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**An Integrative Approach to the Study of Employee Psychology in Mergers and
Acquisitions: systematic review, meta-analysis, case study and CART decision-trees**

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Acknowledgments

I would like to thank my first supervisor, Dr. Caroline Kamau-Mitchell for her continued guidance, insightful expertise and support throughout the entire PhD journey. I would also like to express my gratitude to my second supervisors, Dr. Chris Dewberry and Dr. Andreas Liefoghe for their invaluable advice throughout the research process. I would also like to thank Birkbeck, Department of Organizational Psychology for their help with data collection as well as to the organizations that agreed to support and take part in this project. I would also like to acknowledge my family and friends for all their unconditional support throughout the entire PhD program.

About the author

Throughout my professional career within various industries, I experienced three separate acquisitions. At the time of these acquisitions, I was either employed with the acquirer organization or acquired organization. All these acquisitions had a seismic impact on organizational culture, creating great uncertainty on what the acquisitions might mean for the employees and their future in the new organization. While these experiences were challenging and sometimes distressing as an employee, they offered me a great opportunity to observe the way my work colleagues were interpreting the acquisition, how they were making sense of the new working climate, and how was it like for them to work with new colleagues. These experiences enabled me to become more curious about what are the factors that trigger distrust, fear, combative group dynamics, and negative emotions after a merger or an acquisition. I became fascinated by the way in which employees' interpretations of these events were a function of the organizations they belonged to prior to the acquisition and how much these differed. The question of 'why these things happen' became a persistent issue that motivated me to explore the psychological underpinnings of employee behaviour after a merger or an acquisition and pursue this research interest in a part-time doctoral programme at Birkbeck, University of London.

Throughout this programme, I had the opportunity to conduct in-depth studies on employee psychology in mergers and acquisitions and disseminate my findings at academic conferences or through publications. Part of this PhD research has been published (*Organizational Psychology of Mergers and Acquisitions, Routledge/Taylor & Francis*) as a textbook where I and my supervisor, Dr. Caroline Kamau-Mitchell, explore different subjects within psychology including psychobiology, neuroscience, social psychology, interpersonal relationships, and organizational psychology and how these apply to a merger or an acquisition context. Furthermore, throughout my PhD programme, I had the opportunity to discuss my

research in employee psychology in mergers and acquisitions at dedicated academic conferences (e.g., BPS Conference, International Process Symposium, etc.) or in peer-reviewed book chapters (e.g. CEO Overconfidence in Mergers and Acquisitions / Pearson Education, UK). Finally, my academic interest in employee psychology coupled with my current job role as machine learning engineer, has allowed me to explore different methodological approaches to better understand employee psychology in mergers and acquisitions, some of which I have used and will describe in this thesis. My hope with this work is therefore to reveal insights into this fascinating and important topic of employee psychology in mergers and acquisitions which both add to the body of academic theory and help leaders, HR practitioners, consultants or occupational health practitioners understand and design post-merger / acquisition integration programs in a way that addresses employee health and wellbeing.

Declaration: I hereby declare that the work presented in this thesis is my own, except where explicit reference is made to the work of others.

Camelia Oancea

Preface

In order to understand employee psychology in mergers and acquisitions, it is equally important to analyze not only the relation between certain events and psychological constructs, but also how these change over time. While mergers and acquisitions fundamentally refer to a transaction between at least two organizations intending to combine their businesses, from an organizational psychology perspective, they represent a period of changes unfolding over a long period of time; it is a dynamic process. As I will describe later in this thesis, for the employees, a merger or an acquisition does not start with the closing, but before, when employees have only pieces of information available and when they start experiencing worry, anxiety and unease about their future. After the closing and during the integration period, the major changes in working conditions, arrangements, practices, policies, and so on may have a major psychological cost on employees. They may experience somatic health problems, psychological distress, they may choose to leave the organization or stay but seek retaliation through different means (e.g. absenteeism, loss in productivity). At the same time, they may perceive the transaction as an opportunity, and see the new work environment as a better place for their personal and career development. Therefore, the organizational psychological constructs of interest in mergers and acquisitions such as turnover, work performance, feelings of identification or health indicators require, in an ideal sense, a longitudinal research design. That is because they vary during the course of the merger or the acquisition and the volatility inherent in the merger / acquisition period makes them subject to the influence of innumerable variables of the context, located at different levels of analysis. Longitudinal designs are the most adequate to study these variations as they can give a sense of the nature, magnitude and direction of relations between variables throughout time. They can capture the dynamic nature and processes and the relations between variables and provide insights incomparable with cross-sectional studies, which are based on static theories.

However, there are several challenges associated with longitudinal studies, as they place sometimes impossible demands on establishing the sample. And these are particularly difficult to overcome in case of studies involving organizations in moments of transition, confidentiality constraints or key personnel changes. Even in situations when access to sample is granted by the organization, participation is conditioned by absolute anonymity not only for the organization but also for the employees. This means that tracking participants across the stages of the survey is not possible even when codes are used.

This situation represents a stark reflection of the decisions, barriers and compromises that I needed to make in conducting my study in mergers and acquisitions. The initial plan of the study involved a longitudinal design, with three survey times, at the announcement of the merger or the acquisition, during the transaction (shortly after the closing) and 1 year after the closing. I have started approaching organizations announcing mergers or acquisitions at the beginning of 2014. I have sent out official letters of invitations to key HR persons of the acquiring organizations, used personal contacts to discuss with the organizations or social media. Using these means, I have approached around 30 organizations (or cases of mergers and acquisitions). The contacted organizations declined, the majority of them citing work overload. The time limitations imposed by the PhD programme required me to make a compromise in my study design. Therefore, I have chosen to conduct a cross-sectional research instead, and provide a snapshot of the employee psychology one year into the merger or the acquisition.

This approach has important limitations. In contrast to longitudinal studies, cross-sectional designs hinder the formulation of causality inferences or making predictions. These do not provide insight into how psychological constructs change with time because the static nature of unique measurement does not allow us to draw robust conclusions on changes in variables and relations between variables of interest. I acknowledge the limitations of this study design and adapt the language I use in the interpretation of my results. As such, I discuss the results of this

study within the limitations inherent in a static research approach and stress that these neither represent causal relations nor lead to inferences about the nature or direction of relations between variables. I refer to these aspects also in Chapter 5.6 and Chapter 6.5.

Nevertheless, I do hope that the cross-sectional study presented in this thesis (Chapter 5) and the organizational case study (Chapter 4) provide fresh insights into employee outcomes before and after the closing of a merger or the acquisition respectively. I also hope they will inspire future longitudinal studies in terms of what variables yet uncovered in previous literature are important to be examined over time.

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Abstract

Objective: The goal of this thesis is to understand the psychological impact of a merger or an acquisition on employees, how they construe the change and psychologically adapt to it.

Method: Study 1 of this thesis is a PRISMA systematic literature review on employee affect, behaviour and health outcomes in mergers and acquisitions. Study 2 is a meta-analysis on the role of group status and employee identification in employee outcomes. Study 3 is an organizational case study where I explore employee emotions, behaviours and cognition in a pre-acquisition period. Study 4 is a survey study among 108 employees experiencing a merger or an acquisition where I examine the role of cognitive and contextual factors in employee affect and behaviour.

Results: Study 1 found employees experience negative affect, health problems and may engage in negative behaviours, which seem to be triggered by contextual factors, cognition and work demands and resources. Study 2 found a significant effect of group status on employees' identification with the post-merger organization, the latter being linked with job satisfaction. Study 3 found that employees in pre-acquisition period experience feelings of abandonment, threat and adopt a cynical behaviour. Study 4 tests and proposes an integrative approach to the study of employee psychology in mergers and acquisitions.

Conclusions: Study 1 and Study 2 concluded that mergers and acquisitions literature is highly disintegrated. Study 3 uncovered relevant aspects related to employee psychology in mergers and acquisitions to be tested in my cross-sectional study. Study 4 concluded that integrative approaches may better explain negative employee outcomes in mergers and acquisitions.

Keywords:

Acquisitions; Affect; Behaviour; Cognition; Decision trees; Emotions; Employee health; Group processes; Machine learning; Mergers; Organizational change; PRISMA; Psychological adaptation; Social identity; Systematic review

Chapter 1. Introduction

Mergers and acquisitions refer to transactions between firms in which the ownership of companies or their operating units are being transferred or consolidated with other units or firms. From a legal standpoint, a merger or an acquisition refers to the combination of two legal entities into one. From a commercial or economic standpoint, a merger or an acquisition involves the consolidation of assets and liabilities, including employees under one entity.

Mergers and acquisitions represent major changes for organizations, and so it is important to ask how they affect the employees. More specifically, what is the impact of such a large-scale consolidation on the psychological health and behaviour of employees, including the way people feel, think or act? Much of the evidence suggests that despite the anticipated economic value that a merger or an acquisitions may generate, such forms of interfirm collaborations have been found to create a host of negative consequences for the employees (van Dick, Ullrich & Tissington, 2006; Newman & Krzystofiak, 1993; Seo & Hill, 2005; Teerikangas, 2010; Buono & Bowditch, 2003; Buono & Bowditch, 1985; Cartwright & Cooper, 1993, Marks & Mirvis, 2001). For example, employees experience strong emotional reactions, such as anger (Ivancevich, Schweiger & Power, 1987, Burlew & Pederson, 1994), anxiety (Styhre, Börjesson & Wickenberg, 2006; Astrachan, 2004) and they feel betrayed as a result of the merger or the acquisition (Searle & Ball, 2004). Furthermore, there is evidence showing employees in mergers and acquisitions experience psychological distress (Idel et al., 2003), depression (Väänänen et al., 2011) and a generally poor psychosomatic health and well-being (Joslin, Waters & Dudgeon, 2010; Makri & Ntalianis, 2014). As a consequence, employees become disengaged (Wicker & Kauma, 1974; Rasheed, Khan & Ramzan, 2013), and no longer feel the affective bond with the organization they are working in (Joslin, Waters & Dudgeon, 2010) and may resist the merger or

the acquisition (van Oudenhoven & de Boer, 1995). In this chapter, I will introduce the main theoretical perspectives in the mergers and acquisitions literature. I will then follow with a historical overview of the so-called waves of mergers and acquisitions, and how the characteristic of each wave inspired certain theoretical perspectives to emerge. This historical overview is useful in understanding how these events shaped public opinion about mergers and acquisitions and consequently, why employees may have uncertainties and fears about them.

There are separate theoretical explanations for the negative psychological and health outcomes of mergers and acquisitions and the outcomes which need to be examined, empirically tested, and theoretically reconciled. One perspective is grounded on the concept of organizational culture, which suggests that the negative consequences of mergers and acquisitions are the result of clashes of cultures (Cartwright & Cooper, 1993), or of the acculturation and adaptation pressures on the employees (Larsson & Lubatkin, 2001; Nahavandi & Malekzadeh, 1988). Culture clashes between the merger partners have been found to be associated with resistive employee behaviour (van Oudenhoven & de Boer, 1995; Quah & Young, 2005), negative attitudes toward the merger (van Oudenhoven & de Boer, 1995; Greenwood, Hinings & Brown, 1994), high turnover rates (Lubatkin, Schweiger & Weber, 1999), social conflict and knowledge transfer (Vaara et al., 2012). However, one limitation of the culture perspective resided in the fact that human agency in the emergence of conflict among employees was largely excluded. Employees are 'active agents' in creating culture through social interactions (Hatch, 1993; Meek, 1988), therefore the clashes between employees in mergers and acquisitions are due to not just culture but other behavioural, cognitive, group processes. Thus, culture perspective could not explain such variations in employee behaviour in mergers and acquisitions and a host of other sociocultural integration outcomes (Stahl & Voigt, 2008).

Another theoretical perspective highlights the negative consequences of mergers and acquisitions for group-based conflict among employees because of their sense of identity, loyalty or belonging with the old organization (Hogg & Terry, 2000). The main tenet is that employees in mergers or acquisitions do not identify with the new organization, but maintain their psychological bond with the old, pre-merger/acquisition group (van Knippenberg & van Leeuwen, 2001; van Leeuwen & van Knippenberg, 2003). This is based on social identity theory (SIT, Tajfel and Turner, 1979; Hogg and Abrams, 1988) and self-categorization theory (SCT, Turner, 1985; Turner et al., 1987). A strong sense of belonging to the new organization has been found to be associated with job satisfaction (van Dick, Wagner & Lemmer, 2004) and negatively with turnover intentions (Makri & Hantzi, 2012). According to SIT, when people identify with a group, their identities intertwine with their self-concept (Tajfel, 1972; Tajfel & Turner, 1979). They place some emotional and value significance (Tajfel, 1972). Group identities are particularly manifested and salient in intergroup situations, which automatically activate social comparisons. In such intergroup situations, individuals are motivated by the need to preserve a positive self-esteem and distinctiveness for their group to compare favourably against the outgroup (Tajfel & Turner, 1979). The self-categorization theory extends the SIT to include the cognitive bases of social identity development through self-categorization. Turner (1985) and colleagues (Turner et al., 1987) detailed how self-categorization, a process by which the self and others are not seen in terms of their individualities but in terms of their membership to a particular group, cultivates the social identity phenomena. Social identity theory explained, among others, why employees may develop resistive attitudes after the merger or the acquisition (McEntire & Bentley, 1996; van Dijk & van Dijk, 2009), the emergence of antagonistic intergroup relations (Lupina-Wegener et al, 2014), as well as changes in job satisfaction,

commitment and well-being (Terry, Callan & Sartori, 2001). However, one limitation of the social identity theory is that it cannot explain the variations in employees' behaviour across organizational merger/acquisition situations. Certain cases of mergers and acquisitions trigger more resistive responses on the part of the employees, while others do not (see Chapter 2.3.2). Strength of identification with one or the other organizations may explain why particular behaviours occur during a merger or an acquisitions but not necessarily why certain employees choose to leave the organization (van Dick, Wegner & Lemmer, 2004) or stay and engage in counterproductive behaviours (Empson, 2001). While in mergers and acquisitions literature, the culture and the social identity perspectives are discussed in isolation of each other, the two are compatible in the sense that employees' strength of identification with the organization is strongly related to their commitment to the organizational culture (Albert & Whetten, 1985; Whetten, 2006). In other words, while a merger or an acquisition may be construed as an organizational culture change and hence, a loss of the distinctive features that define the group which form the basis for the employees' identification with the group, this link has not been reflected in mergers and acquisitions research.

Knowledge management is another theoretical perspective highlighting the negative consequences of mergers and acquisitions for employees in the sense of poorer information sharing. This stream suggests that mergers and acquisitions trigger a perceived loss of professional relevance for employees, a loss in status and authority in the new organization (Collins & Wickham, 2002; Carter & Pavur, 2003) and a lack of a context for knowledge sharing (Goddard & Palmer, 2011). This has been linked to employee feelings of being devalued (Piekkari et al. 2005, Carter & Pavur, 2003; Collins & Wickham, 2002) and emotional distress arising from the uncertainty created by a siloed working climate from a knowledge standpoint

(Yoo, Lyytinen, & Heo, 2007). A limitation to this theoretical perspective is that it does not tell us how the loss of professional value is experienced differentially across employees.

Additionally, this perspective focused on the absence of a learning context in mergers and acquisitions is limiting in the sense that it does not fully capture the complexity of the antagonistic intergroup relations. It does not necessarily explain why such a context exist, but rather the consequences of it for the organizational performance at large. In this sense, this theoretical perspective is congruent and complementary with the social identity theory regarding the emergence of status differentials during a merger or an acquisition. A loss to employees' professional level of responsibility and status places them on an unprivileged position within the new organization (Carter & Parvur, 2003; Clarke & Salleh, 2011). Additionally, the reluctance of the employees to share knowledge (Junni, 2011) may be interpreted within the social identity framework as a response by the employees to eliminate the threat posed by the outgroup. In this view, knowledge may be weaponized by the employees in their struggle for dominance (Randall & Procter, 2013; see Chapter 2.3.2.2). While in mergers and acquisitions empirical research the culture and knowledge management perspectives have been treated separately, this does not mean they are incompatible. Rather, extant literature shows that organizational culture creates the foundation on which knowledge sharing and learning practices reside. It is the cultural values and goals that create the social context of learning (Rai, 2011)

Other theoretical perspectives exist in mergers and acquisitions literature highlighting negative consequences for attitudes and behaviours among employees such as management turnover (Kiessling, Harvey & Moeller, 2012; Butler & Perryman, 2012; Walsh, 1988), managerial bias in target choice and pursuit (Hayward & Hambrick, 1997, Vaara et al., 2014) and autonomy of the two merger or acquisition partner in the new organization (Hambrick &

Cannella, 1993; Weber, 1996; Larsson & Lubatkin, 2001). These theoretical perspectives are limiting in the sense that they capture only certain facets of the complex organizational dynamics after a merger or an acquisition. For example, management turnover is discussed within the context of the organization's post-merger/ acquisition economic performance (Cording, Christmann & King, 2008; Papadakis, 2005), and not in the wider context of occupational health. Similarly, managerial biases such as overconfidence only explain why particular mergers or acquisitions take place (Hayward & Hambrick, 1997; Lane, Cannella & Lubatkin, 1998; Berkovitch & Narayanan, 1993; Hietala, Kaplan & Robinson, 2003) but not necessarily how these biases impact employee health. Furthermore, autonomy perspective (i.e. a loss in managerial power and status caused by the merger or the acquisition) explains management turnover after a merger or acquisition (Lubatkin, Schweiger & Weber, 1999; Weber, 1996), but not how this is directly associated with employee health. While the latter may be compatible with the social identity theory, the construct of autonomy in relation to the concept of power and dominance (Sidanius & Pratto, 1999) has found little echo in mergers and acquisitions literature. Other strands focus on occupational health, dealing with stress (Terry & Callan, 1998; Joslin, Waters & Dudgeon, 2010), burnout (Idel et al., 2003) and more severe health outcomes like psychiatric disorders (Väänänen et al., 2011) but less on how the knowledge or identity processes or culture dynamics influence these employee outcomes.

The perspectives discussed above, while discussed in isolation in mergers and acquisitions empirical research, they are not necessarily incompatible. Rather, there is a need for a thorough analysis on how these theories can be reconciled. Therefore, it appears that the literature is highly fragmented along theoretical perspectives that deal with only specific aspects of employee psychology in mergers and acquisitions. Furthermore, there seems to be a

significant imbalance in terms of how occupational health literature is represented, with only a few papers addressing employee mental and physical health during mergers and acquisitions, a topic which I will discuss in more detail in Chapter 2.3.3.

The perspectives discussed above refer to the psychology of mergers and acquisitions. However, the mergers and acquisitions phenomenon attracted academic interest from many other disciplines. There is a wide body of literature from disciplines such as law (Fox, 1983), finance (Colyer, 1999), marketing (Keyes, 1967), strategy (Jensen & Ruback, 1983) and so on in order to understand the intricacies of mergers and acquisitions management in terms of their legal and accounting treatment, impact on marketing practices and strategic considerations. Nevertheless, from an organizational psychology perspective, the theories that are relevant are those that can provide insights into how employees tend to think, feel and behave in response to mergers and acquisitions, such as in the sense of employee turnover, identification with the organization, employee health and wellbeing, their performance on the job and so on.

While multiple strands exist to understand employee psychology in mergers and acquisitions, each with its unique meaning, they tend to progress in isolation of each other. Nevertheless, they are interrelated in that they refer to the precarious relation between the individuals and the post-merger/acquisition organization (Ullrich & Van Dick, 2005). For instance, Albert and Whetten (Albert & Whetten, 1985; Whetten, 2006) suggested that social identity and organizational culture are interrelated constructs insofar as the strength of an employee's identification with an organization is a function of his or her commitment to that particular organizational culture. In other words, while culture encompasses the organization's goals, values and norms that guide behaviour and social interaction, identity refers to the extent to which employees' actually subscribe to these goals and values. For the cultivation of an

organizational identity, it is necessary to encompass centrality, distinctiveness and an enduring sense of continuity (Albert & Whetten, 1985). This perspective has found support in the context of organizational change (Ellemers, 2003; van Leeuwen, van Knippenberg & Ellemers, 2003). In three case studies of identity and culture change, Ellemers (2003) revealed a strong link between employees' identity maintenance during change, threat perceptions and how these processes elicit particular behavioural responses. In other words, an organizational culture change may be perceived as a loss of the distinctive features that define the group which form the basis for the employees' identification with the group. This change and the volatile environment that threatens employees' social identities may elicit stronger resistance on the part of the employees with regards to the change. In this sense, a stronger identification with the organization is likely to lead to enhanced threat perceptions and to animate resistive responses to an organizational change (Ellemers, 2003). Therefore, an organizational change initiative, which does not particularly ensure a sense of identity continuity (van Leeuwen & van Knippenberg, 2003; Ullrich, Wieseke & van Dick, 2005) or address employees' identity concerns (Ellemers, 2003; Slotter, Winger, & Soto, 2015) is likely to activate states of confusion, resistance and counterproductive work behaviours. This may ultimately impact the success of the merger or the acquisition, and jeopardize the realization of the potential synergies (Kiessling, Harvey & Moeller, 2012; Dauber, 2012; Ullrich & van Dick, 2005). Nevertheless, we do not know how the evidence from these theoretical perspectives compare or how they can cross-fertilize into integrative theoretical models that can work across different contexts. This lack of comparative work in the literature highlights the need for a fresh, in-depth review of the literature using state of the art methods, such as Preferred Items for Systematic reviews and Meta-Analysis (PRISMA). This enables us to locate the relevant literature and theoretically synthesise it.

Looking at the historical development of theories in mergers and acquisitions, and the history of mergers and acquisitions in society, it appears that the academics' interests mirror the characteristics of each merger wave (Martynova & Renneboog, 2008). To give an example, a special characteristic of the second wave was the formation of oligopolies, that is, highly diversified firms controlling a significant portion of the market power in the economy. Echoing these developments, academic researchers focused on the impact of monopolistic and diversification behaviour and the conditions preceding such business consolidation practices. One example is the case of General Motors which was formed in the period as a result of a series of acquisitions (e.g. Edmonds, 1923). Another example is the formation of trusts, a characteristic of the first wave, when oil and railway companies were consolidating. As such, academic interest in these two waves mostly focused on the legal aspects of the railway and oil trust mergers in the United States, like the consolidation of Indiana and Illinois railways (Prentice, 1899) or the economics of monopoly formation (Wright, 1901; Daggett, 1913). The next chapter will discuss at length the specifics of each merger wave and how these aspects influenced the emergence of particular theoretical perspectives among academic researchers.

1.1. The Great Merger Movement (1890-1903)

The Great Merger Wave started in late 1890 in the United States and ended in 1903, due to the stock market crash and beginning of the First World War (Lamoreaux, 1985). The corporate takeover activity in the first wave mainly involved friendly acquisitions when the turn-of-the-century economic expansion and industrialization in the manufacturing and steel industries provided an impetus for such monopolization endeavours of corporations. Heralding the first merger wave was the formation of the Standard Oil Trust in 1881 in the United States

(Lamoreaux, 1985). After a series of mergers and acquisitions, Standard Oil Trust, owned by J.D. Rockefeller, was controlling around 85% of the oil production in the United States (Gillon & Matson, 2013). Other examples are the merger of U.S. Steel with Carnegie Steel and 700 other steel companies (Hessen, 1975). The resulting company was controlling more than 70% of the steel production in the United States (Gaughan, 2007). During this wave, the research was primarily focused on the law governing mergers and acquisitions, such as the Union Pacific Merger (Dagget, 1913, 1914). Other research focused on providing a historical account of a particular cases of mergers, such as the formation of the Amalgamated Association of Iron, Steel and Tin Workers (Wright, 1901). This was a merger between previously named United Sons of Vulcan, Associated Brotherhood of Iron and Steel Heaters, Rollers and Roughers and the Iron and Steel Roll Hands Union. However, later analyses of the success of these business amalgamations emphasize the high failure rate among these large trusts, mainly attributed to diseconomies of scale arising from their uncontrollable size (Livermore, 1935; Stigler, 1950; O'Brien, 1988). The literature in the period was mainly oriented towards the economic effects of such monopolistic behaviour and the legal implications, as many such enterprises were formed using loopholes in the law (Gillon & Matson, 2013). This aggressive behaviour which involved the takeover of smaller competitors spurred intense criticism on the fair competitive practices adopted by the acquirers, with a number of lawsuits filed against these trusts (Tarbell, 1904). One such example was the separation of Standard Oil Trust into 34 separate units following fierce public opposition to the company's acquisition practices which led the Supreme Court to decide the company violated antitrust laws (Tarbell, 1904).

These economic developments of the first wave inspired more intense legal scrutiny (Thatcher, 1915), following a more vigorous adoption of antitrust laws (i.e. Sherman Act) and

the enactment of Clayton Act in 1914 (Harbeson, 1958). The aggressiveness and mischievous practices of the first wave that lead to the concentration of industry power in the hands of the few, have shaped the view that mergers and acquisitions are largely driven by empire building motives (Unoki, 2013).

1.2. Second merger wave (1919-1929)

The second wave (1919 – 1929) literature expanded on the chronicling-style of research common during the first wave to include statistical methods to study the success of corporate consolidations (Dewing, 1921; Spahr, 1932; Livermore, 1935). For example, Dewing (1921) sampled 35 industrial combinations that had been active at least 10 years prior to the merger, were formed as a combination of at least 5 separate entities, and had national significance. The success was measured in terms of net profits and earnings. The author analysed the performance of the companies before the consolidation and post-consolidation aggregate earnings by conducting ratio analyses using arithmetic means and medians. The study found that the earnings prior to the consolidation were almost a fifth (18%) higher than the first year after consolidation. These findings were discussed in light of the expectations that the consolidations were to generate around a half increase in earnings. In another study, Livermore (1935) analysed the performance of trusts by sampling 157 concerns founded during 1890 and 1905. The author measured success in terms of trust earnings, from dividend records and company historical data. Comparative analysis of the number of success and failures showed that only half of the mergers analysed were actually successful.

Other strands in the period also looked at the industry-level economic impact of the merger and acquisitions movement (Edmonds, 1923; Ingraham, 1929; Bell, 1932; Spahr, 1932;

Burns, 1933) as well as on the accounting aspects of a corporate consolidation (Fryxell, 1930; Carter, 1945). This economic interest in the field during the second merger wave was stimulated by the formation of industry-level oligopolies. This was a particular feature of the second merger wave, when corporate consolidation strategies shifted from monopoly formation and dilution of market power by one firm to oligopolies, where two or more enterprises were controlling the market power (Martynova & Renneboog, 2008; Stigler, 1950). In contrast to the orientation towards acquisitions within the same industry segment from the first merger wave, the second movement saw an increased focus towards vertical and conglomerate diversification (Gaughan, 2007), where firms were acquiring or merging with other firms in a successive process within the same industry or in a completely unrelated field of business activity, respectively. One notable example of a vertical acquisition in the period was the formation of National Dairy Products (today known as Kraft Foods) in the United States, formed after the merger between Hydrox Corporation (ice cream maker) and Rieck-McJunkin Dairy Co (milk distributor) (Eis, 1969). The popularity of vertical acquisitions was largely driven by the amendments to the Sherman Act and enactment of Clayton act (Stigler, 1950). The passing of the Celler-Kefauver Act as amendment to the Clayton Act (Gaughan, 2007) was meant to prevent anti-competitive mergers or acquisitions and the emergence of monopolies. However, if in the first merger wave around 3000 firms disappeared, the second wave evaporated up to 12,000 (Fligstein, 1990).

Echoes of the first two merger movements have also been found in Europe, in the UK, though at a much smaller pace and size (Cartwright & Cooper, 1996; Vancea, 2013). It is estimated that around 13 billion US dollars in assets came under transfers of ownerships in the second wave that lasted until 1929 (Gaughan, 2007). Nevertheless, the mergers and acquisitions

literature during the second wave seems to suggest that there was a growing distrust on the effectiveness of mergers and acquisitions to generate profits for the owners or shareholders (Oldham, 1923). These dire forecasts on the success of these enterprises inspired future research in terms of the macroeconomic effects of these oligopolies, some suggesting that oligopolies of the second merger wave did less to restrain competition than previous merger monopolies (Stigler, 1950). It has also sparked scholarly debate on the legal treatment of mergers and acquisitions (Perry & Porter, 1983; Williamson, 1968).

1.3. Conglomerate wave (1965-1969)

In anticipation of the third merger wave, the mergers and acquisitions phenomenon was already starting to garner more academic interest, in terms of valuation and pricing (Bonbright, 1945), and of the legal aspects of mergers and acquisitions (Fuld, 1947; Butters & Cary 1951; Brown 1951), as a result of a tightening regulation of such corporate strategies after the second wave. Therefore, economic and legal theoretical perspectives continued to develop during the third wave (1965 – 1969), with a particular focus on taxation and accounting (Butters & Lintner, 1951; Gilmer, 1952; Simon, 1953; Hill et al., 1955; Hellerstein, 1957; Yankee & Green, 1961; Wyatt, 1965) as well as on the marketing implications of mergers and acquisitions (Byrnes, 1953; Curran, 1956). Macroeconomic perspectives on corporate consolidations extended previous wave research with detailed inquiries into the economic effects of mergers and acquisitions in terms of industry concentration (Adelman, 1954; Horvitz, 1957; Worcester, 1958; Keyes, 1961; Collins & Preston, 1961; Weiss, 1965). It is also during this wave that organizational psychology perspectives began to emerge and focused on employees' perception of the merger (Costello, Kubis & Shaffer, 1963; Matusiak, 1967) and management behaviour

(Schoennauer, 1967). These strands highlighted the importance of employee emotions in mergers and acquisitions, providing evidence for emotions such as fear (Matusiak, 1967) about changes in salary, job security, standards of work and so on. Other strands emphasized the importance of strategic management of mergers and acquisitions, including practices such as setting objectives and imposing basic financial and marketing-related policies (McLagan, 1965), integration management (Linowes, 1965; Prince, 1965; Fox, 1967), and the importance of separation of ownership and control in an organization (Manne, 1965). Lastly, marketing and economic perspectives largely focused on the diversification aspects of mergers and acquisitions (Andersen et al., 1959; Weston, 1963; Linowes, 1965; Penn et al., 1965; Sommer, 1967; Burck, 1967; Narver, 1967; Keyes, 1967).

The emergence of these perspectives echoes companies' pronounced orientation towards building conglomerate organizations, a particular feature of the third wave (Ravenscraft & Scherer, 1987). This is also why the third wave is also commonly referred to as the '*conglomerate wave*'. Compared to the first merger movement that mainly involved consolidations in the same industry (i.e. horizontal mergers or acquisitions) and creation of monopolies, the third wave saw a general orientation towards diversification (Kaplan, 1955). Firms began investing in unrelated fields and branched out into various types of activities which led to the creation of conglomerates (Ravenscraft & Scherer, 1987). Literature suggests the main mergers or acquisition motives, were unrelated diversification (Melnik & Pollatschek, 1973; Michel & Shaked, 1984) and managerial ego satisfaction (Roll, 1986).

Around 1970, the oil crisis that directly affected US, Western European economies, Canada and Japan (Issawi, 1978; Sachs, 1982) has led to a short recession and a weakening of the mergers and acquisitions activity. The corporate diversification trend in the third wave fell

out of favor among investors after the performance of the conglomerates formed during the 1960-1980 period was extremely poor, with 60% of the cross-industry acquisitions being divested by 1989 (Gaughan, 2007). Moreover, it appears that the earnings performance of the conglomerate firms lagged those of non-diversified firms and actually decreased with the degree of diversification (Lee & Cooperman, 1989; Mason & Goudzwaard). However, around 26000 mergers took place in the third wave, from 1963 until 1970. This was also when 25,000 firms ceased to exist (Gaughan, 2007). Looking at the growing disciplinary diversity of the literature in the period, and looking at the conflicting performance of mergers and acquisitions, it appears that the issue of a merger or an acquisition's success was no longer a matter of target firm selection or acquirer's urgency to eliminate competition as previous literature of the preceding waves seemed to suggest (Burns, 1933). There was an increased scholarly interest on other, non-financial aspects related to the merger or the acquisition that might have contributed to these weak performances. Some of these aspects were cultural differences (Prince, 1965), weak personnel management (Matusiak, 1967) and lack of strategic management (McLagan, 1965). Furthermore, the market for corporate control study (Manne, 1965) inspired new approaches to the study of mergers and acquisitions, particularly in terms of the usefulness in separation of the security ownership and control as an efficient form of organization, especially in case of mergers and acquisitions (Fama, 1980; Schleifer & Vishny, 1986). This theoretical perspective greatly promoted the view that mergers or acquisitions may be successful if there is a clear separation between ownership and control, that is, between shareholders and management, and when there is a high efficiency at the management level on which shareholders must have direct disciplinary power. These new perspectives will have a significant impact on the theoretical developments of the next waves (e.g. emergence of the theory of the firm, Fama, 1980) on the discussion of the

so-called *corporate raiders* (i.e. investors acquiring controlling stakes in other firms for the purpose of selling them within a short timeframe).

1.4. Fourth merger wave (1984 – 1990)

Together with the growing popularity of mergers and acquisitions practice, and the discouraging evidence on their weak financial performance (Martynova & Renneboog, 2008; Stigler, 1950), the academic interest into this corporate undertaking increased markedly with the fourth wave (1984-1990) from around 387 peer-reviewed articles listed on the Academic Search Complete in the previous wave, to 1146 in the fourth wave. According to Thomson Reuters Web of Science database study distribution per discipline, more than two thirds of the articles published on the topic of mergers and acquisitions (1984-1990) were in business, management and economics combined, 17% in law and about one fifth in areas related to organizational psychology (i.e. applied psychology, industrial relations labor and psychology). As such, economic perspectives remained vocal in the period, mostly with regards to the mergers and acquisitions' monopolistic tendencies and antitrust concerns (Werner, Griffiths & Duggan, 1983; Ebeling & Doorley, 1983; Stillman, 1983; Eckbo, 1983; Theodore, 1983; Davidson & Deneckere, 1984; Werner, Duggan & Griffiths, 1984). The legal perspective has also stimulated insightful discussions on the legal premises for engaging in mergers and acquisitions (Fox, 1983; Cann, 1983; Areeda, 1983; Harris & Jorde, 1983; Matsuo, 1983). Corporate governance perspective has also improved our understanding of the roles of managerial teams and board of directors and addressed the principal/agent problems in mergers and acquisitions (Freeman & Reed, 1983; Lipton & Brownstein, 1985; Knoeber, 1986; Brickley & James, 1987; Jensen & Warner, 1988). The scholarly debate on the role of shareholders and management mirrored the academic interests found in the management and strategy literature on concepts regarding

managerial behavior. Examples include managers' autonomy after a merger or an acquisition (Jensen & Ruback, 1983; Baron, 1983; Cochran & Wartick, 1984; Benston, 1985; Regan & Reichel, 1985; Jennings & Mazzeo, 1986; Willcox, 1988), their scope of decision-making power (Blaylock & Rees, 1984; Stahl & Zimmerer, 1984; Richman, 1984; Duhaime & Schwenk, 1985; Benston, 1985; Marken, 1985; Jemison & Sitkin, 1986; Roll, 1986) and their capacity to be efficient (James, 1984; Mahajan, 1984; Amersh & Sunder, 1987; Scherer, 1988). Managerial turnover perspective (Coughlan & Schmidt, 1985; Mikkelsen & Ruback, 1985) expanded during this wave, partly stimulated by the aggressive takeover tactics that characterized the fourth wave. An important management and corporate governance perspective that emerged in the period which reflected the tendency towards elimination of inefficiencies and deconglomeration during this wave was the resource-based theory (Wernerfelt, 1984). According to this view, a firm is defined in terms of its resources – tangible and intangible assets that are tied semi-permanently to the firm. Concomitantly, the organizational psychology perspective was slowly getting more attention, with articles raising awareness on the impact of mergers and acquisitions on employees' job prospects and well-being, including feelings of uncertainty, affective commitment to the organization and anxiety (Sherwood, 1983; Manzini & Gridley, 1986; Ivancevich, Schweiger & Power, 1987; Schweiger, Ivancevich & Power, 1987; Harshbarger, 1987; Astrachan, 1990), cultural conflict (Mirvis, 1985; Blake & Mouton, 1985; Bennis, 1985; Buono, Bowditch & Lewis, 1985; Hall & Norburn, 1987; Nahavandi & Malekzadeh, 1988) and communication (Kanter & Seggerman, 1986; Bastien, 1987). A particular aspect of the fourth-wave literature was the increased focus on mergers and acquisitions outside the United States and the United Kingdom, namely in Europe (Roach, 1983; Bufford, 1983; Silbiger, 1983)

and Asia (Matsuo, 1983), and also on cross-border transactions (Kitchen, 1983; Eddy & Seifert, 1984; Hisey & Caves, 1985).

The development of these theoretical perspectives in the academic literature appear to reflect both the social and economic conditions in which the fourth merger movement emerged, but also the transaction dynamics that defined it. Aggressive takeover tactics were predominant in the market for corporate control, manifested through hostile acquisitions and corporate raiding. Corporate raiding refers to the practice of acquiring controlling stakes (not necessarily majority stakes) in undervalued firms and forcing new measures in the company such as replacement of inefficient management in order to increase shareholder value (Walsh & Kosnik, 1993). 2,543 mergers or acquisitions were concluded in the United States at the beginning of the fourth wave, in 1984 (Duncan, 2006), that involved up to 122,000 million US dollars in assets (Gaughan, 2007). The speculative activity increased the value paid in acquisitions by nearly two thirds in 1984 from the previous year in the United States while the actual number of takeover cases increased modestly (Gaughan, 2007). In contrast to the previous wave, the focus was now on scale efficiencies through deconglomeration and correction of managerial flaws through the replacement of nonperforming executive team, which informed the management literature on efficiency and decision making (Manne, 1965; Fama, 1980; Fama & Jensen, 1986; Jensen & Meckling) and the related resource-based view (Wernerfelt, 1984; Rumelt, 1984; Chatterjee & Wernerfelt, 1991; Harrison et al., 1991). According to Fama's theory of the firm (Fama, 1980), one role of the hostile takeovers and corporate raiding during this wave was to discipline the management team. Corporate raiders were being portrayed in the media as ruthless business people who oftentimes adopted aggressive and unethical business practices, with significant social consequences for the companies and employees involved (Hirsch, 1986). In the urge to

bring efficiency to firms and make them profitable very fast, many workers lost their jobs in the 1980-1990 merger wave and lead to several plant closings. There were also significant wage cuts particularly among white-collar workers (Jung & Dobbin, 2012). The morality and business ethics of these predatory tactics started to be questioned in the literature (Freeman, Gilbert & Jacobson, 1987; Newton, 1988; di Norcia, 1988; Almeder & Carey, 1991). This was attributed to the fact that these aggressive acquisition strategies ultimately increased the level of unemployment in the economy and caused a significant sector of the economy to go bankrupt.

Considering the emergence of raiding practices and the pressure on the management to deliver shareholder value, this was reflected in the mergers and acquisitions literature through an increased focus on business and management discipline (Datta, 1991; Hitt, Ireland & Hoskisson, 1991; Rao, Mahajan & Varaiya, 1991). There was an increased emphasis on job security after a merger or an acquisition, particularly in case of managers (Walsh & Ellwood, 1991; Walsk, 1988, 1989; Bastien, 1987). Also, the urgency embedded in the raiding practice raised substantial interest on the capability of the firms to be profitable (Miller, 1990; Hitt et al., 1991; Hitt, Hoskisson & Ireland, 1990). These developments in business and management literature correlated with the emergence of literature on employee emotions in mergers and acquisitions, such as anxiety arising from the separation from colleagues (Astrachan, 1990), affective commitment (Buono & Bowditch, 1989) and culture clashes (Buono & Bowditch, 1989; Nahavandi & Malekzadeh, 1988; Napier, 1989).

In order to understand the development of the psychological perspectives of mergers and acquisitions over time, it is important to know how these shaped the public opinion, in terms of whether these aggressive practices were indeed successful in generating profit from the merger or the acquisition or not. In terms of performance, evidence is mixed as to whether the 80's

hostile acquisition behaviour has been dictated by earnings growth or rather empire-building motives or flawed managerial decision-making (Eddey, 1991; Walsh & Kosnik, 1993). While some evidence shows the significant negative effect of management resistance on hostile takeovers' returns in the period (Jarrell & Poulsen, 1989; Gilbert & Lyn, 1990), other event studies comparing the cumulative abnormal returns (CAR) of takeovers initiated by investors engaging in corporate raiding versus those that did not suggests similar levels of wealth were created (Casey, Dodd & Dolan, 1987). Furthermore, firms' capacity to innovate abated in the period (Hitt, Ireland, Harrison, & Hoskisson, 1991), as investors were rather focused on parcelling out units in order to make quick profits with minimal risk. As a consequence of the corporate raiding that was used as a vehicle for quick profits rather than organic growth, the American economy was devitalized of industrial investment in research and development by an annual 13% in the fourth wave, a decrease observed exclusively with firms affected by corporate raiding (Crawford, 1989; Zahra & Fescina, 1991).

In Europe, the mergers and acquisitions activity was more fragile, in the sense that there were far fewer transactions and at smaller prices than in the United States (Gaughan, 2007) although a trend towards consolidation of businesses through mergers or acquisitions could be observed in the United Kingdom also in the second and third wave (Gaughan, 2007). The reductions of trade barriers in successive rounds of GATT and WTO talks from 1974 onward and the creation of the single European market in 1986 that curbed the regulatory obstacles to the free movement of goods provided the impetus for more intensified consolidations (Palle, 2005). However, the deal-making activity pioneered by the United Kingdom was confined to continental European countries and the main goal was to improve competitiveness and develop within the European Community (Garcia & Torre-Enciso, 1995). Around 4000 mergers and

acquisitions were concluded in Europe in 1988, almost half of which were carried in the United Kingdom that involved almost 1 trillion GBP (Martynova & Reneboog, 2008). The rise in popularity of cross-border mergers and acquisitions, particularly between companies from the United States and the United Kingdom (Hunt, 1990) attracted considerably more academic interests on aspects such as the impact of such cross-border mergers and acquisitions on competition (Capie & Rodrik-Bali, 1982), and on the economy at large (Marsh, 1989) thus spawning a scholarly debate on the ethicality of international mergers and acquisitions in the United Kingdom (Wright, 1988). The literature in the period also emphasized the differences between local transactions and international ones, thus triggering further inquiries into the success and failure of organizations merged with or acquired by international partners (Vasconcellos & Kish, 1996; Gonzalez et al., 1997).

In contrast to the United Kingdom, continental European countries, such as France, Germany or Spain (Aktas, Bodt & Roll, 2007), were still imbued with protectionist policies and resisted the adoption of the American firm structure, a phenomenon also termed “Americanisation” (Lescent-Giles, 2003). Takeover attempts by foreign companies were perceived as economic colonization vehicles, and any hostile initiatives were rebuffed through various regulatory mechanisms (Gaughan, 2005). Such was the case of Coca-Cola in Denmark and France (Sørensen & Petersen, 2012). The political turmoil in Middle East (Hall, 1993) brought about the end of the fourth merger wave in 1990. The total deal value decreased though from around 600 billion US dollars in 1988 to 200 billion in 1991 (M&A Statistics Database).

One of the most important implications of the theoretical development of mergers and acquisitions phenomenon during this wave, was an increased focus on the integration process (Buono & Bowditch, 1985), a trend which grew more prominent during the following waves

(Larsson & Finklestein, 1999). The perspectives of this wave, namely employee emotions (Astrachan, 1990; Buono & Bowditch, 1989), job resources, such as job security (Walsh & Ellwood, 1991; Walsk, 1988) and culture (Nahavandi & Malekzadeh, 1988) inspired studies on the impact of national cultural differences on the success of the merger or the acquisitions (Morosini, Shane & Singh, 1998; Weber & Camerer, 2003; Björkman, Stahl & Vaara, 2007). They have also prompted discussion on organizational cultural fit (Seth, 1990; Datta, 1991; Weber & Shenkar, 1996) which is a measure of ease of organizational assimilation after a merger or an acquisition. Studies investigating employee job security and anxiety sparked academic interest into the communication aspect of the integration after a merger or an acquisition (Schweiger & Denisi, 1991) and management turnover (Cannella & Hambrick, 1993; Kavanagh & Ashkanasy, 2006). It is important to emphasize that the striking features of the fourth wave (i.e. raiding practices) have shaped employee perceptions about the mergers or acquisitions, as inevitably leading to job losses or reduced compensations (Jensen, 1988; Jensen, 1984) and that long-term investments are often sacrificed for short-term profits (Stein, 1988; Scherer, 1988). It seems that compared to the literature in the previous waves, which focused on economic effects and performance of mergers and acquisitions (Dewing, 1921; Spahr, 1932; Livermore, 1935), in this wave, the hypothesized cause for merger or acquisition success or failure shifted from the underlying motive for the merger (e.g. increase of market share, diversification) to other possible factors, such as management skills and employee-related factors.

1.5. Fifth merger wave (1993 – 2000)

Mergers and acquisitions research almost doubled during the fifth wave (1993 – 2000) (Gaughan, 2007). Macroeconomic perspective expanded during this wave with analyses on the

cross-border and transatlantic mergers and acquisitions (Vasconcellos & Kish, 1996; Gonzalez et al., 1997; Gonzalez, Vasconcellos & Kish, 1998; Colombo & Mariotti, 1998; Dacin, Hitt & Levitas, 1997), and an increased focus on the privatizations in countries emerging out of state protectionist regimes (Uhlenbruck, 1997; Feldman, 2001). Apart from the developing strands from the previous waves, such as financial (Colyer, 1999), accounting and taxation (Rose, 1995; Manzon, Sharp & Travlos, 1994), marketing and antitrust studies (Cowie & De Mattos, 1999; Hannay, 2000; Aktas et al., 2001), the body of literature emerging during this period included insights on the innovation potential of mergers and acquisitions (Simpson, 1999; Weston & Johnson, 1999; Sivadas & Dwyer, 2000; Hitt et al., 1996), and a focus on strategic management (Chan & Wong, 1994; Lei & Hitt, 1995; Dacin, Hitt & Levitas, 1997; Harrison et al., 2001). The organizational psychology perspective had also been developing, continuing the fourth-wave trend on organizational culture theories (Marks, 1997; Risberg, 1997; Marks & Mirvis, 2000). In contrast to the previous wave, it was during this wave that the culture perspective (Walter, 1985) branched into two separate strands, whereby culture clashes in mergers and acquisitions were thought to emanate both from the differing organizational cultures between the two firms involved in the merger or the acquisition (Miller, 2000; Veiga, Lubatkin, Calori & Very, 2000; Cartwright & Cooper, 1993; Elsass & Veiga, 1994; Weber, 1996; Bijlsma-Frankema, 2001) and also from the national cultural differences (Brannen & Salk, 2000; Vaara, 2000; Frederick & de la Fuente, 1994; Weber & Shenkar, 1996; Larsson & Lubatkin, 2001). During this wave the intergroup perspective in mergers and acquisitions literature also emerged (Terry, Carey & Callan, 2001; Hogg & Terry, 2000; Terry & Callan, 1998; Gaertner, Dovidio & Bachman, 1996) inspired by the developments in social identity theory (SIT; Tajfel & Turner, 1979) and self-categorization theory (SCT; Turner et al. 1987). Another emerging theoretical perspective in the

period was knowledge management in mergers and acquisitions (Inkpen & Dinur, 1998). This perspective focused on the capability of the new organization to be innovative in its new form (Lei & Hitt, 1995; Hitt et al., 1990; Hitt et al., 1991), or on the new organization's capability to facilitate knowledge transfer from one of the merger or acquisition partner to the other (Empson, 2001; Buono, 1997; Björkman, Stahl & Vaara; Chan & Wong, 1994).

The theoretical developments appear to have followed the industry dynamics and the specifics of the fifth wave, whereby mergers and acquisitions were mainly driven by strategic motives of consolidating businesses (Gaughan, 2005). Highly fragmented markets were being consolidated through large-scale acquisitions (Gaughan, 2005) that would allow acquirers to cater to their customers on a national instead of regional level. Another characteristic of the fifth merger wave was the substantial proportion of cross-border and transatlantic mergers and acquisitions (Martynova & Renneboog, 2008) as well as an intensification of the mergers and acquisitions activity in Europe and Asia, which informed the expanding literature on the economics of international transactions and national cultural clashes (Weber & Shenkar, 1996; Morosini, Shane & Singh, 1998; Erez, 2000; Gertsen, Søderberg & Torp, 1998). The deregulation and wave of privatizations were underway in Europe after 1990 as western countries began opening up their sectors dominated by national monopolies (Vancea, 2013). The wave of privatizations started in the United Kingdom towards the end of 1980's under Thatcher administration and was followed shortly by other European countries such as France, Germany Italy, and then other eastern European countries, such as Poland, Czech Republic, Romania etc. (Parker & Saal, 2003; De Castro & Uhlenbruck, 1997). This encouraged many firms to expand their reach to new geographic markets that until recently were inaccessible due to the national trade barriers (Uhlenbruck & De Castro, 1998, 2000).

In Europe, companies in the United Kingdom, France, Italy and Germany began to pursue intra-community consolidations (Geroski & Vlassopoulos, 1990). British firms were already carrying out almost two thirds of their mergers and acquisitions outside the European community, while Denmark and Germany were closely behind with nearly half (Geroski & Vlassopoulos, 1990). In contrast to the traditional role of US companies as suitors to European firms, by 1990, the number of transactions initiated by European companies on US companies exceeded those initiated by US on European targets (Geroski & Vlassopoulos, 1990). In 1991, the United Kingdom became the second-largest acquiring nation and second-largest target nation, partly due to its more lenient merger regulations, low rates of taxation and economic stability, more sophisticated capital market and more liberal economic orientation (Uddin & Boateng, 2014). Some of the biggest transactions that took place in the fifth wave involving UK companies were the acquisition of US-based Bestfoods by UK Unilever PLC, the acquisition of Canada's Seagram by Diageo/Pernod, both in 2000 (Dalhoff 2002), the acquisition of US-based AirTouch Communications Inc by Vodafone PLC (OECD Information Technology Outlook, 2002).

These developments sparked academic interest into the effects of national culture on the performance of mergers and acquisitions (Weber, 1996). The poor performance of mergers and acquisitions was thought to emanate from the differences in how people communicate, think and behave as dictated by their national identities (Vaara, 2000). Studies show evidence of combative relations emerging between the employees of the organizations involved in the merger or the acquisition (Greenwood, Hinings & Brown, 1994; Veiga et al., 2000), as an outcome of integrating culturally remote firms (van Oudenhoven & de Boer, 1995). These clashes, or the dissimilarity between the two cultures were thought to lead to resistance on the part of

employees (van Oudenhoven & de Boer, 1995). The emerging social identity strand (Terry, Callan & Sartori, 1996; Terry & Callan, 1998) helped sustain this representation of the post-merger or acquisition working climate as hostile and combative between groups. It is also when new organizational psychological theories emerged regarding employees' perceptions of justice and fairness (Citera & Rentsch, 1991; Skarlicki, 2001; Gopinath & Becker, 2000) and employees' perceptions of psychological contract breach as a result of the merger or the acquisition (Turnley & Feldman, 1998; Cavanaugh & Noe, 1999; Cooper, 1999). The theoretical debate on employees' fairness and justice evaluations and their perception of a breach of the psychological contract following a merger or an acquisition have shaped the view that oftentimes mergers and acquisitions lead employees to consider that the organization that merged, acquired or was acquired by another firm has broken down its obligations (Searle & Ball, 2004; Bligh & Carsten, 2005) or the change itself influenced employees' perceptions of fulfilment of obligations by the organization (van der Smissen, Schalk & Freese, 2013).

An illustrative case for the emergence of clashes between employees of the companies involved in the merger or the acquisition was the acquisition of Germany's Mannesman AG by UK Vodafone Plc in 2000, one of the largest in history, worth 180 billion US dollars (Szmigiera, 2019). The transaction was fiercely opposed by the employees and the public opinion, largely due to the still pervasive protectionist policies and practices (Atkins, 2000; Economist, 2000). The opposition involved the intervention of Germany's chancellor at the time, Gerhard Schroeder, and responded to by UK Prime Minister, Tony Blair. The former voiced his concerns on the negative consequences of a hostile takeover on a company's traditional German culture. The acquisition of Mannesman AG by Vodafone became a matter of national importance, as the pursuit by the latter was oftentimes portrayed as a battle between nations. The story surrounding

Vodafone's hostile acquisition of Mannesman is a good illustration of the emerging intergroup relations theories and national culture theories (Atkins, 1999). The Mannesmann-Vodafone saga revealed the importance of national identification and culture in mergers and acquisitions theorizing. The hostile acquisition had deep rooted implications not only on employees but on the entire social and economic system in Germany at that point (Garrett, 2001). It is believed that this transaction shaped the neo-liberal transformation of the German capitalism model (Halsall, 2008). Vodafone was an '*invader*' that could threaten the cultural foundations of the Germans (Atkins, 1999) and which employees, public opinion and politicians were determined to defend. The prime minister of North Rhine Westphalia, Wolfgang Clement, declared at the time "*We should hold on to our culture - and that applies to our business culture as well,*" (Atkins, 1999). This is often the case for international mergers or acquisitions (Riad & Vaara, 2011):

"Esser fights for company and country: German group's chief battles nationalist bias and Vodafone, writes Tracy Corrigan" (Corrigan, 1999, p. 35).

In terms of performance, the mega-deals of the fifth wave were not found to be significantly more profitable compared to previous waves (Moeller, Schlingeman & Stulz, 2005). Sampling more than 12000 transactions conducted between 1980 and 2001 by U.S. acquirers on U.S. targets, Moeller, Schlingeman & Stulz (2005) found that from 1991 to 2001, acquiring firms' shareholders lost around 216 billion US dollars, 50 times more than the value lost from 1980 to 1990. The total deal value was 6 times higher in 1990s than in 1980s. Another study (Datta & Puia, 1995) of 112 cross-border transactions undertaken by US firms between 1978 and 1990, found that cross-border deals actually destroy value for the shareholders. Authors (Datta & Puia, 1995) suggested cultural distance may have been an adverse factor to value creation.

However, other studies show that cross-border mergers and acquisitions do in fact create value for shareholders, as long as the geographic expansion is directed at emerging markets and in sectors other than their own (Walker, 2000; Doukas & Travlos, 1988; Corhay & Rad, 2000; Martynova & Renneboog; 2011). The hypothesis that transactions between companies operating in different sectors perform better found little empirical support in the banking industry in Europe. Based on sample of 72 very large transfers of ownerships in EU banking industry carried between 1988 and 1997, Cybo-Ottone and Murgia (2000) found that the performance of both bidder and target companies operating in the banking industry was significantly higher and economically relevant. These findings seem to suggest that the relation between performance of mergers and acquisitions and cultural distance is not so straightforward. Instead, other aspects related to the transaction characteristics may mediate or moderate the effect of culture on performance such as motive, which may determine the extent of control the acquirer may exercise on the acquiree (Datta & Grant, 1990), thus shaping future strands focusing on the role of firm autonomy (Pablo, 1994) and of the degree of integration (Zollo & Singh, 2004; Schweizer, 2005; Puranam, Singh & Chaudhuri, 2009).

The mergers and acquisition intensity slowed down in late 1990s, largely due to the dot-com bubble in 2000 and the 9-11 terrorist attack in the United States (Gaughan, 2007). The terrorist attack in the United States exacerbated the already widespread pessimism pervading the markets at the end of 2000 and early 2001 which rapidly spread to global markets, and marked the end of the fifth wave globally (Mun, 2005; Richman, Santos & Barkoulas, 2005). In Europe, the peak of the fifth wave was reached in 1999 in terms of value, with 547.9 billion euros' worth of transactions carried by European firms, and in 2000 in terms of number, namely 2548 (Vancea, 2013). This value decreased by nearly 27% in 2001 (Vancea, 2013). To conclude, the

features of this wave, namely a focus on business internationalization and strategic motives for mergers or acquisitions stimulated the emergence of national culture theories (Greenwood, Hinings & Brown, 1994), social identity theory (Terry, Callan & Sartori, 1996; Terry & Callan, 1998), contextual theories which highlight the role of factors such as degree of integration, autonomy and control exercised on the acquired firm (Datta & Grant, 1990; Pablo, 1994; Zollo & Singh, 2004; Schweizer, 2005).

1.6. Sixth merger wave (2003-2007)

The analyses of the fifth-wave mergers and acquisitions performance (Moeller, Schlingeman & Stulz, 2005) cast doubts on the management capabilities for both target selection (Rovenpor, 1993; Haunschild, Davis-Blake & Fichman, 1994) and for achieving the expected benefits from the merger in areas such as taxation or cost efficiencies (Covin et al, 1997; Teare et al., 1997; Thach & Nyman, 2001). As such, the literature suggested that a possible reason for a loss in shareholder returns may be the operation of managerial self-serving biases, such as overconfidence, or the tendency for CEOs to overpay in a merger or an acquisition (Hayward & Hambrick, 1997; Lane, Cannella & Lubatkin, 1998; Berkovitch & Narayanan, 1993; Hietala, Kaplan & Robinson, 2003). As a consequence, the theoretical perspectives developed during the sixth wave (2003-2007) focused on the strategic management of mergers and acquisitions (Doukas & Petmezas, 2007; Hazelkorn, Zenner & Shivdasani, 2004; Chanmugam et al., 2005; Mehta & Hirschheim, 2007; Firstbrook, 2007; Meyer, 2008; Nguyen & Kleiner, 2003; Stahl, 2004; Quah & Young, 2005; Haleblan, Ji-Yub & Rajagoplan, 2006). The macroeconomic perspective remained pronounced also during the sixth wave, though with a strong focus on the global rather than national impact of cross-border mergers and acquisitions (Wang, Liu & Zhang,

2007; Norbäck & Persson, 2008). Organizational psychology research focused on employee affect (Dackert et al., 2003; Idel et al., 2003; Gulliver, Towell & Peck; Brown & Humphreys, 2003; Vaara, 2003), organizational and national culture clashes (Vaara, Tienari & Sääntti, 2003; Applebaum & Gandell, 2003; Weber & Camerer, 2003; Ailon-Souday & Kunda, 2003; Stahl & Voigt, 2004; Teerikangas & Very, 2006; Stahl & Voigt, 2008), employee health (Armstrong-Stassen & Cameron, 2003; Astrachan, 2004; Väänänen et al., 2004), social identification (van Leeuwen, van Knippenberg & Ellemers, 2003; van Dick, Wagner & Lemmer, 2004, Ullrich, Wieseke & van Dick, 2004; Giessner et al., 2006; Amiot et al., 2006; Boen et al., 2007), organizational justice and trust perspective (Lipponen, Olkkonen & Moilanen, 2004; Searle & Ball, 2004; Bligh & Carsten, 2004; Bellou, 2007). However, the economic theories and psychological theories rarely met in empirical research, with very few studies taking into account the role of contextual factors in employee psychology, such as extent of integration and merger or acquisition objective (Vaara, 2003), impact of cultural problems on merger or acquisition success (Weber & Camerer, 2003), shareholder value and achievement of merger/acquisitions objective (i.e. synergy, Stahl & Voigt, 2008).

The theoretical focus on strategic management during the sixth wave seems to have echoed organizations' more risk-averse approach to mergers and acquisitions during this wave, in contrast to the previous one (Alexandridis et al., 2012; Bodolica & Spraggon, 2018). In a comparison between the fifth and sixth wave corporate behaviour, Alexandridis and colleagues (2012) found that organizations' assets were less valued in the sixth wave, the mergers and acquisitions market was less competitive given the number of listed firms being targeted and investors were displaying a far less acquisitive behaviour. Furthermore, the level of premiums which was frequently used in the literature as a proxy for overconfidence in the success of a

merger or an acquisition (Hayward & Hambrick, 1997), was lower in the 2003-2007 period than in the fifth merger wave, namely 37.9% versus 45% (Alexandridis et al, 2012).

During this wave, an aggregate 15 trillion US dollars' worth of assets were transferred globally during the sixth wave and more than 151000 transactions took place (Dealogic, 2007). There were little hostile transactions and almost half of the mergers and acquisitions were cross-border (Dealogic, 2007). A striking feature of this wave was a more intense mergers and acquisitions activity in European countries, which exceeded the levels recorded in the United States (Bodolica & Spraggon, 2018). This was stimulated by the enlargement of the European Union with 10 new members and the deregulation started in Eastern Europe in areas such as telecommunication, airlines, utilities and financials (Ovtchinnikov, 2013; Bodolica & Spraggon, 2018). The mergers and acquisitions market developed also in Asia Pacific region, Latin America, Africa, Middle East and Russia (Bodolica & Spraggon, 2018), inspired by the economic liberalization of emerging BRIC markets (Dealogic, 2007). Some of the biggest transactions were the takeover of Bank Austria Credinstalt AG by Unicredito Italiano SpA or the acquisition of ABN Amro Holding NV by RFS Holding BV, a consortium formed of Fortis, Royal Bank of Scotland and Banco Santander (Allen, *et al*, 2011). Other popular sectors were Telecommunications (AT&T and Bellsouth; Comcast and AT&T Broadband & Internet Services), Utilities (Royal Dutch Petroleum and Shell Transport & Trading; Gaz de France and Suez) and Technology (Symantec and Veritas; Cisco and Linksys; eBay and Skype; Google and Youtube; AMD and ATI; HP and Compaq) (Dealogic, 2007).

The housing bubble of 2007 that shortly turned into a subprime lending crisis one year later erupted in the United States thus reducing investor optimism and halting M&A activities. The critical point was reached in September 2008, when some of the largest financial institutions

in the United States declared bankruptcy, such as Lehman Brothers, or were sold off, such as the acquisition of Merrill Lynch by Bank of America. In a now much more integrated global financial market following the expansion movement in 2002-2007, the financial crisis spread faster to other countries compared to the previous crises (Allen, Beck, Carletti, Lane, Schoenmaker & Wagner, 2011). In Europe, UK's Northern Rock was nationalized by Alistair Darling in 2008, as well as other companies, like Bradford and Bingley, Royal Bank of Scotland (partially).

This wave marked by internationalization inspired academic focus on the characteristics of cross-border mergers and acquisitions in terms of their capacity to innovate, of their impact on national economic security (Wang, Liu & Zhang, 2007), profitability (Norbäck & Persson, 2008), as well as of the strategic aspects of mergers and acquisitions management (Nguyen & Kleiner, 2003). Another characteristic of the literature emerging during this wave was the increasing number of studies outside the United States, such as India (Firstbrook, 2007), German, Singapore and Canada (Stahl, Chei & Pablo, 2003), China, Taiwan, South Korea, Japan (Wong, Cheung & Munn, 2009) and so on. Additionally, the fact that studies into the performance of mergers and acquisitions during the sixth wave showed negative shareholder returns (Alexandridis et al., 2012), inspired the development of organizational psychology literature to include constructs such as trust (Maguire & Phillips, 2008; Linde & Schalk, 2008; Becerra, Lunnan & Huemer, 2008; Bellou, 2008), fairness and justice (Gleibs, Mummendey & Noack, 2008; Klendauer & Deller, 2009; Ellis, Reus & Lamont, 2009), knowledge transfer between the two firms (Yang, Mudambi & Meyer, 2008; Evangelista & Hau, 2009; Zollo, 2009), affect such as feelings of threat and uncertainty (Zhou, Shin & Cannella, 2008; Eriksson & Sundgren, 2005; Marmenout, 2010) and employee resistance (van Dijk & van Dick, 2009;

Lipponen, Olkkonen & Moilanen, 2004; Quah & Young, 2005; Huang & Chuang, 2007). These developments led to the proliferation of research into organizations' learning capabilities (Kale & Singh, 2007; Gavetti, 2005) and also to an increased focus on contextual factors related to the transaction, such as degree and speed of integration (Bauer & Matzler, 2014). It has also created the need for reviews of evidence in mergers and acquisitions literature (Kale & Singh, 2009; Stahl et al., 2010; Cartwright & Schoenberg, 2006; Stahl & Voigt, 2008; Vazirani, 2015).

1.7. A seventh wave - 2014 onwards

After the sixth wave, the literature continued to develop, particularly the corporate governance perspective (Goranova, Dharwadkar & Brandes, 2010), strategic management (Makri, Hitt & Lane, 2010; Shin, Sun & Prescott, 2012), selection of the merger or the acquisition target (Hoberg & Philips, 2010), macroeconomic perspective (Boateng, Naraidoo & Uddin, 2011) and marketing perspective with a focus on the impact of mergers and acquisitions' on customer retention and brand identity (Gussoni & Mangani, 2012; Yang, Davis & Robertson, 2012; Kernstock & Brexendorf, 2012). Among researchers in organizational psychology discipline, the theoretical approach to the study of employee psychology in mergers and acquisitions was more inclusive in the sense that several contextual variables were included to explain employee emotions and behaviour, such as type of merger (Wickramasinghe, & Karunaratne, 2009) or HR strategies post merger/acquisition (Creasy, Stull & Peck, 2009; Syrjäälä, Takala & Sintonen, 2009). Existing theoretical perspectives also continued to develop further, such as the culture perspective (Baughn & Finzel, 2009; van den Steen, 2010; Sarala, 2010; Weber, Tarba & Reichel, 2011), social identity perspective (Bartels, Pruyn & de Jong, 2009; van Dijk & van Dick, 2009; van Vuuren, Beelen & de Jong, 2010; Giessner, Ullrich & van

Dick, 2011), and knowledge management and organizational learning perspectives (Zollo, 2009; Chua & Goh, 2009; Arikan & McGahan, 2010).

These developments in the study of mergers and acquisitions coincided with what can be considered as a new wave of mergers and acquisitions (Vazirani, 2015; Green, 2018). The transaction activity increased in 2014 with a total global value of 3.5 trillion US dollars and over 40,000 deals being announced (Thomson Reuters, 2015). The trend seemed to continue in 2015, with close to 5 trillion US dollars-worth of assets transferring ownerships, in around 40,000 deals (Thomson Reuters, 2015). The new trend, which heralds a new merger and acquisitions movement in the global mergers and acquisitions landscape, has already exceeded the 2007 levels, and it is still expected to continue in the coming years (Thomson Reuters, 2015; Bloomberg, 2016). One of the striking features of this new possible wave is the focus on very large deals that exceeded in value the previous merger waves (Bloomberg, 2016). 57 transactions of more than 10 billion US dollars and 9 of more than 50 billion US dollars were carried in 2015, while 95 worth more than 5 billion US dollars were carried a year earlier (Thomson Reuters, 2015; Bloomberg, 2016). Some of the most resounding transactions were: Pfizer's acquisitions of Hospira Inc. (16.8 bln US dollars), Royal Dutch Shell's acquisition of BG Group PLC (79.3 billion US dollars), H.J Heinz Co of Kraft Foods Group Inc. (55.4 billion US dollars), Charter Communications Inc. of Time Warner Cable Inc. (79.2 billion US dollars), and Anheuser-Busch InBev SA/NV's acquisition of SABMiller Plc (120.5 billion) (Bloomberg, 2016). During this period, it can be observed a proliferation of psychological theories, which suggest that the success or failure of a merger or an acquisition can be driven by employee-related factors such as affect (Olcott, 2008; Joslin, Waters & Dudgeon, 2010), identification (Drori, Wrzesniewski & Ellis, 2013), fairness and justice (Ro, Lamont & Ellis, 2013), job security and threat perceptions

(Chung, Du, Choi, 2014), leadership style (Babić, Savović & Domanović, 2014) and emphasized the important role of human resource management (Correia, Cunha, & Scholten, 2013).

Despite the appealing opportunities that mergers and acquisitions may bring, the success of these forms of corporate expansion methods has remained doubtful across these waves. Competing evidence casts doubts on whether mergers and acquisitions do in fact create value or generate innovation (Hitt, Ireland, Harrison, & Hoskisson, 1991). The monopolistic behaviour of the first wave resulted in gross imbalances through high degree of market concentration which resulted in a dramatic decrease in the number of firms active in the economy, for example in steel industry (Gaughan, 2007). Disproportionate allocation of resources and irrational acquisitions were soon followed by sequences of spinoffs (Fligstein, 1990; Gaughan, 2015). The focus on vertical mergers and acquisitions and diversification during the second wave raised even bigger macroeconomic problems (Daley, Mehrotra & Sivakumar, 1997). The performance of conglomerates was found to be negatively related to the degree of diversification (Daley, Mehrotra & Sivakumar, 1997; see Datta, Rajagopalan & Rasheed, 1991 for a review). Research shows the aggressive tactics of the fourth wave that focused on quick wins did not seem to perform any better, with some suggesting flawed managerial decision-making (Eddey, 1991; Walsh & Kosnik, 1993), or management resistance to the hostile takeovers impacting performance of the fourth-wave mergers and acquisitions (Jarrell & Poulsen, 1989; Gilbert & Lyn, 1990). However, there are studies showing no significant decline in performance of these transactions compared to the previous waves (Jarrell & Poulsen, 1989; Gilbert & Lyn, 1990). On whether mergers and acquisitions do or do not destroy value, it is important to understand the multi-layered nature of organizational performance construct. A varied range of performance indicators and measurement methods are used across studies, which might explain the

contradictory research findings. In a review of merger and acquisitions performance measures used in empirical research, Meglio and Risberg (2011) categorized these metrics into market performance (e.g. Cumulative abnormal rate (CAR)), accounting (e.g.: Return on Assets (ROA) or Cash flow), operational performance (e.g., market share, number of patents for innovative capabilities, cost synergies) and multifaceted indicators meant to capture the overall performance (e.g., attainment of M&A goals or divestitures). As a consequence, the multiplicity of performance measures used across empirical studies renders any comparison of them irrelevant on grounds of dissimilar and varied operationalisations of the same construct. Furthermore, the measurement of merger or acquisition success may be different in one industry compared to another. For instance, a merged healthcare company may be perceived by the market as underperforming by looking at its share price trend, but considered successful if measured by the number of patent filings.

1.8. Implications and research questions

In this chapter, I briefly discussed the history of mergers and acquisitions, the specific features of the waves and how they corresponded with the emergence of particular theories or trends observed in the literature. During the Great Merger Movement, there was intense scrutiny in the literature on the macroeconomic effects of trusts, and the resulting high market concentration (Livermore, 1935; Stigler, 1950; O'Brien, 1988). Since during this wave, the mergers and the acquisitions were carried by the organizations with the purpose of controlling a high portion of the market, this shaped the view that most mergers and acquisitions are driven by empire-building motives meant to eliminate competition (Unoki, 2013). As a consequence, the scarce literature emerging in the period were mostly analyses on the legality of mergers and

acquisitions (Thatcher, 1915) or case reports of particular cases of mergers or acquisitions (Dagget, 1913, 1914). As compared to the mergers and acquisitions carried within the same industry segment (i.e. horizontal), the trend of the second wave was towards diversification through conglomerate and vertical acquisitions (Gaughan, 2015), that is, the entry into various segments along the value chain within the same industry. The literature during this wave remained focused on the competitive effects of mergers and acquisitions (Stigler, 1950), the legal treatment of mergers and acquisitions in the context of tighter antitrust regulations in the United States (Perry & Porter, 1983; Williamson, 1968), and their performance (Dewing, 1921; Spahr, 1932; Livermore, 1935). The following wave was marked by the formation of conglomerates (Gaughan, 2007), and it was a period when the academic interest into the mergers and acquisitions phenomenon developed. New theoretical perspectives emerged, such as the theory of the market for corporate control (Manne, 1965), the strategic management of mergers and acquisitions (McLagan, 1965), as well as employee psychology perspectives, focused on attitudes towards the merger (Costello, Kubis & Shaffer, 1963), employee affect, such as fear (Matusiak, 1967) and cultural differences (Prince, 1965). During the fourth wave when corporate raiding practices dominated the mergers and acquisitions market, the literature focused on leadership studies (Jemison & Sitkin, 1986; Roll, 1986), management efficiency (Coughlan & Schmidt, 1985; Mikkelsen & Ruback, 1985) and employee psychology in terms of organizational culture (Mirvis, 1985; Blake & Mouton, 1985), of employee job prospects and well-being, including feelings of uncertainty, affective commitment and anxiety (Sherwood, 1983; Manzini & Gridley, 1986; Ivancevich, Schweiger & Power, 1987; Schweiger, Ivancevich & Power, 1987; Harshbarger, 1987). Compared to the previous waves literature, the theoretical assumptions underlying a merger or an acquisition success during the fourth wave was not

limited to the motive for the merger, but also to the managerial competence and employee-related factors (Mirvis, 1985; Blake & Mouton, 1985). The broadening of the theoretical context continued during the following waves, the fifth wave literature highlighting the role of national cultural differences (Brannen & Salk, 2000; Vaara, 2000; Frederick & de la Fuente, 1994; Weber & Shenkar, 1996; Larsson & Lubatkin, 2001), strand stimulated by the proliferation of cross-border mergers and acquisition, the application of the social identity theory (Terry, Carey & Callan, 2001; Hogg & Terry, 2000; Terry & Callan, 1998) and the capability of the firms involved in a merger or an acquisition to absorb and transfer knowledge (Empson, 2001; Buono, 1997; Björkman, Stahl & Vaara; Chan & Wong, 1994). It also expanded to include psychological contract theory (Turnley & Feldman, 1998; Cavanaugh & Noe, 1999; Cooper, 1999) and organizational justice theory (Citera & Rentsch, 1991; Skarlicki, 2001; Gopinath & Becker, 2000). During the sixth wave, these perspectives developed further but also enlarged with studies on the role of threat perception (Zhou, Shin & Cannella, 2008) and employee perceived uncertainty (Eriksson & Sundgren, 2005; Marmenout, 2010). Looking at the evolution of the literature, it appears that mergers and acquisitions success was now not only assumed to be driven by motive, managerial competence and employee attitudes but also by context-related factors, dynamics of intergroup relations, and how employees cooperate after the transaction has been completed. In this sense, the theoretical focus has shifted from pre-transaction factors (i.e. motive) to post-transaction factors (i.e. integration).

Considering these developments, there were several literature reviews conducted (Kale & Singh, 2009; Stahl et al., 2010; Cartwright & Schoenberg, 2006; Stahl & Voigt, 2008; Vazirani, 2015; Barkema & Schijven, 2008; Hutzschenreuter, Kleindienst & Schmitt, 2011; Cartwright & Cooper, 1990; Schraeder & Self, 2003). However, there are certain limitations to these reviews.

Firstly, the majority of these reviews are narrative (Kale & Singh, 2009; Cartwright & Schoenberg, 2006) and lack a critique of the literature (Kale & Singh, 2009; Vazirani, 2015). Secondly, they only cover a particular topic, such as history (Vazirani, 2015), and do not capture the full complexity of mergers and acquisitions. Thirdly, the narrative reviews do not provide the explicit criteria for article selection and offer no validity information regarding the studies reviewed. As for the meta-analyses carried (Stahl & Voigt, 2010; Larsson & Lubatkin, 2001; Stahl & Voigt, 2008; Homberg, Rost & Osterloh, 2009), there are several limitations arising from the narrow scope of the study. The meta-analyses carried out only cover specific facets of mergers and acquisitions management such as cultural diversity in multicultural teams (Stahl & Voigt, 2010), or cultural differences (Larsson & Lubatkin, 2001; Stahl & Voigt, 2008). These reviews only cover one theoretical perspective, while others, remain unintegrated in a meta-analysis. Social identity perspective, for instance, which has received strong empirical support in the literature (Drori, Wrzesniewski & Ellis, 2013; Bartels, Pruyn & de Jong, 2009; van Vuuren, Beelen & de Jong, 2010, van Knippenberg et al., 2002) has not been integrated in a meta-analytic study. And this is a surprising fact, considering that about a quarter of the studies discussing employee psychology of mergers and acquisitions from 1974 until 2015 fall within the social identity perspective. It is not known whether the variance of employee outcomes in mergers and acquisitions in terms of emotions, behaviour or health across studies is associated with social-identity related aspects such group status or employees' social identities. Furthermore, the sample of studies included in the cited meta-analyses are not exclusively focused on mergers and acquisitions (Stahl & Voigt, 2010) or they are outdated.

Therefore, there is a compelling need for an updated, rigorous and transparent review of the literature on the employee psychology of mergers and acquisitions that includes these latest

and prominent theoretical perspectives and which is based on explicit criteria for article selection and study validity that can fill the gaps in the literature. Additionally, there is a need for a review of the existing research that can bridge the insights from various disciplines to cover context-related factors, dynamics of intergroup relations, and how employees work together in a new organizational setting. There is also a need for a review that reflects the shift from pre-transaction factors (i.e. motive) to post-transaction factors (i.e. integration) in the literature. A review method that can respond to such rigorous constraints is the PRISMA method (Moher et al., 2009). The reliability of PRISMA systematic review makes it a gold standard technique that can generate robust and empirically-derived answers to some of the most pressing questions in academic research.

There are also several limitations regarding the empirical literature. Firstly, the literature progressed in fragmentary manner. The economic theories and psychological theories rarely meet in empirical research, with very few studies taking into account the role of contextual factors in employee psychology, such as extent of integration and merger or acquisition objective (Vaara, 2003), impact of cultural problems on merger or acquisition success (Weber & Camerer, 2003), shareholder value and achievement of merger/acquisitions objective (i.e. synergy realization, Stahl & Voigt, 2008). Therefore, the existing knowledge of the mergers and acquisitions is largely discipline-bound. There is a lack of sufficient theoretical interdisciplinarity in mergers and acquisitions research that can integrate the perspectives, concepts and data from organizational psychology, organization studies and strategy that can fundamentally advance our understanding of this phenomena.

Secondly, there are several aspects of employee psychology in mergers and acquisitions that remain underexplored or there is a lack of enough evidence, such as the link between

markers of employee behaviour and markers of psychosomatic health, like paranoia and hypervigilance and psychological exhaustion. There is also a lack of integration of these health indicators within the theoretical perspectives discussed herein, such as culture and social identity theory.

Thirdly, there are several methodological shortcomings. The majority of empirical studies in mergers and acquisitions research using quantitative methodologies base their findings on linear regression analyses (Lubatkin, Schweiger & Weber, 1999; Puranam & Srikanth, 2007; Papadakis, 2005; Bartels et al., 2007; Agarwal et al., 2012) or correlational analyses (Weber, 1996; Veiga et al., 2000; Lipponen, Olkkonen & Moilanen, 2004). While these are useful in understanding how an independent variable linearly affects a dependent variable, the nature of the relationship between the two may not be represented through a straight-line. This may inadvertently lead us to conclude that the two variables are not linked to each other. For instance, Larsson and Lubatkin (2001) found that pre-merger / acquisition organizational size has no effect on acculturation while Hambrick and Cannella (1993) found that pre-merger / acquisition organizational size does matter in employee turnover rates. That is, the smaller the pre-merger or acquisition firm, the greater the turnover rates. For the sake of argumentation, while the two studies have different outcome variables, existing research suggests a strong link between organizational culture and employee turnover (Vandenberghe, 1999), which means that the more employees believe their organizations' values are congruent with their own, the more they are inclined to stay in an organization. Therefore, there is reason to expect evidence to support the former study. However, this conflicting evidence in mergers and acquisitions confuses the effect of organizational size on employee turnover rates. The fact is that in reality, it may be the case that for small organizations being acquired the effect can be reversed, while in case of large

organizations the effect can be as suggested by Hambrick and Cannella (1993), namely a strong positive link between pre-merger / acquisition organizational size and employee turnover. Or, it may be that there are particular cut-off points in pre-merger organizational sizes in which the effect is either significantly positive or significantly negative. Furthermore, there may be no apriori indication as to what these cut-off values in organizational size might be, to enable discretization of the independent variable and allow a linear fit. Therefore, linear models are not suited for such hypotheses, as the relationship between the pre-merger organizational size and turnover rates may be nonlinear. Additionally, considering the lack of interdisciplinarity in mergers and acquisitions literature and the complexity of the mergers and acquisitions phenomena, the use of methods aimed at confirming or rejecting a hypothesis fail to capture relations between variables that attracted little prior research attention. Continuing the example above with organizational size and turnover rates, there is not sufficient empirical evidence to support the identification of the specific cut-off points in organizational size in empirical research.

Additionally, existing methodologies do not support the discovery of new relationships between variables which may advance our understanding of employee psychology in mergers and acquisitions. There may be relationships between constructs that have not been investigated in empirical research because there is limited literature to base such hypotheses. One such example could be the relation between perceived cultural differences, development of cynical attitudes and turnover intentions among employees in mergers and acquisitions. Another example could be the relation between perceptions of uncertainty, motive for the merger or the acquisition and employee engagement in retaliatory behaviour. These theoretical limitations found in empirical research coupled with the methodological limitations arising from the assumptions of

linearity and absence of integrative theoretical methods that can explain variation across cases of mergers and acquisitions, groups and individuals translate into impractical prediction accuracy levels (i.e. R^2), meaning they are not sufficiently high to be used as a measure of risk and only partly capture the complex nature of employee psychology in mergers and acquisitions.

Therefore, there is a need for new methodological approaches that can produce non-linear hypothesis functions, can be generalizable to the population, be able to uncover relationships between variables without prior theorizing and be able to predict risk of various employee outcomes.

Considering the limitations outlined above, and the needs identified in the literature this thesis aims at filling these gaps in the following ways. Firstly, I will present my systematic literature review using PRISMA methodology. This will allow me to eliminate the implicit researcher bias in the traditional existing literature reviews (Tranfield, Denyer & Smart, 2003). Furthermore, it will allow me to take into account the breadth of the existing empirical evidence in order to generate a more inclusive and more robust overview of the impact of mergers and acquisitions on the employees. The findings of my systematic literature review will be tested in a meta-analysis on the role of status and social identification for employees in mergers and acquisitions, which emerged in my systematic literature review as key antecedents to negative employee outcomes in mergers and acquisitions. In order to improve our understanding of the employee psychology in mergers and acquisitions, it is important that we examine existing evidence on employees' emotions, their behaviour and health after a merger or an acquisition and the specific aspects that cause these affective (emotions associated with the changes at the workplace and social dynamics), behavioral and psychosomatic well-being outcomes. Therefore,

my systematic literature review and my meta-analysis aim to address the following research questions:

- **RQ1:** What does published evidence tell us about the emotions of employees going through a merger or an acquisition?
- **RQ2:** What does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)?
- **RQ3:** What is the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions?

Secondly, in my empirical study, I aim to test a set of hypotheses that emerged as relevant from my systematic literature review regarding the link between affect, negative employee behaviour (e.g. retaliation, turnover), employee psychosomatic health (e.g. anxiety, social dysfunction, somatic symptoms), contextual variables (e.g. motive for the merger, degree of integration) and cognitive antecedents (e.g. social identification, perceived uncertainty, perceptions of fairness and justice). In testing these hypotheses, as informed by the systematic literature review, I aim to answer the following research question:

- **RQ4:** Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?

Thirdly, in order to address the methodological shortcomings (i.e. linearity assumption) and theoretical needs (i.e. integrative models and discovery of new untheorized relationships between variables) that emerged in the systematic literature, I propose a set of algorithms which can be classified as inductive, can be generalizable and may be used as a diagnostic tool for

employee outcomes in mergers and acquisitions, such as anxiety, social dysfunctions, turnover intentions, cynicism, somatic health and employee retaliatory behaviour. These algorithms are logistic regression with forward stepwise feature selection through likelihood ratio and classification and regression trees (CART), the latter being successfully applied in neuroscience and clinical psychology research for the prediction of childhood depression (Seroczynski, Cole & Maxwell, 1997), mental health markers and violence (Monahan et al., 2001) and affect (Gruenewald, Mroczek, Ryff & Singer, 2008). In testing these algorithms, I aim to answer the following research question:

- **RQ5:** What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?

This thesis is structured following the research questions above. Each chapter will discuss the theoretical perspectives outlined above, and their explanation for the various employee outcomes as evidenced by the literature included in the systematic review. Therefore, Chapter 2 discusses the findings of the systematic literature review of 288 articles. Chapter 2.3.1 will address the first research question of this thesis. Namely, *What does published evidence tell us about the emotions of employees going through a merger or an acquisition?* (**RQ1**) The review of the affective states of employees is structured using the framework put forth by Russell (1980). The emotions experienced by the employees are clustered along the arousal (i.e. physiological activity) and valence (i.e. positive / negative) dimensions. Each of the subsections will address the emotions falling into: high arousal and positive affectivity (HAPA), low arousal and positive affectivity (LAPA), high arousal and negative affectivity (HANA) and low arousal and negative affectivity (LANA).

In Chapter 2.3.2, I follow with the evidence on the behavioural outcomes, addressing research question 2: *What does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)?* (RQ2) The range of behaviours elicited by the merger-induced changes are structured by the target of behaviour, namely the organization and the outgroup. Chapter 2.3.3 addresses the third research question (RQ3), namely: *What is the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions?* Here, I delve into employees' propensity to experience depressive thoughts, anxiety or general health problems.

In order to address the scarcity of meta-analysis research about the impact of social-identity related factors on employees experiencing a merger or an acquisition, I conducted a meta-analysis (Chapter 3). This is, to my knowledge, the first meta-analysis to examine consistency across studies on whether social identity theory-related factors do have an impact on employee emotions and behaviours. While a broader focus would have provided valuable information on the prevalence of certain employee outcomes in mergers and acquisitions, such as employee stress, burnout, turnover intentions or job satisfaction, prevalence analyses were not possible due to several shortcomings in the existing literature. Some of these shortcomings refer to inconsistencies in the testing instruments used (e.g. either no two studies use the same instrument, or they use adapted or abbreviated versions), inconsistencies in item scaling (Armstrong-Stassen & Cameron, 2003; Väänänen et al., 2004), inconsistencies in terms of score calculation (e.g. item means or item sums). Furthermore, with very few exceptions, studies do not report norms, odds ratios or means in comparison with normative data. When normative data is reported, most often than not, these scores are 40 years old, such as for job satisfaction (Caplan

et al., 1975). Furthermore, the fact that multiple studies that might have been comparable in terms of measures used have similar authors, though not always in the same order, it may pose a major risk of sample overlap in more situations than stated by the authors themselves (Terry, Carey & Callan, 2001; Amiot et al., 2006; Amiot, Terry & Callan, 2007; Terry, Callan & Sartori, 1996). These recurring shortcomings for several outcome variables (e.g. burnout, health, satisfaction, turnover intentions, etc) would raise important reliability concerns on the resulting pooled estimates. The very few studies that report normative data (Cartwright, Tytherleigh & Robertson, 2007; Cartwright & Cooper, 1993) do not ensure, unfortunately a sufficient sample size to conduct a broader meta-analysis on employee outcomes. Therefore, this meta-analysis is focused on the impact of social-identity-related factors on employees, and it is meant to synthesize existing quantitative evidence of employee outcomes and clarify if the variance in employee outcomes is indeed shaped by factors put forth by the social identity perspective, such as status of the groups or organizations employees belong to and employees' social identities. The meta-analysis is also meant to provide some answers to the controversy in the existing empirical evidence regarding the role of group or organization's status for employees experiencing a merger or an acquisition and how feelings of organizational identity are associated with negative employee outcomes.

Chapter 4 provides an assessment of the study design, as a precursor step to my cross-sectional study discussed in Chapter 5 which is dedicated to research question 4 (**RQ4**), namely: *Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?* Chapter 4 will discuss the findings of my case study of an organization in the process of being sold. The aim of this case study is to assess the theoretical and methodological feasibility of the study design and

improve where possible the methodology to be used in the cross-sectional study. Using personal experience and a survey among 13 employees working in this organization, I examined, the extent to which a merger announcement would prompt particular organizational fairness evaluations, a disengagement from the organization (identity loss / change) and resistive behaviours such as retaliation, and psychological distancing and turnover intentions (i.e. withdrawal). Furthermore, I investigated the extent to which the uncertainty perceived by the employees about the future of their organization and themselves would be associated with a hypervigilant behaviour and health problems. The personal experience of the 9-month pre-acquisition period is meant to provide an account of employee experiences, their emotions and behaviours following the sale announcement.

The first part of Chapter 5 discusses the findings of my cross-sectional study in the context of research question 4 (**RQ4**), namely: *Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?*. Using a sample of 108 employees going through a merger or an acquisition, in a mixed study design, I tested the role of social identity and the strength of it in the way employees perceive the merger event, their subjective evaluations of the event, and behavioural tendencies. Secondly, I examined the link between employees' interpretation of the post-merger/acquisition environment, in terms of perceived uncertainty and trust relations with peers and various health (somatic and mental health markers) and behavioural outcomes (withdrawal and retaliation). Environmental factors, yet underexplored in the literature, and their role in employee psychology are also included in the model.

The second part of Chapter 5 is dedicated to answering research question 5 (**RQ5**). In this section I discuss the inductive computational models that use logistic regression with forward

stepwise feature selection and decision trees. Based on the same sample of 108 employees, I examine the usability of these inductive statistical methods to classify employees into high or low risk on several outcomes, namely general health (somatic health, anxiety and social dysfunctions), retaliation, cynicism and turnover intentions. In this section, I discuss the automatic selection of the variables into the predictive models within the relevant theoretical framework. I also make comparative analyses regarding the predictive accuracy of each predictive model to understand when linear or nonlinear functions are better suited for the diagnostic purposes above using metrics such as precision, recall and accuracy (Powers, 2011; Goutte & Gaussier, 2005). Through this novel data modelling technique in the organizational psychology research, I aim to identify the latent patterns in data that can correctly discriminate highly vulnerable employees at risk of ill psychosomatic health or of engaging in negative behavioural tendencies which have not yet been captured in the literature. Using inductive methods, I also discuss the extent to which the theoretical perspectives (social identity theory, trust and contextual perspective) that emerged in my systematic literature review are reconcilable in a theoretical integrative model of employee psychology of mergers and acquisitions that can work across different contexts.

In Chapter 6, I discuss the conclusions of these studies and the implications for theory and practice.

1.9. Conclusions

To summarize, in this chapter, I provided a brief overview of existing research in mergers and acquisitions and how the literature evolved over time. I concluded with the limitations and the needs identified in the literature. The limitations outlined above highlight the need for an updated systematic review that can include evidence not included in previous literature reviews

or meta-analyses and which is based on systematic article selection and on clear validity criteria. The limitations also uncover the need for a broadening of the theoretical scope and more interdisciplinary research that can include both contextual elements that have been proposed largely by the economic theories and employee psychological factors. Lastly, considering the complexity of mergers and acquisitions phenomena, there is a need for new methodological approaches that can fully capture this complexity and uncover relations yet unexplored in research. In the following chapter, I will discuss the findings of my PRISMA systematic literature review, corresponding to the first four research questions. I will start with the analysis of evidence on employee affect, using Russell's circumplex framework (1980) for affect (Chapter 2.3.1). Next, I will examine the evidence of behavioural outcomes among employees in mergers and acquisitions (Chapter 2.3.2) and follow with evidence on employee psychosomatic health (Chapter 2.3.3).

Chapter 2: Employees' emotions, rivalry, quitting intentions and stress in response to mergers and acquisitions: Systematic review of 288 studies using the PRISMA protocol

Abstract

Objective: In order to address the need for a summary of existing evidence of employee psychology of mergers and acquisitions, this systematic literature review aims to synthesize scholarly research on employee emotions, behaviours and health of employees experiencing a merger or an acquisition and their antecedents. I discuss existing theoretical perspectives, and identify current gaps in existing research.

Method: A systematic search of PsycINFO and PsycARTICLES database was conducted in adherence with the PRISMA guidelines. From 807 articles screened, 288 were included. I use Russell's (1980) circumplex model of affect to systematically categorize employee emotions. For behaviour, I used the adapted version of existing theoretical perspectives to discuss behaviours targeted against the organization and against the outgroup.

Results: Of the 288 studies included in this systematic review, 151 studies examine employee emotions, 126 examine employee behaviour and 8 employee health in mergers and acquisitions. I found the literature is highly heterogeneous in terms of methodologies used and in the specific context in which empirical studies are carried, which provide little generalizability.

Conclusions: It would be useful that future studies recognize the importance of contextual elements, include measures of behavioural and psychosomatic health outcomes and examine the causal relations between these variables in more quantitative studies. A broader theoretical approach to the study of affect and behaviour would be useful to enrich our understanding of employee psychology in mergers and acquisitions. Given the consistent support

of social identity perspective, a meta-analysis of studies within the social identity perspective is needed to understand the role of employees' social identity processes in mergers and acquisitions.

Keywords:

Mergers , Acquisitions, Systematic literature review, PRISMA, organizational culture, national culture, social identity theory, psychological contract, employee affect, behaviour, psychosomatic health, organizational justice, knowledge management, circumplex model, personal resources, job resources, job security, role clarity, perceived control, power differential, identity threat, trust, fairness

2.1.Introduction

Across the merger and acquisitions waves discussed in Chapter 1, several disciplines and theoretical perspectives evolved to understand the mechanisms by which mergers and acquisitions can create or destroy value. Several researchers attempted to provide an integrative theoretical approach to the study of employee psychology in mergers and acquisitions. Some notable examples are the studies conducted by Cartwright and Schoenberg (2006), Cartwright and Cooper (1996), Marks (2006) and Seo and Hill (2005). This systematic literature review adds to this body of evidence by providing an up-to-date systematic review of the empirical evidence and by incorporating fresh perspectives about employee emotions, behaviours and health after a merger or an acquisition. This systematic review also adds to the previous studies by bridging the gap between social psychology (e.g. social identity theory) and cognitive psychology (e.g. theories on emotions). In the table below, I provide a brief overview of the organizational psychology perspectives in mergers and acquisitions.:

Table 1

Main employee psychological perspectives in mergers and acquisitions literature

Organizational psychology perspectives in mergers and acquisitions literature	Summary	References
Organizational culture	Differences in the organizational cultures of companies involved in the merger or the acquisition are the main cause of poor performance and employee resistance	Mirvis, 1985; Blake & Mouton, 1985; Mirvis, 1985; Blake & Mouton, 1985
National culture	The national cultural differences between	Brannen & Salk, 2000; Vaara, 2000;

	organizations involved in cross-border mergers or acquisitions cause intergroup conflict arising from the different ways of working, communicating and behaving at the workplace.	Frederick & de la Fuente, 1994; Weber & Shenkar, 1996; Larsson & Lubatkin, 2001
Employee affect	Discusses employee emotions after mergers and acquisitions, such as fear of losing job, of threat to one's job status or demotion, anxiety of being separated from colleagues, and so on	Matusiak, 1967; Zhou, Shin & Cannella, 2008; Sherwood, 1983; Manzini & Gridley, 1986; Ivancevich, Schweiger & Power, 1987; Schweiger, Ivancevich & Power, 1987; Harshbarger, 1987
Social identity	Employees in mergers and acquisitions do not identify with the new organization but remain bonded to the old, pre-merger/ acquisition organization. Employees' strength of identification with the pre- and post-merger/ acquisition organization may lead to the emergence of "us" versus "them" dynamic and conflicting relations between the employees.	Terry, Carey & Callan, 2001; Hogg & Terry, 2000; Terry & Callan, 1998; Van Knippenberg et al., 2002
Fairness / justice / psychological contract	Employees after a merger or an acquisition perceive the new working environment as unjust in terms of procedures and resource allocation. They also perceive that the company has not met its obligations.	Citera & Rentsch, 1991; Skarlicki, 2001; Gopinath & Becker, 2000; Turnley & Feldman, 1998; Cavanaugh & Noe, 1999; Cooper, 1999
Knowledge management	Employees in mergers and acquisitions do not share the tacit knowledge as they fear their know-how will be	Empson, 2001; Buono, 1997; Björkman, Stahl & Vaara, 2007;

<p>used to their disadvantage and exploited in a way that is detrimental to them. Failure to share knowledge has been cited as a cause of intergroup conflict and poor merger/acquisition performance.</p>	<p>Chan & Wong, 1994</p>
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In the historical overview in the introductory chapter I explored how these theoretical perspectives evolved throughout the mergers and acquisitions waves and how they mirrored the specific economic, legal or social conditions surrounding the mergers and acquisitions activity. Looking at the evolution of the mergers and acquisitions literature, the theoretical assumptions underlying a merger or an acquisition success during the first waves was largely based on the fact that the motives for the merger or acquisition were the most important factors, such as empire-building which justified the formation of trusts or conglomerates enabling firm owners to control significant shares of the market (Livermore, 1935; Stigler, 1950; O'Brien, 1988). Starting from the third wave onwards it was suggested that motive alone was not sufficient to explain success or failure of a merger or an acquisition, but other aspects were also important such as managerial competence (Schoennauer, 1967; McLagan, 1965; Linowes, 1965; Prince, 1965; Fox, 1967; Manne, 1965) and employee-related factors (Costello, Kubis & Shaffer, 1963; Matusiak, 1967; Mirvis, 1985; Blake & Mouton, 1985). The development of affect theories (Sherwood, 1983; Manzini & Gridley, 1986; Ivancevich, Schweiger & Power, 1987; Schweiger, Ivancevich & Power, 1987; Harshbarger, 1987; Astrachan, 1990) and culture perspective (Buono & Bowditch, 1989; Nahavandi & Malekzadeh, 1988; Napier, 1989) and later on, social identity perspective (Terry, Callan & Sartori, 1996; Terry & Callan, 1998) improved our understanding of

the dynamics of intergroup processes and critical aspects related to the integration post merger / acquisition.

By the end of the sixth wave, there was a clear shift in terms of theoretical assumptions underlying merger or acquisition success, namely from a focus on motive, managerial competence and employee attitudes to context-related factors, dynamics of intergroup relations, and how employees cooperate after the transaction has been completed. In this sense, the theoretical focus has shifted from factors before the transaction, related to the selection of the firm for acquiring or merging with (i.e. motive) to aspects related to the integration of the two firms after the conclusion of the transaction.

Despite the breadth of the literature in mergers and acquisitions, the economic theories and psychological theories are not integrated in empirical research. There are, however, some exceptions, such as the study by Vaara (2003), who takes into account the extent of integration and acquisition objective as well as the studies on culture by Weber and Camerer (2003), the meta-analysis carried by Larsson and Lubatkin (2001) and the study by Stahl and Voigt (2008), which study the impact of cultural differences on merger or acquisition success or synergy realization respectively. Therefore, the existing knowledge of the mergers and acquisitions is largely fragmentary. There is a lack of sufficient theoretical interdisciplinarity in mergers and acquisitions research that can integrate the perspectives, concepts and data from organizational psychology, organization studies and strategy that can fundamentally advance our understanding of the mergers and acquisitions phenomenon. This is particularly relevant for how employees feel about the merger or an acquisition, their propensity to engage in resistive behaviour and their psychosomatic health, as they appear to play an important role in the post-merger/acquisition organization's successful synergy realization (Schraeder & Self, 2003; Buono & Bowditch,

2003). The way the employees construe the event is a function of a multitude of factors as they try to make sense of the new working environment before and after the actual merger or the acquisition (Vaara, 2000). Therefore, a comprehensive review of these diverse theoretical perspectives that can improve our interdisciplinary knowledge of the aspects that interact to influence employees' affect, behaviour, health and cognition is imperative in advancing our understanding of the phenomenon and in the development of evidence-based practitioner interventions.

In this chapter, I discuss the results of my PRISMA systematic review of the literature on employee psychology in mergers and acquisitions. I first discuss the need for a systematic literature review by examining the existing reviews carried thus far in the field. In Chapter 2.2, I discuss the PRISMA methodology, where I provide details about the review protocol, search procedure used, eligibility criteria for articles included in the study and study selection in adherence with PRISMA guidelines. In Chapter 2.3., I discuss the results of my systematic review along the first four research questions. Namely, in Chapter 2.3.1 I examine the range of affective states of employees going through a merger or an acquisition (**RQ1**). In Chapter 2.3.2, I discuss the existing evidence on employees' behaviour in mergers and acquisitions (**RQ2**). In Chapter 2.3.3, I continue with the evidence on employee psychosomatic health in mergers and acquisitions (**RQ3**).

Rationale. Considering the breadth of literature in mergers and acquisitions, there were several attempts at reviewing the literature (Homberg, Rost & Osterloh, 2009; Kale & Singh, 2009; Stahl et al., 2010; Cartwright & Schoenberg, 2006; Stahl & Voigt, 2008; Vazirani, 2015; Barkema & Schijven, 2008; Hutzschenreuter, Kleindienst & Schmitt, 2011; Cartwright & Cooper, 1990; Schraeder & Self, 2003). However, there are certain limitations to the existing

literature reviews. Firstly, the majority of these reviews are narrative (Kale & Singh, 2009; Cartwright & Schoenberg, 2006) and lack a critique of the literature (Kale & Singh, 2009; Vazirani, 2015). While these reviews are useful in providing a comprehensive overview of the field, they are narrow in terms of theoretical scope. In other words, these reviews are restricted to specific aspects of the mergers and acquisitions phenomenon, such as history (Vazirani, 2015). Other reviews focus on financial aspects of the mergers and acquisitions success (Datta, Pinches & Narayanan, 1992), modes of payment, experience and relatedness (King, Dalton, Daily & Covin, 2003), influence of management turnover on post-merger / acquisition performance (Butler, Perryman & Ranft, 2012) and relationship between transformational leadership and post-merger / acquisition performance (Vasilaki, 2011). However, since these reviews are limited to specific antecedents or outcome variables, it is important to consider the role of other potential causes identified in the mergers and acquisitions literature. Secondly, the cited narrative reviews do not provide the explicit criteria for article selection and offer no information regarding the article eligibility. As for the meta-analyses carried, the study by Stahl and colleagues (2010) focuses on a specific topic, that of cultural diversity in multicultural teams. While researchers often experience great difficulty in conducting extensive empirical studies in a merger or an acquisition context (King et al., 2004), it is important to emphasize that there is substantial evidence suggesting other possible factors can shape workgroup processes and organizational performance in mergers and acquisitions, such as context (Jensen & Ruback, 1983) or leadership (Bhal, Bhaskar & Ratnam, 2009; Nemanich & Vera, 2009; Covin et al., 1997). Another limitation to this study (Stahl & Voigt, 2010) is that although researchers make reference to mergers and acquisitions context, the sample of empirical studies included in the meta-analysis does not include solely merged or acquired organizations, but any organization that contains multicultural

workgroups. Investigating the degree of acculturation in cross-border and domestic mergers and acquisitions, Larsson & Lubatkin (2001) meta-analysed 50 studies in mergers and acquisitions to understand the role of contextual variables on the degree of acculturation post-merger. Authors found that national culture does have an effect on degree of acculturation achieved, while autonomy removal, relatedness and relative size do not. They suggested that increased socialization between organizational members would favour the creation of a joint organizational culture, as long as a certain amount of autonomy in terms of administration, operation and financial decision-making is preserved. However, one limitation of the study is that the sample included only mergers and acquisitions carried between firms from Sweden and the United States. Therefore, it is yet unclear whether and the extent to which these findings also apply to mergers or acquisitions cases involving organizations from other countries.

Another limitation is that it is outdated, with a significant portion of the literature being left out. Similarly, the meta-analysis carried by Stahl and Voigt (2008) investigated the role of cultural differences (organizational and national) in the success of a merger or an acquisition (measured using accounting-based performance as a proxy for synergy realization and abnormal returns as proxy for shareholder value). This study revealed several interesting contrasts between organizational and national culture in mergers and acquisitions and helped advance our knowledge of their role. Nevertheless, as stressed above, it is important to also examine other aspects that may influence the performance of an organization going through a merger or an acquisition. Authors (Stahl & Voigt, 2008) indeed recognize the importance of contextual variables, such as industry relatedness as moderator and controlled for the size of the organization. However, they did not explicitly take into account other aspects such as autonomy

preservation (Jensen & Ruback, 1983; Baron, 1983; Cochran & Wartick, 1984) or degree of integration (Zollo & Singh, 2004; Schweizer, 2005).

Another limitation is that it is outdated. For example, a search on Web of Science database using “mergers and acquisitions” with no delimiter on period of publication shows that nearly 70% of the literature included in the database of global citation data on the topic of mergers and acquisitions was published between 2009 and 2020. This is, undeniably, an important portion of literature which has not been reviewed or critiqued in the cited reviews. Therefore, there is a compelling need for a review that can fill these gaps in the literature, which can provide an updated overview of existing evidence, and be based on rigorous and transparent review methodology that includes explicit criteria for article selection and study validity. Additionally, there is a need for a review of the existing evidence that can bridge the insights from various perspectives so as to include employee affect, behaviour, psychosomatic health and their context-related, cognitive and resource availability (i.e. personal and job-related) antecedents.

Objectives. This systematic literature review aims to fill the gaps identified in the literature, by providing an updated overview of the evidence on employee affect, behaviour, psychosomatic health and antecedents to these employee outcomes. It aims to respond to the need for methodological rigor by using PRISMA method. It also aims to fill the current gap of reviews that do not focus on particular aspects of mergers and acquisitions, but which can capture the breadth of existing evidence and bridge theoretical perspectives in an integrative way that can provide an in-depth understanding of employee psychology in mergers and acquisitions. Therefore, in order to answer the research questions, while at the same time being able to

accurately account for the intricacies of the M&A phenomenon and its impact on the employees, I have chosen a systematic literature review methodology.

All evidence meeting the eligibility criteria detailed in Chapter 2.2. were collated to provide a reliable summarization of existing research broad enough to include both quantitative and qualitative studies. This is justified by the need to understand which factors are relevant in employee psychology after a merger or an acquisition, and whether this effect is constant throughout studies. This will also allow me to determine what future studies are needed to validate these relations as well as the needs for further meta-analytic investigations of particular perspectives. Given the broad research questions I aim to answer in this thesis, a systematic literature review offers, I believe, the necessary depth and rigor to evaluate the state of knowledge on employee psychology in a merger or an acquisition (Moher et. al, 2009). Thus, in my systematic literature review, I aim to answer the following research questions:

RQ 1: What does published evidence tell us about the emotions of employees going through a merger or an acquisition ? - Chapter 2.3.1

RQ 2: What does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)? - Chapter 2.3.2

RQ 3: What is the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions? - Chapter 2.3.3

In order to answer the first three research questions above, I have limited my search databases to PsycINFO and PsycARTICLES. Despite the focus of these databases on psychology discipline, the databases also include publications covering topics such as business, law, technology and education (see APA, 2019 for a list of journals included in PsycINFO and

PsycARTICLES databases). This limitation of the search to the two databases is justified by the need to pursue relevant articles for the purpose at hand, namely the understanding of the mental life of employees going through disruptive changes at work following a merger or an acquisition. There is a vast literature addressing the topic of mergers and acquisitions from varied perspectives, the majority of which fall under the financial and marketing disciplines (Cartwright & Schoenberg, 2006) and thus do not meet the eligibility criteria for inclusion because they are not discussing how these topics relate to employee psychological aspects. The justified limitation of the database search to the two sources was driven primarily by the objective to include only illustrative papers that specifically address the employee psychology in mergers and acquisitions, rather than screen a very large number of papers which in the later stages would have arguably been eliminated from the final review.

In order to answer the research questions and present the results of my systematic review in a clear and concise way, I have used theoretical frameworks that helped me classify employee outcomes in terms of affect and behaviour into specific categories. For the classification of employee affect in mergers and acquisitions (**RQ1**), I have used the circumplex model of affect proposed by Russell (1980). Due to the fact that the model is not focused on basic emotions but on two dimensions that measure valence and physiological arousal, it provides an appropriately broad investigative framework for the understanding of employee emotions. Secondly, the differences and similarities between employee affective states can be accounted for in a parsimonious manner by these two orthogonal and bipolar dimensions (i.e. arousal and valence), which helps me better synthesize existing research on employee emotions in mergers and acquisitions. In the classification of behavioural outcomes (**RQ2**), I used a system of evaluation that takes into account the target and valence of behaviour which is in accordance with Robinson

and Bennett's (1995) classification methodology. For reviewing the evidence on employee psychosomatic health (**RQ3**), I included those studies that investigate the development of several psychosomatic disturbances among employees in mergers and acquisitions (Table 6). In the inclusion of articles into the psychosomatic section, I have taken into account all studies dealing with markers of mental or somatic functioning that fall within the clinical spectrum of disturbances and which would require specialized care. In reporting of the evidence of these outcomes in terms of affect, behaviour and psychosomatic health, I discuss their antecedents by their characteristics, namely if they are context-related, resources-related (personal and job-related) and cognitive. I provide detailed description of these classification systems next.

2.1.1. Framework for reporting results on the evidence of employee affect in mergers and acquisitions – Circumplex framework (Russell, 1980)

In selecting the key constructs for the employee affective outcomes, I used the definition of a prototypical emotional episode (Russell & Barrett, 1999), or affect (Watson & Tellegen, 1985), defined as a set of subevents occurring in response to a person or an event. The emotional episode consists of core affect, overt behaviour in relation to the object, cognitive appraisal of the event; experience of emotion and psychosomatics. Core affect, as conceptualized by Russell (1980) as a circle in a 2D bipolar space of neurophysiological systems (pleasure-displeasure and arousal-sleepiness), has been central to the development of occupational well-being research (Warr, Bindl, Parker & Inceoglu, 2013; Bakker & Oerlemans, 2012) and consequently in the definition of constructs such as workaholism, burnout, job satisfaction and work engagement.

The core affect represents a synthesis or a combination of pleasantness/unpleasantness and activation/deactivation. The pleasantness dimension deals with the affective valence of

emotions. The arousal or activation/deactivation continuum refers to the physiological substrate of individuals' subjective experience. The circumplex model proposed by Russell (1980) emphasize the interrelatedness between individuals' core affective feelings and their neurophysiological basis. Core affect lies at the heart of any emotional episode which is initiated as a reaction to an event or stimuli but develops once cognitive resources and schemas are enforced and specific goal-directed behaviours are planned and enacted (Russell & Barrett, 1999).

A four-quadrant model deriving from the circumplex model of high/low arousal and pleasant/unpleasant affect with mid-point demarcation has found consistent support in empirical studies (Mäkikangas, Feldt & Kinnunen, 2007) primarily as a result of model specificity of analysis and precision of prediction. In six separate studies investigating the predictive value of the four-quadrant perspective, Warr et al. (2013), found that the two-dimensional framework provides a better fit to empirical data than do alternative models of affect. Furthermore, it has been shown to have predictive value on a specific set of behavioural tendencies. In contrast with other theories, such as Affective Events Theory (Weiss & Cropanzano, 1996; Weiss & Beal, 2005), which focuses on the structure, causes and consequences of affective experiences at work. It suggests that employees' work-related emotions, attitudes and behaviours are affected following an important work event. The framework is widely recognized and respected in the discussion of employees' emotional experiences in the workplace (Humphrey, 2006). However, the theory is strongly focused and centers around job satisfaction as the main organizational attitude that important work events would influence. While job satisfaction may be an important evaluative judgment of a person's work situation, research suggests other negative affective experiences or attitudes may not actually be associated with a lower job satisfaction (Ashforth &

Humphrey, 1993). Furthermore, other research suggests that Affective Events Theory lacks explanations as to how these emotions are experienced, and when certain events at the workplace trigger certain affective reactions as well as the mechanisms by which these reflect in behavioural and cognitive outcomes (Ashton-James & Ashkanasy, 2008). In contrast, the circumplex model of affect (Russell, 2003; Russell & Barrett, 1999) offers consistent theoretical and empirical approaches to studying affective disorders as well as the cognitive underpinnings of affective processing (Posner et al., 2005). This allows me not only to explore the wide range of emotions among employees in mergers and acquisitions, but also to explore in more depth their relation with the evidence on employee behavioural outcomes and psychosomatic health.

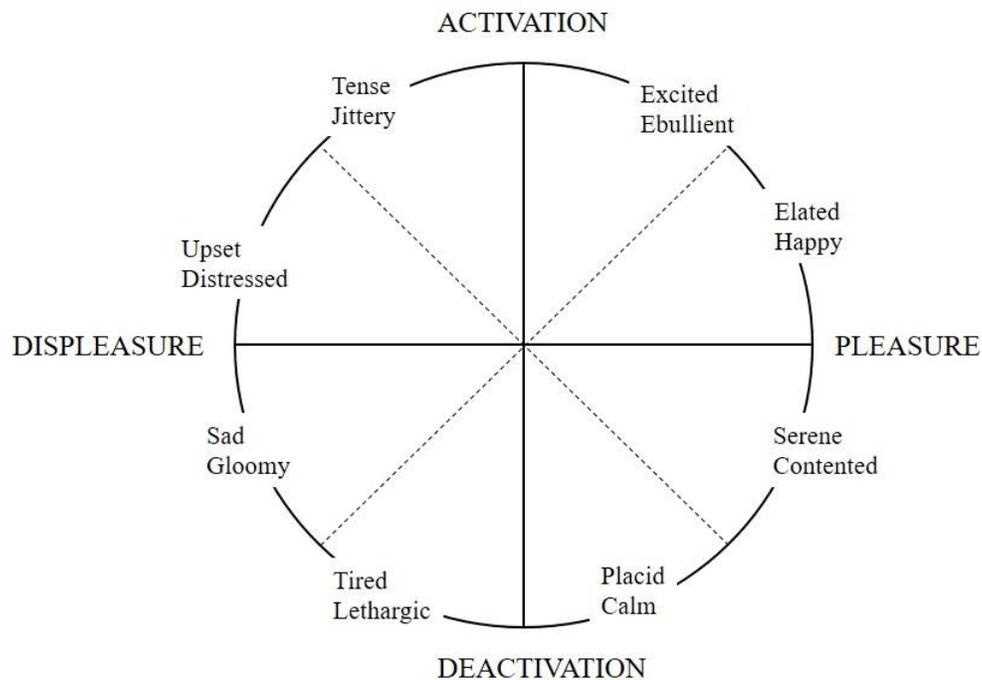


Figure 1. Circumplex model of affect (Russel, 2003)

Figure 1 shows the Core Affect and is reproduced from page 148 of Russell, 2003

I conceptualized the merger or the acquisition as an event that causes a change in employees' core affect, which activates certain cognitions and behaviours as well as some physiological responses. In the organizational psychology setting, the circumplex model of affect has been used as a broad theoretical framework to distinguish between positive and negative subjective wellbeing at the workplace (Bakker & Oerlemans, 2012). According to the authors, the right hemisphere of the circumplex model corresponds to positive forms of work-related subjective wellbeing, namely work-engagement (upper-right) and job satisfaction (lower quadrant). On the left quadrant of the model, the authors position the negative forms, namely workaholism (upper left) and burnout (lower left). Although the model is useful in pinpointing the specific job-related constructs and their affective components, I considered, that for the purpose at hand, a reverse approach would be more appropriate. For instance, the constructs within Bakker & Oerlemans's (2012) compressed model of workplace wellbeing, are multifaceted and integrate affective, but also behavioural dimensions. A restriction of my analysis to the four constructs would indeed have reduced the dimensionality of my study. However, it would not sufficiently retain the diversity of affective states documented in the literature. My aim was to unravel the full panoply of negative and positive affective states of employees, how they become manifested in and out of the workplace through overt behaviour, as well as the psychosomatic responses. An inclusive approach, I believe, will provide a reasonably clearer synthesis of the M&A literature from a psychological perspective in several ways. Firstly, it allows me to explore the large and heterogeneous literature in the field, the majority of which is cross-disciplinary in nature. Restricting the search and screening to a limited range of affective state contextualized to work domain would have yielded limited results, while others (e.g. emotional exhaustion, psychological withdrawal, resentment, individual emotional

state, etc.) would have been excluded. Secondly, the post-merger or acquisition environment is characterized by great uncertainty in terms of people's future standing in the new organization. The degree of emotional distress experienced by employees and adoption of resistive or supportive behaviour as well as the psychosomatic responses may be caused by a multiplicity of factors that change as a consequence of the merger or acquisition, once the cognitive structures are invoked. These causal forces arising from the various events unfolding as well as the ensuing appraisals and construction of these events may not be restricted to the work performed by the people, or the organization as objects of affect, but also the existence of an outgroup (van Dijk & van Dick, 2009), new management team (Shearer, Hames & Runge, 2001), the implementation of new work procedures, systems and routines, status in the new organization (Terry, Carey & Callan, 2001) and so on. I believe that the inclusion of a wider literature in my review allowed me to incorporate the contributions from more research traditions and thus have a more comprehensive view of how employees appraise the new environment, feel about the merger and their standing, and how they express these emotions through either cooperative or resistive behaviour. Not the least, a synthesis of how this major change at the workplace impacts people's health, will paint a richer picture of the effects of mergers and acquisitions on employees. Next, I briefly discuss the link between valence and neural substrate of each of these types of affect, and examine them within the context of mergers and acquisitions in Chapter 2.3.

The role of affect in behaviour. Affect guides and organizes behaviour (Isen, 2003; Andrade, 2005; Carver & Scheier, 1998; Carver & Scheier, 1990). However, certain feelings or emotional states may have more energizing potential in terms of behaviour than others. I explain here the psychobiological link between certain types of affect and behaviour or action tendencies. The emotional arousal dimension refers to the level of electrical activity in certain

areas of the brain in the presence of emotional stimuli. Prefrontal cortex (Bechara, Damasio, Damasio & Anderson, 1994), and amygdala (Davidson & Irwin, 1999) have been found to be critical components in the circuitry underlying both perception of emotions and production of emotional responses. The level of emotional arousal, or activation of core areas in the brain determines the level of bodily resources individuals are mobilizing in the regulation of their affective states. In other words, enhanced feelings of alertness increase the likelihood of engaging in goal-directed behaviours (Bagozzi et al., 2000; Rule & Nesdale, 1976). Valence of the emotions also plays a critical role in determining individuals' future course of action (Zinchenko et al., 2015). Positive emotions energize an approach behaviour. They steer individuals towards actions that may have a pleasant outcome (Fredrickson, 2001). That is, people assess their capabilities to perform a certain behaviour and once performed, the feelings of pleasure represent the affective reward for engaging in that behaviour (Watson, Wiese, Vaidya & Tellegen, 1999). Positive emotions may lead to desirable behaviours in organizations. On the other hand, negative emotions set in motion an inhibitory biobehavioural mechanism of withdrawal, which prevents individuals from engaging in activities that might lead to pain and punishment (Murphy, Smith & Lawrence, 2003).

The approach and withdrawal behaviour represent two adaptive motivational systems that mediate goal-directed behaviours (Carver, 2006). They facilitate and direct organisms towards situations that may yield either positive or negative outcomes. Furthermore, the two systems serve both reward-seeking and self-preservation functions by either responding to positive incentives or by triggering a more vigilant appraisal of the environment (Watson et al., 1999; Carver & Harmon-Jones, 2009; Carver, 2006; Citron et al., 2014). Therefore, particular emotions encourage or suppress certain action tendencies. For instance, high activation and positive

feelings, such as enthusiasm, cheerfulness, and excitement, implicate a higher level of physiological arousal, and thus a higher impetus for action compared to low-activation affect (Warr et al., 2013). In contrast to the high activation positive affect, positive feelings low in arousal are not invariably linked to an urge to pursue a certain course of action. While the former provides a higher impetus for action (Warr et al., 2013) the function of the latter is to broaden the range of thought-action repertoires (Fredrickson, 2001) or cognition (Gable & Harmon-Jones, 2010). In other words, feelings of high motivational intensity provide a stronger urge to engage in a particular behaviour, while feelings of lower arousal increase the cognitive breadth and cause a more global attentional focus (Gable & Harmon-Jones, 2008; 2010). For example, feelings of excitement or elation might be linked with the urge to push the limits or seek novelty. Feelings of contentment might be linked with the urge to enjoy and savour life events which are more contemplative rather than active action tendencies. Furthermore, these feelings also function to sustain one's personal resources (Fredrickson, 2001) which are linked to resilience and refer to individuals' perceived ability to successfully control and change the environment (Hobfoll, Johnson, Ennis & Jackson, 2003). Feelings of contentment, relaxation, calmness and tranquillity are some examples of such feelings within the circumplex model of affect. In an organizational context, the feelings within this quadrant have been linked to the broader construct of job satisfaction (Bakker & Oerlemans, 2012) which refer to the evaluative judgment of one's job or job situation (Weiss & Cropanzano, 1996). Employees who are satisfied with their job, derive a feeling of pleasure from their job, but limited level of energy or aspirations (Bakker & Oerlemans, 2012).

Extant literature suggests that positive valence feelings encourage an approach behaviour, while negative feelings withdrawal behaviours (Watson, 2000). However, affective valence alone

does not set in motion one or the other set of action tendencies. Anger, for example, as a negative feeling, does not trigger a withdrawal but an approach behaviour (Carver & Harmon-Jones, 2009). Therefore, it seems that in some cases, high arousal positive feelings may carry a stronger urge to action, while in others they do not. Correspondingly, certain negative feelings that are highly arousing may sometimes lead to action, while in others, they elicit efforts of withdrawal (Warr et al., 2013). Anxiety, for instance elicits rumination, avoidance and suppression regulation strategies (Aldao, Nolen-Hoeksema & Schweizer, 2010), while fear and threat activate freezing and defensive behaviours (Blanchard et. al., 2001). Along the same lines, frustration and other feelings related to self-worth, like insecurity or betrayal may rather prompt deliberate delay of job tasks and search for distractions (Harrington, 2005), or ruminative preoccupations (Rachman, 2010). While negative feelings may not always lead to withdrawal and may not originate in an inhibitory system, they promote an action repertoire that is momentary and decisive, and which is meant to restore individual's wellbeing (Fredrickson, 2001). Negative affective states have been linked to counterproductive behaviours in organizations such as disengaged silence, social withdrawal, effort withdrawal and minor theft (Warr et al., 2013). I will discuss the evidence on negative affect and high activation among employees in mergers and acquisitions in Chapter 2.3.1.3.

At the low end of the arousal continuum are negatively valenced feelings, meaning those emotional states that range from sleepiness, drowsiness and fatigue. The low activation and unpleasant emotions are associated with lower physiological activity and have been found to be primarily associated with a loss or absence of something desired (Lazarus, 1991). Even though the level of arousal, manifested and measured in terms of various cardiovascular indicators (Neumann & Waldstein, 2001), determines the urgency of action or the strength of evoked action

tendencies, it seems not to be the case with the negatively valenced emotions (Frijda, 1986). The intensity of the physiological responses does not always support the manifestation of behaviour to restore wellbeing (Warr et al., 2013). That is, low arousal states do not necessarily trigger inaction, particularly in case of negative feelings. Instead, it is rather the high activation unpleasant affect category that triggers a more reflective approach, whereas the low-activation negative affect is associated with a stronger urge to action directed towards the attainment of something desired. Warr and colleagues (2013) found significant positive associations between low-arousal negative affect and a range of counterproductive behaviours such as disengaged silence, social withdrawal, effort withdrawal and minor theft. Authors (Warr et al. 2013) also found negative associations between low activation negative affect and positive behaviours such as organizational advocacy and proficiency.

As such, low-activation negative affect refers to feelings such as sadness, feelings of emptiness and hopelessness. Depression for instance is linked to diminished interest in all activities, loss of energy coupled with feelings of worthlessness (Blatt, 2004; Zahn et al., 2015; Buchwald & Rudick-Davis, 1993). It is also associated with weakened ability to concentrate on daily matters as well as impairment in social and other areas of functioning (Hirschfeld et al., 2000; Gotlib & Hammen, 1992). In an organizational context, depression has been linked with impaired presenteeism and absenteeism (Claxton, Chawla & Kennedy, 1999; Evans-Lacko & Knapp, 2016; Bhui et al., 2012), and hence, a loss in work productivity (Lee, 2010; Lerner et al., 2004; Lerner & Henke, 2008). Empirical evidence supports the relation between depression and productive time at work in an American sample (Stewart et al., 2003). Although depression has affective, cognitive and physiological expressions in terms of appraisal and cognitive change, as well as impaired emotion regulation system and somatic symptoms, I will discuss depression research in mergers

and acquisitions literature in more detail in the Chapter 2.3.3. Chapter 2.3.3. outlines the evidence on psychiatric morbidity and comorbidity with other syndromes in more clinical terms, while in Chapter 2.3.1.4. I will discuss it in relation with other affective phenomena.

Another similar affective construct, emotional exhaustion, refers to a sense of chronic fatigue in response of excessive work demands that drain employees' emotional resources (Maslach, Schaufeli & Leiter, 2001). Emotional exhaustion, as a symptom of burnout syndrome, has been linked with anxiety, headaches, and other somatic disturbances (Kahill, 1988). It has also been associated with deterioration of individuals' relationship with family and friends and other aspects of their personal lives (Jackson & Maslach, 1982). On a macro-level, employees who experience emotional exhaustion exhibit negative attitudinal outcomes in relation to clients and colleagues (Singh, Goolsby & Rhoads, 1994; Kop, Euwema & Schaufeli, 1999), turnover intentions, job satisfaction and attitudes towards workplace climate (Lee & Ashforth, 1996). Role ambiguity, role conflict, stressful events and workload were the most important work stressors that correlated with the prevalence of emotional exhaustion in an occupational setting (Lee & Ashforth, 1996). I will discuss the results of my systematic review of low activation and negative affect among employees in mergers and acquisition in Chapter 2.3.1.4.

Considering the above, in discussing the affective states of employees in mergers and acquisitions that involve varied degrees of arousal or activation, I considered more appropriately to take a rather granular approach in order to understand how specific emotional states permeate and manifest in a changing organizational context. For example, for positive-valence affective states that involve high arousal or activation, such as affective commitment, emotional attachment to the organization, feelings of hope, motivation and engagement, although there exists an overlap between constructs and some of the affective states identified may in fact

constitute sub dimensions of other broader concepts (e.g. emotional attachment and organizational commitment), they are not reducible to one or the other.

2.1.2. Framework for reporting results on the evidence of employee behaviour in mergers and acquisitions

Affect has been found to be strongly linked with action tendencies (Carver, 2006). However various other aspects influence the extent to which individuals do ultimately engage in performing certain behaviours or not. The choice of a particular behaviour as a function of a certain affective state is subject to various contingencies, such as contextual (Tan & Tan, 2008; Coie & Dodge, 1998; Bamford & Ward, 2008; Montani, Odoardi & Battistelli, 2014), individual (Ajzen & Madden, 1986; Cantor, 1990) or group-related factors (van Zomeren, Spears, Fischer & Leach, 2004; Gollwitzer & Bargh, 2006; Terry, Hogg & White, 1999). For instance, the encouragement or discouragement of a range of workplace behaviours in the new organization might impose situational constraints that would inhibit behavioural expression and action based on individual affective states (Peters & O'Connor, 1980). Self-perception is another moderating variable that influences the extent to which individuals might indeed engage in a certain course of action, consistent with his or her affective state (Rise, Sheeran, & Hukkelberg, 2010). For example, the extent to which one evaluates himself or herself as resilient or competent to engage in an approach behaviour influences the manifestation of such behaviour. Additionally, as the theory of planned behaviour postulates (Ajzen, 2005), individuals' attitudes towards the behaviour determine the expression of a particular action. Strictly speaking, if an individual anticipates positive outcomes from the performance of a certain behaviour, he or she will most

likely pursue it, whereas a negative evaluation of the potential consequences, may inhibit its performance. Membership to a group entails the adoption of certain behavioural norms that are particular for the group and to which all members adhere to (Terry, Hogg & White, 1999).

Therefore, there is a wide range of causes and moderators that come into play before one actually decides to perform a certain action. Individuals need to accurately weigh in the implications of that behaviour, its congruency with the organizational norms and group norms (Terry & Hogg, 1996) and his or her perceived resources and opportunities of engaging in that behaviour (Ajzen, 2002).

For systematically analysing the existing evidence on the range of behaviours of employees in mergers and acquisitions (**RQ: 2**), I firstly classified them by target. This classification is, I believe, meaningful and comprehensive in understanding the way people act in changing organizations. Existing typologies (Warr et al. 2013) are either too limiting in terms of underlying dimensions used to discretize behaviours or focused on either positive or negative behaviours (Robinson & Bennett, 1995; Warren, 2003). Warr and colleagues' (2013) method of analysing impact of affect on behaviour uses a hierarchical classification system that takes into account both the valence of behaviour and its discretionary nature (for positive behaviours) as well as level of withdrawal (for negative behaviours). However, for the negative behaviours, authors focus on withdrawal behaviours, leaving out some other less passive forms of resistance but intuitively harmful to the organization and employee wellbeing, such as bullying or sabotage. In contrast, later frameworks focus exclusively on deviant behaviours (Robinson & Bennett, 1995; Warren, 2003). As deviance is defined as a violation of a norm (Robinson & Bennett, 1995), it was not possible to evaluate a particular behaviour in absence of the prescribed norms, standards and policies of organizations sampled in the literature. Moreover, the framework is

essentially focused on negative, more aggressive forms of behaviours. This excludes from the analysis, the more passive manifestations of dissatisfaction with the work and organization. Therefore, considering the shortcomings of the frameworks above, I used a system of evaluation that takes into account the potential of a behaviour to harm the organization or be beneficial. This classification, is, I believe, broad enough to include both passive and resistive employee behaviours, thus capturing the heterogeneity in employee behaviours in mergers and acquisitions observed in the literature. This classification by target and valence of behaviour takes into account Robinson and Bennett's (1995) classification methodology, whereby a deviant act at the workplace is directed either towards the organization or to other individuals.

As I will discuss in Chapter 2.3.2, a relevant target of employee behaviour in a merger or an acquisition context, as emerged from my literature review, is a salient outgroup. The intergroup context has been suggested by social identity perspective to cause employees to think in terms of "us" versus "them" (Hogg & Terry, 2000), emergence of intergroup hierarchy (Ellemers & Van Rijswijk, 1997; Leonardelli, Pickett & Brewer, 2010) and discriminatory behaviours (Abrams & Hogg, 1988). Therefore, the classification considers behaviours targeted against the organization and against the outgroup.

2.1.3. Classification of antecedents to employee affective, behavioural and psychosomatic health outcomes

The systematic review of the evidence on employee affective, behavioural and psychosomatic health outcomes in mergers and acquisition showed there is a diverse range of factors that can contribute to the way employees experience the merger or the acquisition which reflect particular theoretical perspectives. In discussing the evidence of employee outcomes in

mergers and acquisitions (Chapter 2.3), although I will analyse the impact of each factor, I will often refer to them collectively using terms such as contextual, cognitive or work demands/resource-related factors. This categorization is justified by the theoretical breadth of the mergers and acquisitions literature which involve the application of varied theories such as social identity theory (Tajfel, 1972; Tajfel & Turner, 1979; Hogg & Abrams, 1988), self-categorization theory (Turner, 1985; Turner et al., 1987), culture theories (Davis, 1985; Young, 1989; Turner, 1986; Alvesson, 1991; Rossi & O'Higgins, 1980; Levine & Moreland, 1991), trust (Mayer et. al., 1995); organizational justice (Colquitt, 2012; Greenberg, 1990; Greenberg, 1987), employee well-being theories (Demerouti, Friedhelm, Bakker & Schaufeli, 2001) and theories focusing on the context in which the merger or the acquisition is being carried. Here, I provide an overview of these perspectives in order to provide the theoretical foundation needed for the interpretation of the evidence on how particular factors function to produce certain affective, behavioural or health outcomes among employees involved in a merger or an acquisitions.

Contextual factors

Contextual factors refer to those aspects related to the merger or acquisition transaction, to the organizations involved in the transaction, or aspects related to the integration following the transaction. They are characteristics of the working environment and which have been suggested in the literature to play a significant role into how employees construe and feel about the merger or the acquisition (Guerrero, 2008; Fairfield-Sonn, Ogilvie & DelVecchio, 2002) or how they respond to it (Walsh & Kosnik, 1993; Meyer, 2001; Wickramasinghe & Karunaratne, 2009; Bauer & Matzler, 2014; Elstak et al., 2014). In this category, I included mood of the transaction, type of transaction (i.e. vertical, horizontal, conglomerate), degree of integration, speed of integration, structural changes, type of transaction in terms of geographical scope (domestic or

cross-border), organizational identity (i.e. brand), pre-merger or acquisition organizational size and corporate reputation before the merger or the acquisition.

While some of these factors are intuitive, other terms are specific to the mergers and acquisitions domain, therefore I provide here a short definition. Mood of the transaction refers to whether the deal is hostile or friendly. Hostile acquisitions refer to those transactions where the buyer submits unsolicited bids for purchasing a firm and target company management initially contests the offer. The acquiring firm takes the offer directly to the shareholders for passing the deal (Schnitzer, 1996; Morck, Shleifer & Vishny, 1988). In contrast, a friendly transaction is carried with the consent and cooperation of the target firm management. Type of transaction refers to the overlap in partner organizations' scope of business. From this perspective, one of the most commonly used typologies is the one established by the Federal Trade Commission (Angwin, 2012). According to this classification, mergers and acquisitions can be horizontal, vertical, product extension, market-extension or conglomerate. However, it is common that in research, the product and market extension category is subsumed under either horizontal or vertical category, and the shortened horizontal / vertical / conglomerate classification may be preferred (Rozen-Bakher, 2018; Herger & McCorrison, 2014). A horizontal merger or acquisition involves organizations operating in the same market and commercializing similar products, the rationale mostly being to increase market power or exploit cost-based synergies (Kolaski & Dick, 2003). In contrast, a vertical merger involves two or more firms operating in a similar market, but on different segments of the value chain (Comanor, 1967). An example is an energy supplier acquiring an energy production company (backward integration) or an industrial platform consuming a large quantity of energy (forward integration). The rationale is that firms engaging in vertical mergers or acquisitions can gain more control over the supply chain while

reducing costs. Conglomerate mergers involve companies operating in unrelated industries, the rationale being that it may open up diversification and cross-selling opportunities, as well as being a risk reduction mechanism (Lewellen, 1971; Mueller, 1969; Amihud & Lev, 1981).

Cognitive factors

In this category, I included those aspects of employee psychology that deal with how employees perceive themselves and their colleagues and how they construe the merger or the acquisition. The theoretical perspectives that emerged during my literature review and which I am discussing within the employee cognition as antecedents to employee affect, behaviour and psychosomatic health are social identity theory (Tajfel & Turner, 1979; Abrams & Hogg, 1990; Stets & Burke, 2000; Ashforth & Mael, 1989; Brown, 2000) and self-categorization theory (Turner, 1987; Turner et al., 1987; Turner & Reynolds, 2011), trust (Mayer et. al., 1995) and justice perspectives (Colquitt, 2012; Greenberg, 1990; Greenberg, 1987) and culture perspective (Davis, 1985; Young, 1989; Turner, 1986; Alvesson, 1991; Rossi & O'Higgins, 1980; Levine & Moreland, 1991). I will provide here a cursory review of these theories that is meant to lay the theoretical foundation for the analysis of the evidence of antecedents to employee outcomes.

Social identity theory and self-categorization theory. The main tenet surrounding the concept of social identity is that individuals conceive of themselves and others in intergroup contexts, based on “individuals’ knowledge that he or she belongs to certain social groups together with some emotional and value significance to him or her of this group membership” (Tajfel, 1982). The functional role of this classification rests with the cognitive ordering of the social environment and perception of oneness with or belongingness to a salient group classification (Ashforth & Mael, 1989). Several mechanisms foster individuals’ identification with a group. Firstly, group distinctiveness, which refers to the perceived idiosyncratic nature of

the group's values and practices compared to a relevant outgroup (Oakes & Turner, 1986; Brewer, 1993, 1991, 2003; Spears et al., 2004). Secondly, there is the prestige of the group that bolsters one's level of internalization of a particular social identity (Abrams & Hogg, 1988; Luhtanen & Crocker, 1992; Branscombe & Wann, 1994; Ellemers, Kortekaas & Ouwerkerk, 1999; Rubin & Hewstone, 1998). Social identity and intergroup behaviour are influenced by individuals' strive for evaluatively positive social identities, through intergroup comparisons, which in turn is motivated by the need for positive self-esteem (Abrams & Hogg, 1988). Thirdly, the presence of an outgroup raises awareness and salience of the ingroup. In the presence of an outgroup, individuals display greater group homogeneity than in the absence of a comparison outgroup (Turner, 1981; Simon & Pettigrew, 1990; Simon & Brown, 1987; Simon, 1992). Other mechanisms underlying group formation have been indicated to nurture individuals' sense of identification with a particular group, such as common history, interpersonal interaction, proximity, shared goals, and so on (Turner, 1981; Hogg & Williams, 2000; Abrams & Hogg, 1990).

Self-categorization theory unveils additional motivational mechanisms underlying social identity processes, such as individuals' need to reduce subjective uncertainty (Turner, 1987; Turner & Reynolds, 2012; Hogg & Mullin, 1999; Hogg, 2000; Mullin & Hogg, 1998). Affiliation to a group and internalization of a particular set of attributes that define that group enable the assimilation of the individual to a *prototype* that guides perceptions, attitudes, feelings and behaviours (Hogg & Abrams, 1993). Through its uncertainty reduction role, social identification renders individuals' existence meaningful and confers confidence in terms of behaviour and expectations from the social environment (Hogg & Terry, 2000). The self-categorization theory (SCT) represents the cognitive underpinning of the social identity theory (Turner, Oakes, Haslam

& McGarty, 1994). According to SCT, “when we think of and perceive ourselves as ‘we’ and ‘us’, as opposed to ‘I’ and ‘me’, this is ordinary and normal self-experience in which the self is defined in terms of others who exist outside the individual person doing the experiencing” (Turner et al, 1994). The categorization process implies a definition of the self as similar to some social aggregate and essentially in contrast to some other relevant social group. The self is thus experienced subjectively as a social category (Turner et al, 1994). An important characteristic of this cognitive process of self-definition is that the more group identity becomes salient, the more people see themselves as interchangeable representative of a social group and less as an individual person – a process of depersonalization (Turner, 2010; Hogg, 2003; Brewer, Manzi & Shaw, 1993). Depersonalization enforces assimilation and homogenization of self-perception and behaviour in line with the group norms and of an abstract prototype (Hogg, Hardie & Reynolds, 1995; Hogg, 2001). The notion of prototypes refers to the collection of stereotypical attributes of the group that capture the essential, defining features; an abstraction of group characteristics that are conceived of in the form of exemplary members (Hogg & Terry, 2000; Hogg, 1996). The role of prototypes is to maximize the similarity within group and differences between groups (Jetten, Spears, & Manstead, 1996; Turner, Brown & Tajfel, 1979).

Social identities are inherently relational and comparative (Tajfel, 1982) and are maintained by intergroup comparison. Contextual salience determines which psychological groups are used for comparison (Fiske & Taylor, 2013). While individuals attempt to access higher-status groups may be the easiest way to shrug off a negative self-image derived from particular group membership, it nonetheless remains contingent upon the higher-status group permeability (Ellemers, van Knippenberg, de Vries & Wilke, 1988). Should such attempts fail, individuals may either seek alternative routes or internalize the inferior status (Jost & Banaji

1994). Other strategies to cope with a threatened social identity, collectively termed “social creativity” involve a redefinition of the elements that form the basis for the comparative intergroup framework (Ellemers, Spears & Doosje, 2002). These individualistic strategies may imply a change in the dimensions for comparison between the ingroup and the outgroup, a change in the values assigned to the attributes of the group, so that what used to be negative is reframed as positive, or changing the comparison outgroup altogether (Tajfel & Turner, 1979). When individuals are highly committed to their group whose status is being under threat, their responses may involve an affirmation of their group identity, a stronger emphasis on group homogeneity and intergroup differentiation tactics (Spears et al, 1997; Mlicki & Ellemers, 1996; Ellemers, Spears & Doosje, 2002).

Culture. Several definitions exist about the concept of culture. For instance, a structuralist view of organizations posits that organizational forms and practices are reflections of unconscious processes (Davis, 1985; Young, 1989). In contrast, the symbolic view (Turner, 1986; Alvesson, 1991) defines organizations as patterns of symbolic discourse, thus emphasizing the role of language in the transmission and perpetuation of culture. In contrast, the social cognitive school of thought (Rossi & O’Higgins, 1980; Levine & Moreland, 1991) highlights the central role of knowledge. Organizations rests in the network of subjective meanings that organization members share to varying degrees. They are systems of knowledge. A structural-functional view conceptualizes organizations through their adaptive nature as organisms in the process of exchange with the environment. Although complete reviews of the culture theories are available elsewhere (see Smircich, 1983), there is a relative agreement on the unconscious operation of culture in the mind of the individuals, and that it shapes and transforms individuals’

interpretative schema of the world around them and guides behaviour (Triandis, 1994; Brislin, 1993; Shepherd, 2011).

Trust and organizational justice. Organizational justice refers to perceptions that the work outcomes individuals receive match the work inputs and those received by a comparison other (Greenberg, 1987; Adams, 1965) or whether they match certain norms (Leventhal, 1976). This conceptualization of organizational justice on content is central to the distributive justice approach (Greenberg, 1990). However, there are other facets to organizational justice. Another dimension of organizational justice is procedural justice, which focuses on the means used to achieve certain ends (Leventhal, 1980; Tyler, 1994; Sweeney & McFarlin, 1993). Interpersonal justice refers to the quality of interpersonal relationship, namely if people are treated with respect and dignity. Lastly, informational justice reflects the extent to which people receive the necessary justifications for certain procedures or outcomes (Bies & Moag, 1986; Colquitt, 2001; Greenberg, 1993). Perceptions of organizational justice has been found to be associated with organizational citizenship behaviour (Colquitt et al., 2013; Moorman, 1991), job satisfaction, organizational commitment (Kumar, Bakhshi & Rani, 2009), turnover intentions (Ambrose & Schminke, 2009), task performance (Zapata-Phelan et al., 2009), emotional exhaustion (Cole et al., 2010) and positive affect (Colquitt et al., 2013). Organizational justice, particularly the informational justice dimension has been found to be associated with the related concept of trust (Colquitt & Rodell, 2011).

Trust was defined as the willingness to be vulnerable to the actions of another person, with the expectations that that person will perform a certain action (Schoorman, Mayer, & Davis, 2007; Mayer, Davis & Schoorman, 1995). In contrast, trustworthiness reflects the attributes of a trustee that inspires trust, such as ability (i.e. competence, skills), benevolence (i.e. being caring

and empathic) and integrity (i.e. having moral principles; Meyer et al., 1995; Colquitt & Rodell, 2011). Employee trust in management and peers have been found to be associated with employee loyalty and satisfaction (Matzler & Renzl, 2007). Under Job Demands Resources Model that I discuss below in more detail (Demerouti, Friedhelm, Bakker & Schaufeli, 2001) trust is viewed as a resource (Schaufeli & Taris, 2014), along with team harmony, employee appreciation, goal clarity, etc. However, considering the important strand in the mergers and acquisitions literature that discusses the role of trust, and associated constructs organizational justice and psychological contract, it is, I believe, important to examine it more closely independently, rather than collectively as a job resource.

Resource-related factors

In analysing the causes of employee outcomes, job characteristics emerged during the literature review, characteristics which fall under the classification of the Job Demands-Resources Model (Demerouti, Friedhelm, Bakker & Schaufeli, 2001). The model proposes the classification of the working conditions into two qualitatively distinct categories. On the one hand, there are the physical, social or organizational aspects of the job that require sustained physical or mental effort, such as work overload, organizational changes, sustained noise, task interruptions (Bakker, Demerouti, Taris, Schaufeli & Schreurs, 2003). The job demands are negative only as long as they exceed employees' adaptive capacities (Schaufeli & Bakker, 2004). The health-enhancing factors, namely job resources, refer to those characteristics of the working environment that provide a protective buffer against the negative health impact of the job demands, they are functional in achieving work goals, they reduce job demands and the associated psychological costs and stimulate personal growth and development (Demerouti et al., 2001; Van de Broeck, Vansteenkiste, De Witte & Lens, 2008). Job resources refer to aspects such

as social support, performance feedback or job autonomy. On the other hand, the (JD-R) job demands-resources model proposes that people also recruit personal resources to cope with work demands (Bakker & Demerouti, 2017). These refer to the beliefs people hold about themselves with regard to the level of control over their environment, such as self-efficacy, organizational-based self-esteem and optimism (Xanthopoulou et al., 2007). Extant literature suggests job demands are the main predictors of job strain (Bakker, Demerouti, Taris, Schaufeli, & Schreurs, 2003; Bakker, Demerouti, & Verbeke, 2004), while job resources are the most important predictors of work engagement (Hakanen, Bakker, & Schaufeli, 2006). As for personal resources, studies suggest they moderate the relationship between adverse working conditions and well-being (Makikangas & Kinnunen, 2003; Van Yperen & Snijders, 2000). Additionally, job resources have been found to prevent employee emotional exhaustion (Xanthopoulou et al., 2007) and hence, to help employees become more resilient to adverse working conditions (Hobfoll, 2002).

In answering the research questions of this thesis, I try to unravel the multiple ways mergers and acquisitions differentially impact employees on an affective, behavioural and psychosomatic health and what are the most commonly researched antecedents of these effects. Each chapter of the Results section (Chapter 2.3) is dedicated to each of the research questions of this thesis. I will start by detailing the scientific criteria used in the search, selection and exclusion of articles for this review and registration protocols, as well as all other items in accordance with PRISMA guidelines (Moher et al., 2009). In the results section (Chapter 2.3.), I begin with a discussion of the evidence on employee affect in mergers and acquisitions (**RQ1**). I continue with a discussion of existing evidence on employees' behaviour in mergers and

acquisitions (**RQ2**: Chapter 2.3.2). The next chapter (Chapter 2.3.3) is dedicated to the evidence of employees' psychosomatic health (**RQ3**).

2.2.Method

Protocol and registration. A common practice in conducting systematic reviews is the registration of the systematic review before the screening of the research papers on a prospective register, namely PROSPERO database (Booth et al., 2012). The objective of the database is to avoid duplication of systematic reviews and increase transparency of the review process. The scope of PROSPERO register is restricted to reviews of effects of interventions and strategies to prevent or diagnose health conditions, for which there is a health-related outcome (Booth et al., 2012). Reviews accepted on Prospero database refer to reviews that have a health-related outcome and can be of interventions, service, delivery, prognostic factors, risk factors and epidemiological reviews (Booth et al., 2012). Therefore, given the wider scope of my review it was not possible to register my systematic review to Prospero database.

Eligibility criteria. In my systematic review, I included articles published in journals indexed in PsycINFO and PsycARTICLES. The search terms used were “mergers” AND “acquisitions” as Boolean search strings with special limiters on population group and methodology, meaning only empirical papers, literature reviews and meta-analyses were included. The eligibility criteria for the inclusion of articles in the systematic review were: a) the sampled population consisted of employees of a company that went through a merger or an acquisition either in public or private sector; and b) empirical studies had to include measures of employee affect, and/or evidence of particular behaviours (directed towards organization, job or co-workers) and/or markers of psychosomatic health, namely any health complaints stated by the employees in and out of the workplace. The systematic reviews and meta-analyses were considered eligible only if they reviewed studies dealing with the psychological health of employees, employee affect or behaviour before or after a merger or an acquisition. I did not impose any limiters on publication year, or language, demographics restrictions on the sample of

empirical studies or population group. Most of the articles retrieved were in English language, with only one exception, a paper in French language (Dumond, 2005). However, as I have an academic background in French linguistics and obtained my translator certificate for French, no third-party translation was needed. Overall, 797 articles were screened and included in an Excel spreadsheet for a balanced and reproducible management of retrieved citations. During the screening and inclusion of articles in the spreadsheet, I extracted information about each articles based on a checklist, which included: title, year of publication, authors, publication, full-text availability, whether the article meets the eligibility criteria, research hypotheses, methodology information, instruments of investigation, variables, number of cases of mergers or acquisitions included in the sample, number of participants in the study, details regarding the experimental context or sample information (e.g., country or specific professions), industry in which the organizations in the study were operating and findings. This metadata was extracted for all the papers retrieved and downloaded from the two databases (PsycINFO and PsycARTICLES). This spreadsheet with the information collected for each article was used to reliably weigh the eligibility of articles to be included in the final analytical step (see Appendix A).

Information sources. The sourcing of the relevant articles and inclusion in this review was in consonance with the research questions of this thesis. Therefore, I limited the search results to two relevant databases, namely PsycINFO and PsycARTICLES which specifically contained papers that investigated psychological markers or constructs. The two databases are specifically dedicated to the abstracting and indexing of peer-reviewed literature in the behavioural and mental health sciences. However, their scope is wide to include journals that would generally fall within management, organization, strategy studies and so on, but feature articles that are linked to psychology (APA, 2019, see Appendix B).

Search. Following the selection of the databases, the second stage involved the definition of the search criteria. I used ‘mergers’ AND ‘acquisitions’ as Boolean search strings and placed special limiters on population group and methodology. Particularly, in order to locate the relevant literature, I only included studies that had human samples and which were either empirical studies (including quantitative, qualitative and observational studies, using both primary or secondary data), systematic literature reviews and/or meta-analyses. I did not search for specific psychological constructs, but decided instead to include and download all the papers indexed in the two databases. Furthermore, I did not limit the search to a specific research method, the only conditions being to be indexed either as reviews of literature and /or empirical papers (quantitative, qualitative and observational studies, using both primary or secondary data). The studies were narrowed to the ones published in peer-reviewed journals.

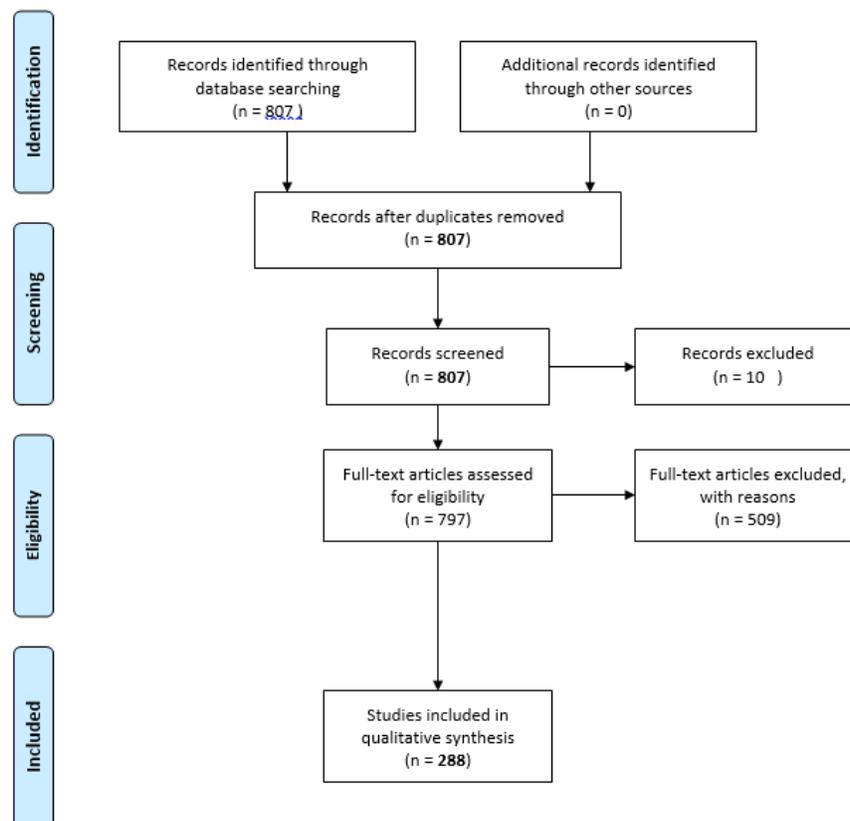


Figure 2. Prisma flow chart for the systematic literature review

Study selection. Studies that tested employee behavioural markers, affect and psychosomatic wellbeing were included. All empirical studies included in the review had to be carried in an organization that went through a merger or an acquisition, either in private or in public sector.

I excluded from the systematic review the articles that did not measure or analyse quantitatively or qualitatively any aspects related to employee affect, behaviour and psychosomatic health in a merger or an acquisition. I dropped any other paper in the financial (Reuer, Tong & Wu, 2012), marketing (Chen & Lin, 2011; Melewar, Saunders & Balmer, 2001) or strategy literature (Nisar, Boateng, Wu & Leung, 2012; Kristensen, 2000) that did not specifically link any employee psychological variables /constructs to organization variables. For example, Kristensen (2000) investigates the role of fairness in a corporate takeover in Sweden. However, the author discusses fairness in terms of satisfaction with a target organization selling price, without taking into account how this pre-merger or acquisition measure of satisfaction with the price affects employees. Also, I excluded from this review any empirical research carried in other forms of inter-firm collaborations, other than mergers or acquisitions, such as joint ventures (Lee, Chen & Kao, 2003; Al-Khalifa & Peterson, 2004), or various forms of alliances or partnerships (Mitsubishi, 2000). For example, Mitsubishi (2002) explores the concept of uncertainty and the mechanisms used by firms to eliminate it when selecting partners for R&D alliances or other inter-organizational collaborative projects. However, the research is not focused exclusively on mergers and acquisitions as particular forms of inter-organizational alliances, where, compared to more flexible inter-firm arrangements such as R&D alliances, different types of constraints exist (Das & Bing-Sheng, 2000; de Rond & Bouchikhi, 2004).

From 807 retrieved records, 797 were assessed for eligibility and 288 met the eligibility criteria. Of the 807 search results in this stage, 10 were removed on account of duplication and irretrievability. I present in Fig. 2 the PRISMA flow chart detailing every stage of the process.

Data collection process. For the screening of the citations identified during the database search, I created a table in an Excel spreadsheet based on a checklist for the screening and inclusion of articles in the systematic review (see appendix A). The checklist included: title, year of publication, authors, publication, full-text availability, type of article (e.g. Literature, review, empirical study, etc.), whether the article met the eligibility criteria, research hypotheses, methodology information (e.g. quantitative/qualitative, cross-sectional / longitudinal, primary/secondary data, survey/interviews), instruments of investigation (e.g. questionnaires used), variables, number of cases of mergers or acquisitions included in the sample, number of participants in the study, details regarding the experimental context or sample information (e.g., country or specific professions), industry in which the organizations in the study were operating and findings. This allowed me to synthesize the information and extract the relevant data. The data entry form also enabled a systematic and reliable management of citations for the systematic literature review, as well as an accurate organization of data collected throughout the process.

Data items. Throughout the screening of the citations in full length, the information about the study were entered into the spreadsheet. The systematic extraction of study information enabled a reliable classification of articles along constructs studied and accurate comparison of results. I coded the articles using the following categories:

Research hypotheses. This records the research questions in case of empirical studies, that specifically report hypotheses in itemized form. The structured extraction of research hypotheses was not, however, possible for studies using qualitative methodologies. In the latter case, epistemologies that guide the research process are inherently inductive, whereby the theory

traditionally emerges out from the data, though a clear dichotomy is not as strict. In qualitative research, generally there are no a priori assumptions about the phenomenon to be investigated. Instead, evidence related to a phenomenon provides a ground for theory formulation. While quantitative studies place an emphasis on causal relationships between constructs, predictions and generalizations, qualitative methods are generally centred on emergent theories and new concepts (Ritchie & Lewis, 2003). Therefore, in case of qualitative studies, I have detailed the phenomenon under inquiry.

Methodology. Given the complexity of the scientific method as a means by which the goals of scientific inquiry are achieved, I have chosen to take a piecemeal approach to the extraction of methodological data about the empirical papers reviewed. Namely, in order to ensure comparability of the papers and experiments carried in mergers and acquisitions, I separately coded information about the scientific methods used in the literature. Therefore, the data were classified along the following dimensions:

Data analysis. In this subcategory, I recorded the methodological information about the nature of the research. It categorizes papers into quantitative, qualitative and mixed methods. This separate encoding of experiments by the nature of the research is justified by the need to better understand the propensity of certain research methods and ensure comparability of research across similar methodological characteristics (Thomas et al., 2004). Information on the methodology takes into account Harden and Thomas (2005; Hammersley, 2001; Vulliamy & Webb, 2001), who highlighted the need to include qualitative studies into systematic reviews by aggregating the findings from both methodological paradigms after a separate analysis of both types of study (Thomas et al., 2004).

Temporality. This records the temporal dimension of the scientific method of choice in retrieved studies. Namely it categorizes data into cross-sectional and longitudinal experiment

conditions. Inclusion of the temporality dimension is useful to understand the extent to which we can make causal inferences from the empirical data and identify potential gaps in the M&A research (Luppino et al, 2010; Tran et al., 2015).

Reactivity. This record measures the degree of intervention of the researcher on the subject of study by the instruments of the study. This dimension classifies retrieved experiments into: experimental (e.g. lab experiments, controlled experiments – high reactivity), quasi-experimental (e.g. survey experiments, interviews – moderate reactivity) and observational (e.g. no direct intervention of the researcher on the subject of study). This is relevant for the purpose of the literature review to have a better understanding on the overall validity of the experiments carried in the field, and the level of bias in the studies carried so far (Cox et al, 2009).

Furthermore, it provides us with an informed understanding of any potential areas needing further, more rigorous evidence (Groenwold et al., 2008).

Instruments of investigation. This field records details about the specific instruments used in the study of various psychological constructs in the mergers and acquisitions literature. It details the constructs investigated in the experiment, as well the corresponding citations to trace the original questionnaire development and instrument reliability statistics. This data provides us with an overview of the most popular research tools used up to present day, and whether construct validity and reliability were adequate, following van Saane and colleagues (2003). For the qualitative studies, whereby no particular instrument is used, the information refers to the type of interviews (if applicable) used. In case of observational studies, where no direct intervention exists on the subject of study, the field records data about the metrics used in the analysis or proxies used for specific constructs.

Variable types. This field records data about the types of variables in the research design employed. Namely, the independent variable subfield collects data about the hypothesized and

measured antecedents or causes of certain outcomes. As the name suggests, the dependent variable field records data about the variables measured at the end of the causal pathway, the outcomes to certain causes or antecedents. For qualitative studies, the fields record details about the specific areas explored during the interviews with the participants (e.g., views, and subjective experiences of the post-merger/acquisition environment) (Harden & Thomas, 2005).

Sample. The information about the sample studied in the articles retrieved was separated into number of cases (i.e. of mergers and acquisitions) and sample (employees participating in the study). Existing research accentuate the specificity of each merger case and raise attention to the limited generalizability of the empirical findings (Bruner, 2005), largely as an argument to the inconsistencies across merger cases. In order to take stock of these idiosyncrasies, I separately recorded the number of cases of mergers and acquisitions investigated and the number of respondents. For instance, in case of a merger between three companies (Dackert, et al, 2003), the sample of cases field accounted for 1. The separate extraction of sample information addresses the issue of generalizability of research findings through a better understanding of the theoretical applicability and strength of existing evidence, following Deeks, Macaskill and Irwig (2005). Additionally, I collected sample metadata, namely sector in which the companies involved in the merger or the acquisition operate, location and type of transaction (e.g. national, cross-border).

The findings field records the results of the study. In particular, it tracks the validation or invalidation of the research hypotheses. In case of qualitative studies, I inputted the conclusions of the study or propositions generated. The literature reviews (systematic and meta-analyses) were categorized as quantitative with an observational methodology, and cross-sectional. The sample field in this case was populated with the number of empirical studies included in the analysis. Hypotheses and findings were coded similar to any other quantitative empirical paper.

Finally, the raw data collected in the form was subsequently categorized into affect, psychosomatic health, behaviour and antecedents. This unified data entry scheme served as the backbone for the subsequent analysis of the literature by aim.

Risk of bias. There two biases that must be considered in the interpretation of the results of this systematic review. Firstly, the publication bias in favor of the results published in peer-reviewed journals. Despite the growing acceptance of studies reporting nonsignificant findings, a preference still exists for those papers in which hypotheses being tested have positive results (Dwan et al., 2013). However, I used broad inclusion criteria, therefore, I do not expect any evidence of employee affective states, behaviours or psychosomatic health markers in the context of a merger or an acquisition to be outside of those considered in this review in unpublished papers. Furthermore, the synthetization of specific affective and behavioural markers into composite categories (i.e. the use of Russell's (1980) circumplex model of affect for high/low activation and pleasant/unpleasant affectivity and the use of adapted framework by Robinson and Bennett's (1995) for classifying behaviour) as a reporting strategy, reduces the publication bias in case of overlapping constructs being tested in unpublished papers. Secondly, there is the database bias. Although PsycINFO and PsycARTICLES provide full-text access to more than 2500 scholarly journals and extensive coverage of papers, there may be journals or periods of journals not licensed by Birkbeck University of London. The full text of these articles that could not be obtained via Birkbeck University of London library, where possible, were retrieved from other sources, such as www.researchgate.com or www.academia.edu research portals. Therefore, in my search strategy I have tried to limit the two notable biases to a minimum.

2.3.Results

Overall, 288 articles were retrieved for this review that fulfilled the inclusion criteria. Of these, 98 (32%) empirical papers were based on qualitative methodology, 200 (65%) on quantitative, and 10 (3%) involved mixed methods. As to the types of articles, 254 or 88% of the references included in our review were empirical studies, 30 were case studies (10%), and less than 2% were literature reviews (meta-analyses and systematic reviews). The most preferred research design was cross-sectional with 80% being carried at a specific point in the pre- or post-merger/acquisition period. Still, 20% of the articles reviewed provided valuable insights on the dynamic nature of employee variables and how these change once the organizations involved in the merger or acquisition gain a unitary form in longitudinal inquiries. Quasi-experimental methodologies predominate the empirical literature, with 208 (72%) articles studying employee outcomes without any randomization. Observational methods are also popular among M&A authors, with almost a quarter of the articles reviewing data collected from other sources rather than directly testing the employees going through mergers and acquisitions (e.g. annual reports, media analyses, etc.). Only 6% use experimental designs, usually carried in higher education environments in which a typical organizational merger or an acquisition environment was simulated for students (Giessner, Viki, Otten, Terry, Tauber, 2006). Table 2 summarizes the methodologies used in the literature so far and the type of articles that predominate the M&A research.

Table 2**Methodologies used in mergers and acquisitions psychology research**

Article Type	Design	Affect	Behaviour	Psychosomatic health	Total
Empirical study	Cross sectional	96	86	3	185
	Longitudinal	39	30	4	73
Case study		16	10	1	27
Reviews*					4
Total		151	126	8	289

*Note. *Including meta-analyses, systematic and narrative reviews*

The most popular outlets for the merger and acquisition research from a psychology perspective are Strategic Management Journal and Academy of Management Journal. Although the journals fall under strategy and management disciplines, it appears that the high share of research dealing with psychological aspects of the mergers and acquisitions targeting these outlets may reflect the cross-disciplinary nature of the field as well as the diversity of the topics accepted by these journals. The full list of journals covering M&A research from a psychology perspective and the number of articles included in this review are listed in Table 3 (APPENDIX B).

In the following chapters, I will discuss the results of my systematic review in terms of employee affect (**RQ1**), employee behaviours in mergers and acquisitions (**RQ2**), employee health and the underlying causes of these outcomes (**RQ3**). I will first start with the evidence of employee affect. The results for employee affective states in mergers and acquisitions are reported using Russell's 1980 circumplex model of affect, as detailed in Chapter 2.1.1.

2.3.1. Review of evidence of employees' emotions in mergers and acquisitions

Literature on employee effect emerged during the third wave revealed the importance of employee attitudes in mergers and acquisitions and how they affected employee health and the organization (Costello, Kubit & Shaffer, 1963; Matusiak, 1967). Later on, several studies suggested employees in mergers and acquisitions feel uncertain about their future and become anxious (Sherwood, 1983; Manzini & Gridley, 1986; Ivancevich, Schweiger & Power, 1987; Schweiger, Ivancevich & Power, 1987; Harshbarger, 1987), they become less satisfied with their job and become less committed emotionally to the organization (Schweiger & Denisi, 1992). More recent studies indicate employees in mergers and acquisitions are frustrated (Greenwood, Hinings & Brown, 1994), confused (Burley, Pederson & Bradley, 1994) or feel helpless (Fried et al., 1996). In contrast, other studies showed no effect of merger or acquisition on the level of employees' satisfaction with the job (Cartwright & Cooper, 1993; Krug & Nigh, 2001) and certain aspects make them feel included and engaged in the change process (Harwood & Ashleigh, 2005). As there are contrasting views regarding the employee affect in mergers and acquisitions, in this chapter I aim to review and compare existing evidence, analyse the gaps in research and provide future research directions. For clarity, I am reporting my systematic review results of evidence on employee affect in mergers and acquisitions following the circumplex framework (Russell, 1980), detailed in Chapter 2.1.1. Namely, I classified existing evidence into high activation and positive affect (Chapter 2.3.1.1), low activation and positive affect (Chapter 2.3.1.2.), high activation and unpleasant affect (Chapter 2.3.1.3) and finally, low activation and unpleasant affect (Chapter 2.3.1.4). In will begin by discussing next the high activation and positive affect of employees in mergers and acquisitions, such as employee affective

commitment, engagement or feelings of hope. The studies included in my systematic review of employee affect in mergers and acquisitions are listed in Table 4, Appendix C.

2.3.1.1. What published studies show about high activation and positive affect in employees' responses to mergers and acquisitions?

This chapter discusses the results of evidence on employee affect in mergers and acquisitions that require high levels of physiological arousal and are pleasant. In case of evidence of such affective states among employees in mergers and acquisitions, this chapter will discuss affective commitment and feelings of hope.

Affective commitment. Meyer and Allen (1991)' three dimensional model of commitment distinguish between affective, continuance and normative commitment. The affective component refers to employees' emotional attachment to, identification with and involvement in the organization. Continuance commitment refers to the perceived costs of leaving the organization while normative commitment deals with the feelings of obligation associated with remaining in the organization. In this chapter, I will discuss the results of my systematic review of evidence of the affective dimension of organizational commitment.

In mergers and acquisitions, the announcement of the merger or acquisition event has been found to induce a sense of uncertainty and fear about employees' new roles and functions in the new organization (Eriksson & Sundgren, 2005; Marmenout, 2010). This may ultimately lead to decreases in organizational commitment (Schweiger & Denisi, 1991) along with other dysfunctional outcomes, such as absenteeism, stress and turnover. These findings resonate with extant organizational health literature on the relation between commitment and performance and

counterproductive behaviours (Mathieu & Zajac, 1990; Steers, 1977; Meyer, Stanley, Herscovitch & Topolnytsky, 2002). However, there are certain limitations to these studies, largely due to the difficulties researchers often experience in conducting empirical studies in a merger or an acquisition. For example, Schweiger and Denisi (1991) were able to carry their survey experiment in only one case of a merger. This implies that we need more studies that can tell us whether these findings generalize well to other organizations. In mergers and acquisitions research the sample of employees in the study, I argue, is reasonably as important as the number of merger or acquisition cases these participants work in. That is because there is a diversity of factors that make mergers and acquisition sensible to local settings (Bruner, 2005), factors that influence how employees perceive the merger or acquisition event, such as national culture (Frijsn, et al., 2013) or industry (Miller, 1993). Additionally, affective commitment seems to be also a function of organizational culture (Silverthorne, 2004), organization size and other organization-specific factors (Sommer, Bae & Luthans, 1996). Therefore, these findings need to be validated in more studies in mergers and acquisition cases in different settings that can cover potential sources of variation in results. Another limitation is that authors did not take into account status or other contextual variables into account, such as degree of integration which have been found to be associated with how employees evaluate the merger or the acquisition (Giessner et al., 2006). In case of the study by Marmenout (2010), she conducted an experiment, using a hypothetical merger scenario. A limitation is that experimental methods may not create a realistic situation for the employees in mergers and acquisitions and may not accurately replicate their job or personal situation, that influence their feelings and emotions at work. Secondly, the sample used by the author consisted of undergraduate students, which may not be comparable to employees involved in a merger or an acquisition. The study by Terry, Carey & Callan (2001)

examined if status or power differentials between the two firms during the integration period influences employees' level of commitment. Authors found that as long as there is a certain degree of permeability (i.e. openness of the intergroup boundaries) and there are frequent opportunities for intergroup contact, members of the low status group would be more committed to the new organization. However, as with the study by Schweiger and Denisi (1991), it is important to understand whether these findings can generalize to other cases of mergers and acquisitions or different industry than the one examined by Terry and colleagues (2001), namely aviation. Therefore, there are similar concerns regarding the generalizability of the study, arising from the sampling of one case of merger or acquisition, covering only one industry. An earlier investigation of the psychological impact of a merger between two U.K Building Societies on middle managers (Cartwright & Cooper, 1993) provided opposite findings. Authors found that commitment did not change much as a result of the merger and did not challenge the organizational core values as much as it was expected. However, an important aspect of the study is that the sample only included middle managers, and the findings may not apply to non-management employees experiencing a merger or an acquisition. Although the two studies (Terry, Carey & Callan, 2001; Cartwright & Cooper, 1993) apparently yielded opposing results, the variation may be attributed to both differences in industries covered, and in the operationalization and conceptualization of the predictor variables. While Terry et al. (2001) measured perceptions of power differentials, Cartwright & Cooper (1993) controlled for pre-merger company affiliation. Therefore, it seems that perceptions of power differentials or status position may not necessarily be a function of organizational membership alone. Perceptions of power and hence, their impact on the level of organizational commitment may thus differ both

within and between groups. Therefore, a limitation of existing evidence on affective commitment lies also with differing operationalization of status as antecedent to employee affective outcomes.

Disengagement from the organization is exacerbated also by perceptions of organizational injustice. Perceptions of fairness appears to shape employees' affective commitment to the organization as the merger or the acquisition induces a sense of injustice among the employees (Klendauer & Deller, 2009). Perceived organizational injustice and particularly subjective evaluations of an unfair treatment individuals receive ultimately abates their commitment to the new organization's goals and values (Clarke & Salleh, 2011). While the study by Klendauer and Deller (2009) fills the gaps of previous literature in terms of number of mergers and acquisitions cases sampled (i.e. 37), the study focused on employees in managerial positions. It would be interesting to examine whether the relation between affective commitment and perceptions of injustice remains significant also for employees in non-managerial position. Another important aspect about this study sample is that it was carried in Germany. In order to understand whether this relation is not moderated by national culture (Harris, Moran & Moran, 2004), more studies in different countries would improve our understanding of the relation between justice and affective commitment in mergers and acquisitions.

Employee affective commitment has been found to be associated with the necessity to stay in the organization (i.e. normative commitment, Michela & Vena, 2012). Authors found that among the employees high in dependence, a greater uncertainty at the workplace influenced their level of affective commitment. One explanation for this finding is that an increased dependence on the organization for the fulfilment of employees' needs (pay, job security, status) activates certain cognitions and affect such as a more vigilant appraisal and allocation of considerably more effort towards anticipating their future in the new organization (Kelley & Thibaut, 1978;

Fiske, 1993). Therefore, those who feel reliant on the organization for personal goal achievement, are reasonably expected to have a more imperative need for information about how the merger will play out in the future. Employees who do not feel vulnerable with regards to their future situation in the merged company do not seem to be affected by the uncertainty brought about by the change event (Michela & Vena, 2012). They remain in the company because they *want to* and not because they are bound by any external constraints. For these employees, the uncertainty about the merger-related changes is not as poignant as in the case of individuals with high dependence. This study confirms the relation found by Schweiger and Denisi (1991) between uncertainty perception and affective commitment. An important aspect about this study (Michela & Vena, 2012) is that it was carried in a banking organization based in Canada. Considering the heterogeneity of mergers and acquisitions cases in a variety of ways (Bruner, 2005), across industries (Miller, 1993) or countries (Frijsn, et a., 2013), it would be interesting to see whether these findings apply to other cases of mergers or acquisitions operating in different industries in different countries. . Another aspect about the study is that it was carried prior to the merger, which means we do not know the extent to which these employee affective states prior to the merger or acquisition remain unchanged, turn positive, negative or increase or lessen in psychological arousal after the merger or the acquisition takes place.

In terms of outcomes, Armstrong-Stassen and Cameron (2003) found that the higher the affective commitment, the more likely the employees will engage in control-oriented coping strategies (Lazarus, 1993). That is, employees will try to reappraise the situation in positive terms, manage the situation effectively or seek additional information from others. By contrast, the more the employees feel locked up in the company with few alternatives to pursue

(continuance commitment), the more likely they will make attempts at escaping from the situation (avoidance/resignation coping).

Hopeful. There is however evidence suggesting that employees may also take a more constructive stance as they adapt to the change. They may exhibit feelings of hope about the relative continuity of their standing after the merger (Burley, Pederson & Bradley, 1994), and a generally positive appraisal of the merger event, as opportunity instead of as a threat. This ultimately kept employees motivated to perform in the organization (Teerikangas, 2012). Burlew and colleagues (1994) found this by conducting structured interviews with 8 mid and lower level managers in the pre-acquisition phase. It would be useful to determine also in a quantitative study with a larger sample size that also includes non-management employees what are the determinants and implications of a positive or negative construal of the merger or acquisition. A limitation to the study by Burlew and colleagues (1994) is that there are few data in the sample (8). In her qualitative study, Teerikangas (2012) investigated employee reactions in 8 cases of mergers and acquisitions and among 141 employees. The large sample size improved our understanding of how and when employees perceive the transaction as a threat or as an opportunity. It would be interesting to see if these results are also supported using a quantitative approach.

Conclusions. In summary, employee affective commitment appears to be weakened after a merger or an acquisition. Employees seem to lose the sense of togetherness in the new company and do not seem to develop a psychological bond with the post-merger/ acquisition organization. From the findings discussed above, employees react and construe the merger and its effect on their professional and personal lives differently (Terry, Carey & Callan, 2001). This may be due in part to a perceived privileged position one of the merger partners may enjoy in the

intergroup situation (Terry, Carey & Callan, 2001). Feelings of unfairness about the new procedures and treatment in the new organization is another factor which seems to reduce the strength of their psychological engagement (Klendauer & Deller, 2009). Disengagement from the organization appears to be accentuated by the extent to which individuals perceive themselves as *trapped* in the organization and highly reliant on the benefits they receive from their job coupled with a negative appraisal of the merger and its consequences (Michela & Vena, 2012). However, in certain cases, employees follow a healthier path of adaptation to change (Burley, Pederson & Bradley, 1994). Employee reactions may in certain conditions lean more towards motivation rather than negative construal of the merger in threatening terms (Teerikangas, 2012). This has been found to be contingent upon buying firm's behaviour, its future intentions and development of a shared understanding of the merger rationale (Teerikangas, 2012).

The evidence discussed in this section suggests that a systematic dissemination of information about the change process may stimulate a reappraisal of the merger in more positive terms as people reflect on its potential benefits on their career and benefits. Timely and relevant information (Rafferty & Restubog, 2010) may allay their anxiety arising from possible implications of the change on their professional and personal lives. A formal communication change process must be complemented by with actions meant to (re) build the trust of its employees. A feeling of fairness and trust in leaders cultivates a sense of identification among the employees and desire to embrace the new organization goals. Also, a proactive involvement of the management from both companies in the promotion of the merger success may ameliorate employee perceptions to the new organizational situation that would not warrant it continued work motivation or affective involvement.

Koch & Steers (1976) emphasize that commitment may be a more relevant predictor of turnover intention than oft-cited job satisfaction and may represent a very useful indicator of organizational effectiveness (Steers, 1975). Commitment is thus a very important construct for organizational health inasmuch as it has a predictive power on the adoption of cooperative or counterproductive behaviours. Employees who are not committed to the organization are likely to underperform, quit the job, not show up, be late at work or experience stress and work-family conflicts (Steers, 1977; Mathieu & Zajac, 1990; Meyer et al., 2002; Cohen & Freund, 2005). Conversely, a high affective commitment to the organization provides an impetus for a range of discretionary behaviours, such as organizational citizenship and extra-role behaviours (Williams & Anderson, 1991).

To conclude, the development of high activation/pleasant affect in mergers and acquisitions is a function of a) perceived uncertainty, b) trust, c) justice perceptions, d) group status, e) appraisal of the merger and f) company attractiveness, mediated by individual's professional situation and quality of organizational communication. The affective states in this category have been found to be associated with positive coping strategies and indirectly with post-merger effectiveness.

Limitations of studies about high arousal positive affect in mergers and acquisitions.

There are certain limitations that I have identified in the literature, which largely involve a significant under sampling, with the majority of studies being carried in either one organization, one country and one industry (Burley, Pederson & Bradley, 1994; Armstrong-Stassen & Cameron, 2003; Michela & Vena, 2012; Schweiger & Denisi, 1991; Terry, Carey & Callan, 2001). The undersampling problem can be mostly attributed to the challenges and difficulties researchers experience in gaining access to organizations undergoing a merger or an acquisitions.

The period before and after the transaction is generally problematic because of high workload associated with the transaction or there are confidentiality constraints. These represent major and most often insurmountable obstacles to researchers seeking access to sample. Another limitation is that studies are carried among managers (Cartwright & Cooper, 1993; Klendauer & Deller, 2009), or do not take into account aspects such as status or contextual variables (Schweiger & Denisi, 1991). Other limitations are related to the timing of the study, covering only pre-merger or acquisition stage (Michela & Vena, 2012), or use different operationalization for the same construct, such as status (Cartwright & Cooper, 1993; Terry, Carey & Callan, 2001).

Considering the limitations outlined above, it would be useful that future studies fill these gaps by trying to include more cases of mergers and acquisitions in their studies, increase the diversity in terms of industries and countries in which these mergers and acquisitions take place.

There is also a gap in terms of studies investigating the link between high arousal positive affect of employees in mergers and acquisitions and behaviour. Confirmatory evidence is still needed to validate the behavioural implications of these emotions experienced by the employees. There is an abundant stream investigating turnover intentions among the employees (van Dick, Wagner & Lemmer, 2004; Bellou, 2008; Fried, Tieg, Naughton & Ashforth, 1996), or other forms of withdrawal behaviours such as passivity (Choi, Holmberg, Löwstedt & Brommels, 2011). However, the research examining the link between this range of emotions and positive discretionary behaviours is inconclusive. If high arousal positive feelings energize an approach behaviour, such as organizational citizenship or extra-role behaviour (Warr et al., 2013), then the feelings of excitement and elation mediated by a systematic communication after the merger and promotion of the merger event as opportunity would inspire employees towards a helping behaviour and loyalty to the organization. A direct investigation into the affective-behavioural

pathway is needed to better understand how high activation positive affect comes to operate within its nomological network in a post-change working environment.

Furthermore, it may be useful in future research to answer the issue of both affective and behavioural homogeneity within and between the subgroups existing in the post-merger organization. One fruitful avenue, I believe, would be if the coexistence of both low and high activation positive affect confirms the co-occurrence of both positive and counterproductive behaviours. A process view on how these affective states become synthesized amid organizational pressures for uniformity as it evolves in its new form may offer fresh insights into the psychological dynamics of employees' psychological adaptation.

In terms of methodology and research instruments, some of the most widely used scales are Porter's 15-item commitment scale (Porter & Smith, 1970, Porter et al., 1974, Mowday, Steers & Porter, 1979) and Allen & Meyer's (1990) three-factor model. The former measures individuals' belief in the organizational goals and values, behavioural tendency for organizational citizenship or extra-role behaviour and desire to remain in the organization. The latter measures affective commitment to the organization, continuance commitment and normative commitment.

However, despite the stable instrument reliability, there are certain concerns particularly notable in the mergers and acquisitions context. For example, employees may be committed to various aspects of their work environment, namely both to their groups and to their pre-merger organization, entities which are markedly salient in this context. Therefore, survey items need to accurately specify the entity the employee is or is not committed to, in order to avoid any ambiguity in terms of the facet of their environment being assessed. Although there are occasional mentions of item adaptations (Terry, Carey & Callan, 2001), most often than not, authors fail to specify the target organization being evaluated in terms of employee commitment

(Joslin, Waters & Dudgeon, 2010; Armstrong-Stassen & Cameron, 2003). This raises important construct validity concerns, particularly for cases where significant structural changes occur after the merger. Employee commitment evolves over time (Mowday et al., 1979), as employees reflect on their relationship with the new organization and this aspect needs to be better reflected in empirical research.

2.3.1.2. *What published studies show about low activation and positive affect in employees' responses to mergers and acquisitions?*

In the preceding section, I discussed the evidence of high activation and positive affect of employees in mergers and acquisitions. In this section, I continue with the literature on positive affect but low in physiological arousal, such as employee satisfaction.

Satisfaction. Mergers and acquisitions literature discusses satisfaction both as a global evaluative summary of one's job and also as evaluations of specific aspects of their jobs or work environments. Schweiger & Denisi (1991) found that merger announcement causes an abrupt shift in employees' global assessment of their work. As soon as individuals learn about the merger, they no longer view their job in positive terms. Instead, their overall evaluations of the working environment become unpleasant when it comes to their prospects and need fulfilment in the new company. The effects of the merger on employees' level of satisfaction apparently continue to reverberate months into the integration stage (Schweiger & Denisi, 1991). Evidence shows low levels of job satisfaction persist two years after the implementation of merger-related changes (Amiot et al., 2006; Amiot, Terry & Callan, 2007), or at least for three years after the acquisition (Guerrero, 2008; Peck, Towell & Gulliver, 2001).

As a global evaluative construct, employee satisfaction, as with affective commitment (Mathieu & Zajac, 1990; Tett & Meyer, 1993), seems to be determined by certain contextual variables. For instance, degree of integration has been found to be associated with lower satisfaction on the job and job stress (Makri & Hantzi, 2012). In other words, it appears that the more assimilationist the integration strategy, the longer it will take for the employees to identify with the new organization, the lower the satisfaction on the job, and the higher the post-merger

stress (Makri & Hantzi, 2012). However, a limitation to the study by Makri and Hantzi (2012) is that the authors did not take into account the influence of resource variables, such as job security, autonomy or organizational support, these factors being indicated in extant literature as strong predictors of job satisfaction (Tian, Wang & Chia, 2018; Artz & Kaya, 2014).

Other contextual factors appear to play an important role in employees' propensity to experience low-arousal affect in mergers and acquisitions (Elstak et al., 2014; Chun & Davies, 2010; McEntire & Bentley, 1996). For instance, the reputation of the partner organization has been found to increase identification with the newly merged organization (Elstak et al., 2014) and to be positively associated with employees' emotional attachment, satisfaction and job security (Chun & Davies, 2010). Another organization-related factor associated with employee outcomes is organizational identity. This comprises brand names, positioning in the market and other organizational artefacts, which during the integration process may lead to organizational identity confusion (McEntire & Bentley, 1996; Kooor-Misra & Smith, 2008).

Aspects related to intergroup dynamics post-merger/acquisition represent another cluster of antecedents associated with employees' satisfaction on the job, such as power differential (Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007; Makri & Hantzi, 2012). Employees of the low-status organization are found to be less satisfied with their jobs compared to the high-status employees (Terry, Carey & Callan, 2001). Despite the confirmatory evidence on the perceived superiority of the two groups in the organization and status as defined by firms' role in the transaction or their pre-merger size (Terry et al., 2001), the latter does not seem to independently produce an equally strong influence on job satisfaction. Cartwright & Cooper (1993) found no significant difference in scores among the merger partners. These contradictory findings may be explained by the fact that size or pre-merger organizational boundaries alone may not explain the

variance in employee adaptation to the merger. Instead, it is the salience of power differential that has an impact over employees' affective experiences post-merger (van Knippenberg et al., 2002). A shared understanding and tacit reciprocal agreement on the intergroup hierarchy may in fact cue associated social identification cognitions. This could animate a reconstrual (in non-positive terms) of employees' jobs and organization. As emphasized previously, studies in more organizations are needed to understand whether these findings (Schweiger & Denisi, 1991; Cartwright & Cooper, 1993; Terry, Carey & Callan, 2001) can be generalized to other cases of mergers and acquisitions. . As there are specific aspects that influence employees' modes of thinking and how they evaluate specific change events, such as national culture (Meyer et al., 2007), or organizational culture (Smollan & Sayers, 2009) that may have a role in the relation between employee group status and emotions.

Status and power differential seem to influence also the more parsed aspects of aspects of job satisfaction such as satisfaction with the merger (Covin et al., 1996; Fischer et al., 2007; Basinger & Peterson, 2008; Chun & Davis, 201). Satisfaction with the merger, operationalized as perceptions towards the merger through its change potential on organizational culture, is experienced differently for acquired versus acquiring employees (Terry, Carey & Callan, 2001; Covin et al, 1996; Fischer et al., 2007). Also, union membership was found to have a positive effect on satisfaction (Covin et al., 1996). Satisfaction with the merger may also be experienced differently when status is operationalized as perceptions of dominance (Marmenout, 2010).

Identification with the organization has been found to play an important role in the relation between a range of merger/acquisition-related antecedents and job satisfaction (van Dick, Wagner & Lemmer, 2004). However, the two foci of social identification at work in a merger or an acquisition context functions differently in terms of employee adjustment. Identification with the

post-merger or acquisition organization would presumably fulfil an additive role to job satisfaction, while pre-merger or acquisition identification an inhibitory one, a hypothesis that would accord to social identity theory (Ellemers, 2003). Instead, there is evidence supporting the opposite pattern of relations. Van Dick, Wagner and Lemmer (2004) showed that a high identification with the pre-merger subunit but a low identification with the post-merger organization induce a high sense of overall job satisfaction. Positive relations between identification with the pre- and post-merger or acquisition identification and job satisfaction were also found for high/high identification levels. In light of these findings, whereby as long as the pre-merger unit remains visible within the new organization, developing bonds with the post-merger entity may not be as critical for cultivating positive evaluations of their jobs as initially thought (van Knippenberg & van Leeuwen, 2001). However, a limitation to this study (Van Dick, Wagner & Lemmer, 2004) is that employees of a public hospital are not necessarily comparable to employees working in a private sector, as extant literature seems to suggest (DeSantis & Durst, 1996). There are various aspects of the job that differentially account for employees' overall job satisfaction in private versus public sector such as pay, career development, workload and social context (Pillay, 2009) or in terms of intrinsic versus extrinsic values of their work (Ullah et al., 2018; Schneider & Vaught, 1993; Rodriguez et al., 2014; Chaudhry et al., 2011; Staude, 1996). Therefore, the results of the study may not be generalizable to different sector in which employees going through a merger or an acquisition may work in.

Job satisfaction among employees in mergers or acquisitions seems to be also a function of work demands/resource-related factors. The mergers and acquisitions literature suggests there are limited (or lack of) job resources that employees can recruit in such a highly demanding work context (Krug & Nigh, 2001; Edwards & Edwards, 2014; Chung, Du & Choi, 2014) such as job

security and autonomy. These have been associated with various affective outcomes such as declines in job satisfaction (Gulliver, Towell & Peck, 2003). Apart from job security, role clarity has also been found to be a strong predictor of job satisfaction in mergers and acquisitions (Gulliver, Towell & Peck; 2003), explaining up to 40% of the variance in job satisfaction.

Mergers and acquisitions literature supported the hypothesized linkages between job satisfaction and withdrawal intentions and cognitions as well as counterproductive behaviours (Tett & Meyer, 1993). Satisfaction with the job appears to be a central antecedent to executives' decision to stay in the organization (Krug & Nigh, 2001), as well as to the adoption of either supportive, compliant or resistive behaviour (Nikandrou & Papalenxandris, 2007). However, Krug and Nigh (2001) conducted their study among managers. It may be that employees in mergers and acquisitions in non-managerial positions are not psychologically comparable to employees in managerial positions, as there may be different motivators underlying turnover intentions or work in different ways (Foreman, 2009). For example, removal or autonomy in decision-making may be more important for a manager after a merger or an acquisition (Lubatkin, Schweiger & Weber, 1999) than pay or job security which may be more relevant for non-management employees (Lee et al., 2013).

Conclusions. In summary, evidence suggests employees may sometimes feel satisfied at the workplace after a merger or an acquisition, while in other cases, the merger or the acquisition induces states of discomfort and uneasiness. Reviewed evidence shows the factors that contribute to employee satisfaction at the workplace after a merger or an acquisition are: a) group status, b) group permeability (i.e. the possibility of crossing group boundaries), c) strength of identification, d) organizational trust, e) perceived uncertainty; f) job and personal resources; and contextual factors (role in transaction and degree of integration). A high satisfaction at the workplace can

trigger supportive and learning behaviour and a good psychosomatic health. In contrast, a dissatisfaction at the workplace may generate resistance, withdrawal and ill-health. However, the difficulty researchers experience in conducting their studies because the organizations tend to be particularly reluctant when experiencing a merger or an acquisition in giving researchers access to respondents reflects in certain methodological limitations of the existing literature that raise generalizability concerns. While authors do acknowledge these limitations, the majority of the studies are conducted in one organization or one industry or one sector (Schweiger & Denisi, 1991; Cartwright & Cooper, 1993; Terry, Carey & Callan, 2001; van Dick, Wagner & Lemmer, 2004) which means that we do not know whether the relations uncovered between job satisfaction and other factors will in fact be confirmed in other countries, industries or sector. Additionally, the studies on the link between job satisfaction and turnover mostly involve employees in managerial positions (Krugh & Nigh, 2001), therefore, the link between job satisfaction and turnover may not be generalizable to non-management employees.

From the literature above, I conclude that organizations may try to cultivate a sense of belongingness through active involvement of employees in the integration programme (Harwood & Ashleigh, 2005) or decision-making processes (Bellou, 2007) in order to encourage more positive evaluations of the merger or the acquisition. This may enable employees find meaning in their jobs and thus, become more satisfied with their work and merger or acquisition.

In this and the preceding chapter, I discussed the evidence on the positive affect in mergers and acquisitions. I have also provided suggestions for future research which, considering the limitations of existing research, I believe would be useful to pursue in empirical studies. In the next section, I will examine the evidence of negative affect in mergers and acquisitions and their antecedents and outcomes as found in the literature .

2.3.1.3. What published studies show about high activation and unpleasant affect in employees' responses to mergers and acquisitions?

In the previous two chapters, I discussed how mergers and acquisitions encourage or inhibit positive affect among employees and how these emotions find expression in particular behaviours. In the next two chapters, I will continue the discussion on employee affect with evidence of negative emotions. Firstly, I will review here the studies investigating high arousal negative affect, and follow with low arousal negative affect in Chapter 2.3.1.4. Here, I explore high activation and negative affect namely, employee feelings of being devalued, betrayed, feelings of threat, and anxiety.

Self-esteem/Devaluation. Institutionalization of different performance criteria which oftentimes obviates employees' skills and abilities or renders their knowledge unnecessary in the new organization affects people's judgments about their current standing (Piekkari et al., 2005). As people face the threat of losing their job, of being demoted or of dealing with status devaluation after a merger or an acquisition, employees seem to lose their sense of self-worth which may in turn, influence employee intentions to leave the organization (Piekkari et al., 2005). This shift in self-judgment occurs both at an individual level and also at a collective level. Individuals oscillate their cognitive schemas between individual and social self-concept. They thus derive their self-worth from self-evaluation of their personal traits and characteristics (Pelham & Swann, 1989), but also from the status of the group they belong to (Brewer & Gardner, 1996). Mergers and acquisitions seem to elicit negative affect related to a lessening of perceived worthiness at both levels of self-conceptualization (Terry, Callan & Sartori, 1996; Terry, Carey & Callan, 2001).

On an individual level, the institutionalization of new work practices and culture following a merger or an acquisition seem to trigger a re-evaluation of one's competences and role (Piekkari et al, 2005). The various changes at operational level thus may prompt individuals to question their skills and capability to perform their jobs effectively in the new environment (McEntire & Bentley, 1996).

On a social level, employees in mergers and acquisitions may often be fraught with a negative group image (Terry, Carey & Callan, 2001). Within this stream, which is based on the social identity theory, the presence of another group activates individuals' social identities (Turner, Hogg, Oakes, Reicher & Wetherell, 1987). People strive for positive personal identity but also a positive collective identity (Tajfel & Turner, 1986) that would allow their group to compare favourably with a relevant comparison outgroup. Literature suggests employees in merged organizations are experiencing tension and frustration, which are essentially manifestations of a loss of group status and hence, of collective self-esteem (Lupina-Wegener, Schneider & van Dick, 2011; Piekkari et al., 2005; Vaara, 2000). These feelings of depreciation of perceived self-worthiness may lead employees to adopt various tactics to differentiate themselves from the outgroup to maintain a positive distinctiveness (Tienari et al., 2005; Langley et al., 2012) such as derogatory behaviour towards the outgroup (Weber & Camerer, 2003). Employees' strive towards boundary demarcation often elicits competitive or non-cooperative behaviour which may jeopardize the success of the merger (Empson, 2001). These studies provide valuable preliminary qualitative evidence of a loss of self-esteem and devaluation (Piekkari et al., 2005; Langley et al., 2012). It would be interesting to see in future studies whether these findings can also be supported using quantitative methods. Another limitation is that sometimes the sample of respondents is very small. For instance, Piekkari et al. (2005) carried interviews with 8 employees in a recently merged

organization. Lastly, as emphasized previously, it would be interesting to see whether the findings of these studies that are usually conducted in one organization (Piekkari et al., 2005; Terry, Carey & Callan, 2001; Lupina-Wegener, Schneider & van Dick, 2011), can be validated in studies sampling more than one case of a merger or an acquisition.

Betrayed. Employees in merged organizations reported feelings of betrayal, or of being deceived by the actions of trusted organizational members (Brown & Humphreys, 2003; Searle & Ball, 2004; Teram, 2010). This is in line with the literature discussing the existence of trust-destruction dynamics in merged organizations (Klendauer & Deller, 2009; Nikandrou & Papalexandris, 2008) from a psychological contract breach perspective (Linde & Schalk, 2008; Bellou, 2007). Employees may construe the merger itself as a trust-destroying event. Psychological contract (Rousseau, 1989, Robinson, 1996) appears to be violated both by the decision to merge/acquire/be acquired, but also by the changes in employment occasioned by the integration of the merging organizations (Bellou, 2007; Bellou, 2008). Both the merger and its actual or fabricated consequences arouse strong feelings of betrayal, deception or of being exploited by either the acquirer (Brown & Humphreys, 2003) or their own organization (Searle & Ball, 2004). Employees voice a lack of respect from the management and inconsistencies in the application of HR policies (Teram, 2010). However, there are certain limitations to the studies cited above. Brown & Humphreys (2003) for instance, interviewed around 37 employees in an educational institution that resulted after a merger between two separate colleges in the United Kingdom. The participants to this study were members of only one of the two colleges that were merged, which was selected based on authors' prior evaluation that the employees in this institution "had not developed a clear identity or sense of purpose" (Brown & Humphreys, 2003). However, research suggests that groups of employees in mergers and acquisitions construe the merger or acquisition

differently and have different reactions to it (Terry, Callan & Sartori, 1996; Covin et al., 1996; Panchal & Cartwright, 2001). Therefore, the results of the study may not be generalizable to the other organization involved in the merger or the acquisition. Furthermore, extant literature suggests that there are certain cultural variations in perceptions of a breach of psychological contract (Rousseau & Schalk, 2000) - a source of employee feelings of betrayal as found in mergers and acquisitions literature. Therefore, as the majority of these studies were conducted in one case of either a merger or an acquisition in only one country (Brown & Humphreys, 2003; Panchal & Cartwright, 2001; Searle & Ball, 2004; Teram, 2010) more studies discussing employees' feelings of betrayal after a merger or an acquisition would be useful to determine whether these findings can generalize to other countries not covered in the literature or to cross-border mergers and acquisitions.

Threatened. Evidence shows the merger or the acquisition is also construed as a threatening event (Amiot, Terry & Callan, 2007; Zhou, Shin & Cannella, 2008; Clark et al., 2010; van Vuuren, Beelen & de Jong, 2010). Threat in the mergers and acquisitions literature has been framed both in terms of existential risks the merger pose on groups (van Vuuren, Beelen & de Jong, 2010; Clark, Gioia, Ketchen & Thomas, 2010; Lupina-Wegener, Schneider & van Dick, 2011), but also in terms of competition for resources and power (Smith et al., 2013).

In the former line of inquiry, employees perceive the change event as presaging the onset of an ideological shift that would disintegrate the central, distinctive and enduring aspects of their organization (Jacobs, Oliver & Heracleous, 2013; Spicer, 2011; Colman & Lunnan, 2011). These findings are consistent with the threat studies emerging from the terror management theories (Solomon, Greenberg & Pyszczynski, 1991). Individuals create common set of cultural worldviews in order to alleviate the anxiety of their mortality. Culture provide structures, meaning

and creates a context that fosters individuals' sense of value and self-esteem (Greenberg et al., 1990; Greenberg, Solomon & Pyszczynski, 1997). Threat is hence embedded in any event or indication that questions the validity of standards imbued with value within the system of meaning. The presence of an outgroup with dissimilar worldviews may challenge the validity of the valued conceptions of reality on which they base their self-esteem thus activating negative evaluations of the others and defensive reactions (Greenberg et al., 1990; Greenberg, Solomon & Pyszczynski, 1991). However, as these studies provide initial qualitative evidence (Jacobs, Oliver & Heracleous, 2013, Spicer, 2011, Colman & Lunnan, 2011), future quantitative investigations into employees' perceptions of threat would add further depth and breadth to these findings. Another limitation is the bias arising from sampling only the management employees (Jacobs, Oliver & Heracleous, 2013; Colman & Lunnan, 2011), thus the study results may not necessarily reflect in other organizational ranks. For instance, it may be that the management team may feel that their jobs are more at risk compared to non-management, and hence, feel more threatened by the merger or acquisition event or the presence of an outgroup management team that might replace them in their jobs. Another limitation is the relative small sample size, which may raise some concerns in terms of generalizability of the findings (i.e. Jacobs, Oliver & Heracleous, 2013 – 8 employees; Spicer, 2011 – 6 employees). Therefore, statistical evidence is needed to provide indications as to the generalizability of feelings of threat among employees involved in mergers and acquisitions and its link to the construal of the merger/acquisition or the outgroup as threats to their culture.

Threat is also conceived in the literature in terms of relations of power between the two groups (Amiot, Terry & Callan, 2007; van Vuuren, Beelen & de Jong, 2010). Employees remain identified with the previous organization and feel threatened by the presence of another group. This may explain why degree of integration in a merger or an acquisition has been found to be

associated with perceptions of threat (Giessner et al, 2006). It seems that the more the companies are integrated after the merger or the acquisition, the more the transaction is framed as a threatening event (Giessner et al, 2006), and the lower the innovation potential (Puranam & Srikanth, 2007). Employees perceive the interaction with the outgroup as a sign of submission and a threat to their supports of positive identities (Smith et al., 2013). Power differential has been pinned as an antecedent to a host of adverse consequences for both the organization (Goddard & Palmer, 2010) and the employees (Terry, Callan & Sartori, 2001).

Anxious. Interpretation of the merger as a danger to one's self-integrity is also evidenced by the stream investigating anxiety and extreme worry as a common emotional reaction. The merger is thus evaluated as having higher threat value. For example, the ambiguity surrounding the changes in terms of individuals' career progression, benefits and job security may cue an interpretation of the merger or acquisition-related information in threatening terms (Goddard & Palmer, 2010; Lupina-Wegener, 2013; Burlew, Pederson & Bradley, 1994; Clark, Gioia & Ketchen & Thomas, 2010; Kovoov-Misra & Smith, 2008).

Other aspects related to the merger seem to trigger states of anxiety and fear among employees. Their future in the new organization seems to be perceived as uncertain (Searle & Ball, 2004) as well as their membership to the group they merged with. The merger may force employees to re-examine their understanding of the organization and often change their judgments and perceptions of how things are and should be. The loose lines of communication and working relationships coupled with opaque decision making at the management level may thus trigger a sense of uneasiness about the unpredictability of the changes occurring and henceforth their future. They may feel the new working arrangements and standards are too strict, or require considerable efforts to meet (Kavanagh & Ashkanasy, 2006). They may feel unable to perform and become

disillusioned by the prospects of their career. The institution of new procedures and measures of performance seems to wear down employees' possible initial enthusiasm about the merger, as they feel pressured and overwhelmed by new targets and expectations (Drori, Wrzesniewski & Ellis, 2013). Inevitably, this may cause employees to entertain doubts about their future and worry about how the merger will play out for them.

In a similar vein, Styhre, Borjesson and Wickenberg (2006) speak about cultural anxiety as experienced in mergers and acquisitions. Authors discuss cultural anxiety as an 'emotional response to changing conditions and the new social realities emerging on the basis of cultural change'. The cultural anxiety thus termed, referred to the reception of an alien culture which eventually reflected in employees' efforts at augmenting the intercultural differences and ignoring the similarities. Studying the emotional experience of employees in two merger cases, namely between Astra and Zeneca and between Ford and Volvo, authors found the cultural differences as the main source of anxiety.

Separation from colleagues may further heighten employees' state of anxiety in mergers and acquisition. Astrachan (2004) suggests that impending separation from colleague may arouse strong feelings of distress. In a simulated merger designed to measure group attitudes and individual emotional state, the author found that the imminent departure of one or more group members or groups altogether from an organization caused all employees to report fear. However, a limitation to this study is that recruitment of postgraduate students to participate in a simulated merger environment may have produced artificial results and which cannot be replicated in real-life situations. Additionally, postgraduate students may not be comparable to employees in a merger or an acquisition, as different cognitive and affective processes may be linked with tenure, or age.

The systematic literature review found that another source of anxiety may be employees' fear of being 'exploited' and 'contaminated' (Empson, 2001; Junni, 2011; Mirc, 2012). The studies found that the fear of exploitation becomes manifested in behaviour directed at thwarting the transfer of know-how between groups by withholding valuable information. Authors suggest that individuals believe their group's knowledge is more valuable than that of the other group and thus guard their most valuable assets. In these studies, the fear of contamination refers to the organizational image of the merging partners. Employees fear of being associated with a downmarket colleague or of being 'contaminated' by a less savvy or less trendy corporate image which would hurt their reputation. Authors suggested that employees' anxieties related to an anticipated loss of valued features cannot be understood simply in economic terms of costs and benefits. Instead, their concerns are rooted in both objective and subjective factors that are personally relevant to the employees.

Conclusions. In this section, I have discussed the high arousal negative affect in mergers and acquisitions. I have discussed in detail employees' affective experiences of devaluation, threat, anxiety and fear. Literature shows mergers or acquisitions trigger a reappraisal of employees' skills and abilities and their relevance in the current organization. The changes imposed in the post-merger integration process may have an adverse impact on employees' sense of worth for the success of the new organization (McEntire & Bentley, 1996; Piekkari et al., 2005). They may feel threatened that the merger would render their skills and abilities irrelevant. They may also feel threatened they could lose the central and distinctive aspects of their pre-merger group. Cultural differences may be a source of anxiety for the employees (*cultural anxiety*; Styhre, Borjesson & Wickenberg, 2006), as well as an impending loss of colleagues (*separation anxiety*; Astrachan, 2004). The limitations of the existing research on the high activation and negative affect of

employees in mergers and acquisitions are largely associated with sampling, thus raising concerns on the generalizability of existing evidence. The empirical studies either investigate the high-activation negative affect in one of the two or more organizations involved in the merger or the acquisition (Brown & Humphreys, 2003) or in one case of a merger or an acquisition (Brown & Humphreys, 2003; Panchal & Cartwright, 2001; Searle & Ball, 2004; Teram, 2010). Existing studies do not provide robust evidence on how management versus non-management employees construe the merger event, and whether the two groups do indeed feel threatened in the same way (Jacobs, Oliver & Heracleous, 2013; Colman & Lunnan, 2011). Additionally, the small sample size (Jacobs, Oliver & Heracleous, 2013; Spicer, 2011) raises some concerns regarding the generalizability of these findings.

Nevertheless, despite these limitations there are indications that certain factors may elicit such negative affective outcomes, and which may trigger negative behaviours both for the organization and the employees.

Future research directions. To summarize, the literature is very helpful in identifying the range of fear-related affects that the merger or the acquisition itself and the integration process elicits in employees. Different specific situations or factors seem to induce people a sense of threat, fear and anxiety which may animate either an avoidant or withdrawal behaviour or other more action-oriented resistive strategizing meant to preserve identity, self-image and reputation.

The threat literature shows employees' experience excessive angst with regards to group's social identity and the self-esteem (Amiot, Terry & Callan, 2007; Colman & Lunnan, 2011), to meaning and security that membership to a group provides (Spicer, 2011), and in terms of a loss of material and symbolic resources (Smith et al., 2013). A systematic investigation of the defence structures activated by individuals' threat perceptions would be useful in order to determine the

causal patterns between group cognition and a range of antagonistic intergroup behaviour. Furthermore) empirical evidence on the co-evolutionary dynamics between threat perceptions and collective self-esteem (Turner, 1982) might unravel the ways in which individuals' construe the merger event as ushering in a negative self-concept and employees' responsiveness to this threat.

Another area where future research might yield interesting findings would be the causal relationship between employees' threat perceptions and the range of behavioural expressions in response to the change event and outgroup. Terror management literature contends that the existence of an outgroup with dissimilar beliefs activates defensive reactions in the form of ingroup bias, derogatory behaviour or negative attitudes meant to defuse the threat (Greenberg, Pyszczynski & Solomon, 1991). On the other hand, social dominance theory suggests any threat to the position or status of one's group engenders discriminatory behaviour against the outgroup (Sidanius, Levin & Pratto, 1996). Social identity theory argues that threats to one's social identity results in individuals leaving the group, altering the comparative outgroup, or engaging in intergroup discrimination or competition (Hogg & Abrams, 1990). Replication of these findings in a merger context would provide a better grasp on the perception and evaluation of the risks to employees' self-integrity and their choice of defence tactics.

From a methodological perspective, threat assessment in mergers and acquisitions literature is mostly based on personal accounts of employees interviewed (Clark et al., 2010). One of the few exceptions (Amiot, Terry & Callan, 2007) used a measure whereby participants were asked to rate the merger against other stressful situations. However, the stressfulness of an event and perception of threat are functionally different. Stress is linked to a person's perceived inability to cope with situations that demand effective response (Cohen & Willis, 1985). Threat refers to the evaluation of a stimulus as having the potential to inflict harm on a person's self-integrity. Stress is

essentially a psychological response to an event while threat is an individual's personal appraisal of a stressor. Threat is linked with the urge to eliminate the threat stimulus through flight, freeze or defensive threat or attack (Blanchard et al., 2001), while stress is linked with various behavioural adaptations that do not require an immediate response or a response is not available (Cohen & Wills, 1985). I argue that a parsed examination of the specific stimuli may reveal the factors relevant for the employees that they feel are jeopardized by the merger. Measures of threat perceptions within the theoretical formulations outlined above are needed to determine both the sources of threat, be they either symbolic or material, as well as the extent to which these appraisals facilitate particular behaviours. Additionally, comparative analyses between managerial and non-managerial employees, different organizations being part of the merger or the acquisition would be useful in obtaining a deeper understanding into how these specific groups of employees construe the merger or the acquisition and how they feel about the impending changes. In response to the limitations outlined above, the inclusion of more cases of mergers and/or acquisitions would offer more indications on the extent to which these findings do in fact generalize across different mergers and acquisitions.

Furthermore, in terms of applied psychology of fear, the mergers and acquisitions literature suffers from several inadequacies related both to the conceptual bases of fear and anxiety and also to the methodological rigor. Firstly, despite that fear and anxiety are both emotional states associated with the presence of a dangerous stimuli, they are qualitatively different in that they flesh out different psychosomatic expression. For instance, fear is associated with fight or flight response and thoughts of immediate danger and require considerable energy, whereas anxiety is rather associated with increased vigilance in anticipation of future danger. Fear is rather associated with escape behaviour while the evaluation of a situation as threatening facilitate either defensive

routes or approach in the form of risk assessment (Mobbs et al., 2015; Blanchard et al., 2001). By contrast, anxiety facilitates cautious and avoidant behaviour (Reiss, 1991).

Secondly, anxiety has been defined differently across studies in mergers and acquisitions. It has been referred to either as a mild form of worry or concern regarding the erosion of the pre-merger cultural artefacts (Styhre, Borjesson & Wickenberg, 2006) but also in its clinical sense. Astrachan (2004) speaks about separation anxiety as manifesting in excessive fear resulting from an anticipated separation from colleagues. Anxiety is here associated with a frightening situation that employees might be estranged from their attachment figures in the organization. Therefore, the literature presents a range of conceptual inconsistencies in the investigation of the prevalence of anxiety and fear in a changing organizational context. Indeed, loss of the familiar, the need to adapt to new organizational imperatives and the separation from colleagues differ in the level of abstractness and materiality as threat stimuli. Thus, they may implicate varying degrees of autonomic arousal. Nevertheless, although anxiety, which originally is used to denote a psychiatric disorder characterized by excessive distress and behavioural disturbance, has entered mainstream language, its mixed conceptualization across research may potentially mislead to flawed inferences regarding the prevalence of anxiety in mergers and acquisitions.

Lastly, the measures usually employed in research usually focus on the threat stimulus, such as the change itself (Rafferty & Restubog, 2010), separation from colleagues (Astrachan, 2004) or of being exploited by the other group (Junni, 2011). However, these measures focus on the stimuli rather than excessive fear symptomatology. Earlier studies relied mostly on participants' account of the merger through qualitative inquiry (Lawlor, 2014; Goddard & Palmer, 2010) or through self-reports of participants' evaluation of a stimulus as threatening (Rafferty & Restubog, 2010). A measure that would include both the evaluation of the merger-relevant stimuli and the

physiological reactions of the employees may prove to be more helpful and relevant to actually understand how employees interpret, feel about and respond to the changes in their work environment.

The research examining fear-related affect in mergers and acquisitions is at preliminary stage. Future research should address the concept of fear within a framework that investigates the ensuing strategies individuals employ to cope with a threatening stimulus. Specifically, employees may envisage and predict the merger or the acquisition unfolding in a way that is detrimental to their career and well-being. They may anticipate demotions, layoffs or benefits cuts, even in situations that would not warrant such a dim outlook. They engage in active disambiguation efforts and become vigilant to the information available to predict their future in the new organization. Heightened vigilance as an emotion regulation strategy in the context of threatening changes in the work environment would improve our understanding of the affective processes of employees.

I believe that the lines of future research proposed herein will not only clarify the mechanisms by which individuals perceive and experience the change but also unravel new ways to mitigate the deleterious consequences at both the individual level in terms of health outcomes and at an organizational level in terms of productivity, knowledge transfer and effectiveness.

2.3.1.4. *What published studies show about low activation and unpleasant affect in employees' responses to mergers and acquisitions?*

In the previous chapter, I discussed the evidence of employee unpleasant affect that are high in arousal. I end the evidence of employee affect in mergers and acquisitions with the evidence of low activation and negative affect. Here, I examine such emotions that were found in previous studies, such as psychological distress and emotional exhaustion.

Psychological distress. Mergers and acquisitions literature provides substantial evidence of psychological distress among employees (Randall & Procter, 2013; Lawlor, 2013). While some researchers investigate psychiatric morbidity, including the onset of depressive episodes (Vaananen et al., 2011), other studies provide empirical evidence of its symptomatology, such as gloominess, nostalgia and sadness or feelings of helplessness (Piekkari, Vaara, Tienari & Santti, 2005; Vaara, Tienari, Piekkari & Santti, 2005; Fried, Tiegs, Naughton & Ashforth, 1996).

The longitudinal study conducted by Väänänen and colleagues (2011) in a cross-border merger between two forest industry companies in Sweden and Finland, revealed that a negative change in the organization during the merger was associated with a 60% increased risk of psychiatric event. Furthermore, only 20% of the 6511 employees sampled viewed the merger in positive terms. The remaining 80% construed it as neutral or negative event. Additionally, it appeared that those employees with a previous low self-rated health and weak psychosocial work characteristics were more susceptible to report a worsening of the work conditions after the merger. The study concluded that when initially healthy employees believed their work situation deteriorated after the merger, it predicted the onset of a psychiatric event as long as 7 years after the merger closed.

Emotional exhaustion. A construct related to depression is emotional exhaustion which is characterized by a lack of energy and a feeling that individual's emotional resources to cope with work demands are used up (Cordes & Dougherty, 1993). Emotional exhaustion is a central component of the burnout syndrome in organizational psychology and reflects the emotional and physical manifestation of prolonged work stress (Maslach, Schaufeli & Leiter, 2001). There are several commonalities between depression and emotional exhaustion in terms of symptomatology, such as chronic fatigue, impaired concentration and attention or feelings of sadness. However, depression manifests in different areas of a person's life, whereas emotional exhaustion is a work-related phenomenon (Bakker et al., 2000). In mergers and acquisitions literature, emotional exhaustion is the most studied facet of the burnout syndrome (Terry, Carey & Callan, 2001; Armstrong-Stassen & Cameron, 2003; Väänänen et al., 2004a). Employees going through a merger or an acquisition seem to be predisposed to emotional fatigue, mostly as a function of strength of identification with the organization (Terry, Carey & Callan, 2001), perceptions of group permeability and frequency of intergroup contact. In other words, the more the employees identify with the organization, the less likely they are to experience emotional exhaustion. Furthermore, the more the employees perceive a high cross-over potential in terms of intergroup boundaries, the less likely they are to experience emotional exhaustion. Nevertheless, this dynamic is not replicated for the members of both groups. Frequency of intergroup contact and perceptions of group permeability works in opposing ways for the low and high-status employees. While for the latter the two factors are negatively associated with the prevalence of emotional exhaustion, for the former, the threat posed by a possible break into their group status quo induces a feeling of strain. Prevalence of emotional exhaustion is a function also of pre-merger group affiliation (Idel et al., 2003).

Negative affect. Employees appear to have negative emotions after a merger or an acquisitions (Guerrero, 2008; Terry, Carey & Callan, 2001), this being found to be associated with the contextual factors. Namely, mood of the transaction or whether it is a hostile or a friendly transaction (see Chapter 2.1.3) seems to have a significant impact on employees' affect (Guerrero, 2008). The antagonistic nature of the pre-transaction relationship has an impact on how employees construe the new working environment and how they adapt to change (Fairfield-Sonn, Ogilvie & DelVecchio, 2002). In a five-year longitudinal study of a hostile and a friendly acquisition, Guerrero (2008) hypothesized that a hostile mood in the transaction would be conducive to negative affective impact on employees and also on the identification with the organization. However, the results came in the opposite direction. Contrary to the hypothesis that acquired employees will identify less with the organization in a hostile acquisition compared to the friendly acquisition as a function of lower perceived legitimacy, employees' identification actually increased. It seems that employees' adapted their self-concept to the new entity much faster in the hostile acquisition compared to the friendly one. A limitation to this study is that although authors interpreted these findings as employees' tendency to compensate their sense of social loss with a greater status value after being acquired by a legitimately dominating firm, the status change as construed by the employees was not modelled in their predictive model. Sampling employees in similarly hostile transactions, Fried and colleagues (1996) showed employees' change in job control (role ambiguity, participation in decision making, etc.) following a hostile acquisition was associated with feelings of helplessness and psychological withdrawal from work. Authors suggested that either a positive change in job status or pre-merger financial performance of the organization (Walsh & Kosnik, 1993) may have buffered the feelings of mourning and melancholia arising from a group identity loss or a motivational ground for departure (Ray & McGee, 2006;

Teram, 2010; Langley et al., 2012; Lawlor, 2013). Perceived controllability (Demerouti et al, 2001) has also been suggested by Makri and Ntalianis (2012) to be associated with negative affect such as feelings of helplessness or frustration. In certain instances, employees' perceptions of resiliency in the context of mergers and acquisitions seems to alleviate the sense of helplessness on the job (Fried et al., 1996) people experience, as well as improve the health and wellbeing of individuals (Makri & Ntalianis, 2012). Individuals who perceive the situation as changeable may not only become more engaged in the new organization, but they may also elicit an interpretation of the change event in more positive terms. Therefore, it seems that as long as people manage to reappraise the change event positively, their work attitudes and behaviours may be more cooperative (Joslin, Waters and Dudgeon, 2010) and conducive to proactive involvement in the acquisition and integration (Teerikangas, 2012).

Negative affect among employees in mergers and acquisitions also seems to be associated with job resources such as role clarity (McEntire & Bentley, 1996). The study by McEntire and Bentley (1996) showed that the absence of a definition of their jobs and professions creates confusion and frustration with the employees, as they lack a clear path for them to do their jobs. Nevertheless, communication about the changes and about aspects surrounding their roles in the organization may have the potential to neutralize the impact of the structural transition process on the employees (Schweiger & Denisi, 1991). Realistic communication about the goals and future paths of the new organization and of their jobs has also been found to be associated with positive affect, that are both high and low in arousal such as job satisfaction, organizational commitment (Chapter 2.3.1.1 and Chapter 2.3.1.2), perceptions of organizational trustworthiness and employee wellbeing (Bartels, Douwes, de Jong & Pruyn, 2007; Amiot, Terry, Jimmieson & Callan, 2006; Bartels, Pruyn & de Jong, 2009; Wittman, Hunt & Arnett, 2009). The effects of

positive communication climate can also crystallize into better post-merger organizational performance overall (Papadakis, 2005; Agarwal, Anand, Bercovitz & Croson, 2012).

In terms of cognitive antecedents, negative affect has also been linked with perceptions of cultural differences (Greenwood, Hinings & Brown, 1994). Greenwood suggests that perceived differences between the two organizations in terms of routines, customs and ways of working are a source of frustration for employees in mergers and acquisitions (Greenwood, Hinings & Brown, 1994). van Oudenhoven and de Boer (1995) found that in mergers or acquisitions involving culturally similar partners, there are more positive attitudes and less resistance to the integration on the part of the employees. However, a limitation to this study is that it was experimental which involved 90 senior managers who were asked to rate the willingness to merge, assess the probability of success and the amount of resistance. The experiment carried with artificial data may have produced artificial results, which may not necessarily apply in a real-life scenario. Additionally, the study included only management, and their evaluation of merger success, which may be prone to overconfidence bias (Oancea & Kamau-Mitchell, 2015). Other studies suggest that it is not necessarily the cultural incompatibility but the culture change that can be a source of negative attitudes, decreases in job satisfaction and increases in emotional exhaustion (Peck, Tower & Gulliver, 2001).

Conclusions. In mergers and acquisitions, employees are found to experience states of emotional exhaustion (Terry, Carey & Callan, 2001) and psychological distress (Randall & Procter, 2013; Lawlor, 2013). Employees' experiences of low arousal negative affect were found to be elicited by perceived uncertainty (Siegel, 2000), changes in the organizational structure (Väänänen et al., 2011; Piekkari et al., 2005, Vaara et al., 2005), organizational support (Kovoor-Misra & Smith, 2012; Makri & Ntalianis, 2012), identification and intergroup relations (Terry, Carey &

Callan, 2001), job status (Carter & Pavur, 2003; van Dijk & van Dick, 2009) and work demands/resources-related factors (Searle & Ball, 2004). A high prevalence of low arousal and negative affect may be conducive to functional incapacity (Väänänen et al., 2011), resistive behaviour (van Dijk, & van Dick, 2009), psychological withdrawal (Fried et al., 1996) and ill-health (Makri & Ntalianis, 2012).

Future research directions. Although the research seems to converge on the impact of identification on employees experiencing emotional exhaustion, there is an inherent contradiction in the findings which suggest different underlying causes for the prevalence of this symptomatology. This seem to be caused not necessarily by how much employees identify with the organization per se, but rather by the fact that their access to the outgroup is being denied (Terry, Carey & Callan, 2001). The obstruction of access to the outgroup, operationalized by perceptions of intergroup permeability (i.e. a possibility to traverse the group boundaries), coupled with a deliberate limitation of contact with the outgroup anchors the employees in a state of helplessness, nostalgia or disappointment.

These range of emotions have been extensively documented in employee accounts of their merger experiences (Carter & Pavur, 2003; Bellou, 2007; Searle & Ball, 2004; Fried et al., 1996). However, for the other group, unrestricted access entry and frequency of contact works in opposing ways. They may deliberately avoid contact with outgroups (Sonnenschein, Bekerman, & Horenczyk, 2010) as this would have the potential to jeopardize their group's social situation, or the group's distinctiveness (Horenczyk, 2004; Ron et al., 2017). A potential breach into the status quo of their group is a cause of frustration, a cause of fatigue and exhaustion. Therefore, it may not necessarily be the identification with the organization that may directly account for the variance in emotional exhaustion but rather the nature of the intergroup relations. Further studies that would

correlate the fears experienced by each group, their affective experiences as well as coping mechanisms (i.e. strengthening of the pre-merge group boundaries) would shed more light on the specific causes and consequences of intergroup conflict and affective life of employees in mergers and acquisitions.

2.3.1.5. General conclusions about employees' emotional responses to mergers and acquisitions

As a conclusion, the existing evidence on the employee emotions going through a merger or an acquisition shows a higher research attention to the negative states, with hypotheses testing the existence of unpleasant emotions. Almost two thirds of the research papers reviewed focused on the prevalence of unpleasant affect, rather than positively valenced feelings employees experience in organizational change.

Nevertheless, this biased approach towards the unpleasant affect testing is not as conclusive as the strength of the evidence, methodology chosen and context for the empirical testing. For instance, as I have discussed in the previous section, the literature on high-arousal positive affect provides contradictory evidence. Employees may either remain committed to the new organizational goals and emotionally attached to it and not affected by the merger event (Cartwright & Cooper, 1993; Cartwright, Tytherleigh & Robertson, 2007) or quite the opposite. Employees may distance themselves from the organization and fail to develop a sense of identity in the new organization (Schweiger & Denisi, 1991, Clarke & Salleh, 2011, Bartunek & Franzak, 1988; Weber, 1996).

However, organizational commitment, as well as the other positive emotions must be analysed within the context in which they occur. If employees accept the merger and construe it in positive terms, they are more committed, and more hopeful about the change (Joslin, Waters & Dudgeon, 2010; Teerikangas, 2012). Receiving the necessary support from the management and creation of a trusting environment is intuitively conducive to positive affect and subsequently to cooperative behaviours such as organizational citizenship and extra-role. By the same token, group

membership, perception of fairness, dependence on the organization, intergroup relations influence the extent to which employees develop a sense of congruency in terms of values and goals with the new organization.

Overall, there is some contradictory findings in the literature on the extent to which employees actually experience states of positive affect of high arousal, though the balance tilts towards the absence of it rather than presence. One area fruitful to pursue is a better understanding of the behavioural implications. As the theory of affect posit, it is reasonable to expect the employees scoring high on high arousal positive affect to engage in proactive behaviour, go beyond the confines of their jobs. However, the research linking the confirmatory studies of positive affect with individuals' approach tendencies in the form of supportive behaviours in the post-merger stages are scant. Conversely, the absence of such affective states should be mirrored with evidence of some form of resistive approach or withdrawal behaviour. At its current stage, the evidence is feeble, with very few attempts at identifying a link between affect and coping strategies employees in mergers and acquisitions pursue.

Equally balanced evidence is found also for the low arousal affect. Literature does not appear to provide a consensus on a generalized absence or presence of pleasant affect for the employees going through an organizational change. For instance, while certain studies show a decline in job satisfaction after the merger announcement (Schweiger & Denisi, 1991; Peck, Towell & Gulliver, 2001; Amiot, Terry & Callan, 2007; Basinger & Peterson, 2008), other studies found no significant difference (Cartwright & Cooper, 1993; Gulliver, Towell & Peck, 2003).

However, where the research does seem to converge is on the fact that the merger is indeed experienced differently across merged groups. Most often than not, the acquired organization employees are less happy with their jobs after the merger compared with the acquiring organization

members (Brown & Humphreys, 2003). Group boundaries defined in terms of hierarchical status or dominance rather than role in the transaction, studies have yielded comparable results (Makri & Hantzi, 2012; Amiot, Terry & Callan, 2012). A privileged position in the post-merger organizational hierarchy may induce a feeling of safety while a low-status position may confer a sense of uneasiness or displeasure towards the job or organization. A fact that is exacerbated by structural changes such as job change, demotions, new leadership or new working standards (Lawlor, 2013).

The unpleasant affective processes of employees in mergers and acquisitions have drawn much more attention in empirical research compared to the positive states. A wide array of negative emotions has been documented in existing research. For instance, one of the most promising avenues has been the investigation of fear-related affects. Employees going through this form of organizational change appear to experience varied forms of anxiety and excessive fear as they perceive their new work situation as threatening. They fear that the merger would invalidate their pre-existing frames of references and standards on which they based their social identity (van Vuuren, Beelen & de Jong, 2010; Clark, Gioia, Ketchen & Thomas, 2010; Lupina-Wegener, Schneider & van Dick, 2011). They also fear the merger would bring about a loss in resources as they engage in intergroup competition (Smith et al., 2013). Employees also show anxiety both about the imminent and potentially detrimental changes in the new working environment and also about the possibility of being separated from long-time colleagues.

However, although the lines of research investigating the fear affect has provided an invaluable contribution to the literature in mergers and acquisitions, further investigations into the way in which these states of emotional alertness find behavioural expression in a changing organizational context would provide a better understanding of the causes and consequences of

certain organizational factors. Furthermore, existing research would benefit of a more systematic conceptualization of the symptomatology investigated, but also of a more epistemological rigor. Further attempts to expand existing findings on fear in mergers and acquisitions would broaden our intuition of the operation of not only the high but also the low arousal affective experiences. The causes and consequences of these affective experiences are less clear, as sometimes similar hypothesized relations yield contradictory evidence or suffer from conceptual shortcomings.

It would be useful that future research address the recurring limitations identified in my systematic literature of employee affect in mergers and acquisitions. Firstly, it would be useful to explore the interaction effects of contextual and resource-related factors for the prediction of several outcomes, such as job satisfaction. Mergers and acquisitions literature investigate contextual factors such as reputation or degree of integration in isolation from resource-related elements. However, there are aspects such as such as job security, autonomy or organizational support that in combination with contextual factors may yield interesting findings. Secondly, there are certain methodological shortcomings in the existing mergers and acquisitions literature that may provide a biased view of the role of culture in employee affect (van Oudenhoven & de Boer, 1995). It would be useful that future studies also include non-managerial employees in order to provide a better understanding of the role of culture on employees' emotions in mergers and acquisitions. Lastly, more quantitative studies are needed in order to have a better intuition into the extent to which certain propositions can, in fact, be generalizable to other populations.

In Chapter 2.1.2, I discussed the link between affect and behaviour and the extent to which emotions may sometimes prompt individuals to take action or not (Isen, 2003; Andrade, 2005; Carver & Scheier, 1998; Carver & Scheier, 1990). The next chapter will discuss the evidence on

employee behaviour in mergers and acquisitions, as well as the extent to which the emotions discussed here are in fact, reflected in empirical research on behaviour.

2.3.2. Review of evidence about employees' behavioural responses to mergers and acquisitions

Previously (Chapter 2.3.1), I have reported the evidence on the multitude of emotions studied in the literature and which have been receiving considerably more attention in empirical studies found in my systematic review. Employees construe the change event as threatening, they lack trust in the new routes of their organization, and fear the unknown. As a consequence, they may wilfully oppose the change as they seek to curtail any disruption to their status quo in the organization (van Oudenhoven & de Boer, 1995). Therefore, in line with the reviewed literature, it seems reasonable to assume that the high prevalence of studies on negative affect compared to studies on positive affect may offer indications as to the existence of positive or counterproductive work behaviours. In this chapter, I aim to answer research question 2 of this thesis, namely:

***RQ2:** What does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)??*

To this aim, I discuss the results of my systematic review of evidence of behaviours employees going through mergers and acquisitions engage in. In order to provide a systematic way to report the results, I am using the framework described in the Introduction (Chapter 2.1.2). I will first examine the evidence of behaviours directed towards the organization (Chapter 2.3.2.1), and follow with evidence of employee behaviours directed towards the outgroup

(Chapter 2.3.2.2). The studies included in my systematic review of employee behaviours in mergers and acquisitions are listed in Table 5, Appendix D.

2.3.2.1. Behaviours directed towards the organization

The review of employee affect discussed in the previous chapter suggests that in mergers and acquisitions, there are multiple objects of affect and evaluation that are chronically accessible for the employees. On the one hand, there is the post-merger organization, which encompasses the new for one of the groups or maintains a relative continuity for the other (van Vuuren, Beelen & de Jong, 2010). Secondly, there is a significant outgroup that threatens the existence of the ingroup, by making it obsolete (Colman & Lunnan, 2011). The outgroup and the prospects of a radical change in their standing in the new organization appear to induce a state of fear (Clark et al, 2010). This activates either combative or defensive responses by the employees (van Dijk & van Dick, 2009). In this section, I will focus on those behaviours that are directed towards the organization, namely withdrawal behaviours, such as turnover and forms of resistive behaviour. In discussing the evidence, I will also report the prevalence statistics of these behaviours in the dedicated sections.

Withdrawal / Turnover. A considerable stream of research provides evidence of various forms of withdrawal behaviours (Choi et al., 2011; van Dick, Wagner & Lemmer, 2004). Such form of behavioural withdrawal has been referred to in the extant literature as a cluster of interrelated behaviours to include frequency-based withdrawal behaviours (Blau, 1985), like job alienation, turnover intentions and absenteeism (Bhagat, McQuaid, Lindholm & Segovis, 1985), or a composite of cognitive and behavioural forms of withdrawal (Fugate & Prussia, 2012). As withdrawal refers to those behaviours which individuals engage in to avoid their current work

situation, working climate or organization (Hanisch & Hulin, 1990), I have included in this section both frequency based forms of avoidance, and also various forms of passivity.

Mergers and acquisitions seem to elicit a psychological withdrawal of employees from their work and organization, thus increasing their propensity to search for a new job (Bellou, 2008) or remain in the job, but express his or her dissatisfaction through more or less harmful behavioural manifestations (Apfelthaler et al., 2002). In an environment where they feel as lacking the ability to gain new skills or abilities (Piekkari et al., 2005), or perceptions of organizational inequalities based on standards of performance that favour others, employees may gradually become disengaged and abandon the struggle for self-affirmation by seeking employment elsewhere (Fried, Tieg, Naughton & Ashforth, 1996) or career alternatives within the same organization (Stovel & Savage, 2005).

Mergers and acquisitions literature suggests there are several work demands/ resource-related factors that are associated with employees' tendency to engage in withdrawal behaviours. For instance, job autonomy has been found to be associated with employee turnover (Lubatkin, Schweiger & Weber, 1999; Weber, 1996). It seems that as long as employees perceive the change as not so intrusive in how they used to work and manage to keep a certain autonomy in performing their jobs, they are likely to stay in the organization (Lubatkin, Schweiger & Weber, 1999; Weber, 1996). Therefore, if the employees manage to preserve their personal freedom on the job, independence in task performance and a sense of ownership of their work behaviour, they are more likely to remain in the organization, rather than withdraw and search for alternate career options. Similarly, employees' perceived ability to control the outcomes of the changes ensuing from the merger or the acquisition seem to be associated with positive thinking, and hence, can prevent employees from engaging in withdrawal behaviours (Armstrong-Stassen &

Cameron, 2003). In a longitudinal study of an acquisition that involved four community hospitals in Canada, authors found that nurses who felt they could control the situation they find themselves in they were more likely to engage in positive thinking three to five years since the acquisition and less likely to engage in avoidance/resignation coping (Amstrong-Stassen & Cameron, 2003). Therefore, it seems that once people feel that they can alter a potentially negative sequence of events, they may lack the motivational and interpretative basis for an avoidance or resignation strategy. It follows that people may not relinquish efforts to mend the situation as long as they believe they have the capacity to do so, but if they believe the future of themselves in the organization is unmanageable, they may have a higher propensity to depart or engage in other forms of withdrawal behaviours. By contrast, a low sense of controllability over the future in the new working environment may not always lead to the actualization of particular withdrawal behaviours, such as departure from the organization. Even though they may harbour departure cognitions, they may objectively lack the opportunities to do so. They may feel constrained to remain in the job, and devise alternate coping strategies instead, such as psychological distancing from their work and organization in the context of the merger or the acquisition (Michela & Vena, 2012). This form of response to the merger or the acquisition was found to translate into reduced work effort, neglect and lower motivation (Kiefer, 2005; Michela & Vena, 2012). Such withdrawal behaviours may have significant consequences both on employee health and wellbeing and also on the organization, through a reduction in productivity and innovation potential (Kiefer, 2005). However, employees may choose to remain in the organization, should they construe the merger in positive terms and as providing growth opportunities (Joslin, Waters & Dudgeon, 2010). Other factors shown to be negatively associated with turnover rates in mergers and acquisitions are perceptions of a supportive organizational

environment and as offering job resources, such as training and job security (Chung, Du & Choi, 2014).

In terms of cognitive factors, trust has been found to be associated with withdrawal behaviours (Bellou, 2008; Lee et al., 2013). In mergers and acquisitions, employees do not seem to be distrustful towards the post-merger/acquisition organization, but they may construe the merger itself as a trust-destroying event (Oancea & Neundlinger, 2016). Psychological contract (Rousseau, 1989, Robinson, 1996), appears to be violated both by the decision to merge/ acquire/ be acquired, but also by the changes in employment occasioned by the integration of the organizations involved in the merger or the acquisition (Bellou, 2008). A perceived breach in the psychological contract is construed as a betrayal by the employees. Thus, they may feel the need to get even by either leaving the organization (Bellou, 2008) or seek satisfaction in other forms of withdrawal behaviours, like reduction in productivity (Cording et al., 2014; Chung, Du & Choi, 2014). The non-fulfilment of these obligations by the organization was also found to have a negative impact on civic virtue behaviour and positive impact on turnover intention in mergers and acquisitions (Bellou, 2008; Kiessling, Harvey & Moeller, 2012).

The uncertainty of the employees' future prospects in the organization, and anxiety of about the change may represent another factor that leads to employee turnover intentions (Marmenout, 2010; Rafferty & Restubog, 2010). Marmenout (2010) found that the higher the perceived uncertainty, the more employees' reactions will be dysfunctional in terms of anticipated conflict ($B = .42, p < .001$), lower willingness to collaborate ($B = -.19, p = .046$) and greater intention to leave ($B = .71, p < .001$). However, a limitation to this study is that the sample included undergraduate students in an experimental design, which on the one hand, may

not be comparable to employees in mergers and acquisitions, and on the other hand, may produce artificial results.

The scarcity of information and individuals' impossibility to anticipate the outcomes of the merger for their career and professional lives are likely to reflect in employees' intention to leave both at the change announcement (Schweiger & Denisi, 1991) but also years into the merger (Hambrick & Cannella, 1993). Loss of job status (Piekkari et al., 2005), strength of identification with the organization (Colman & Lunnan, 2011; Makri & Hantzi, 2012) have also been found to be negatively associated with intentions to leave and turnover.

Another factor associated with employee withdrawal behaviour in mergers and acquisitions is culture and perceptions of cultural incompatibilities (Weber, Shenkar & Raveh, 1996; Weber, 1996; Weber & Menipaz, 2003). Cultural incompatibilities seem to be associated positively with employee turnover (Lubatkin, Schweiger & Weber, 1999). Cultural incompatibilities have also been suggested to be an important cause for integration process effectiveness (Weber, 1996; Lodorfos & Boateng, 2006; Stahl & Voigt, 2008; Bauer & Matzler, 2014) and also for the post-merger performance (Viega, Lubatkin, Calori & Very, 2000; Bauer & Matzler, 2014),

For management employees, there seem to be certain factors that have a particular influence on their likelihood of engaging in withdrawal behaviours. For instance, the anticipation of a possible layoff in a highly competitive environment (Walsh & Kosnik, 1993), perceptions of unfairness and evaluation of growth opportunities in the new organization (Fried et al., 1996) influence the extent to which individuals in managerial positions remain committed or become gradually more attracted to job alternatives in different companies. This is all the more important given the fact that Hambrick and Cannella (1993) found that around 67% of the acquired

executives depart the new organization within a 4-year window while an earlier study by Walsh (1988) pointed to an average management turnover rate of 59% in a five-year monitoring span across different types of business consolidations.

Among the contextual factors that influence executives' turnover rates or intentions seem to be the mood of transaction (Walsh & Kosnik, 1993; Hambrick & Cannella, 1993). Hambrick and Cannella (1993) found that hostile acquisitions are associated with higher departure rates 24 months after the transaction. In their study, the authors found a pronounced effect of the mood of the transaction up to two years since the acquisition (χ^2 : 0.612, $p < 0.05$). In other words, acquired executives are more likely to leave the post-merger/acquisition organization in the first two years, particularly if the acquisition was initially contested by top management, this effect fading out starting with year 3 (χ^2 : -0.271). However, Walsh and Kosnik's study (1993) did not find a significant effect on turnover rates. In other words, turnover rate among managers is not significantly higher in hostile versus friendly transactions. Rather, authors suggested it was the pre-acquisition financial performance of the target firm that had a significant predictive role in turnovers rather than the mood per se. However, a limitation to this study is that authors did not measure voluntary departures but rather forced top management turnover. Therefore, the non-significant effect of the mood cannot be generalized to cases where the top management chooses to leave the company rather than being constrained to do so.

Another context-related factor that influences employee turnover rate seem to be the type of the merger or the acquisition (i.e. horizontal, vertical, conglomerate; Quah & Young, 2005; Brealy, Myers & Allen, 2011; see Chapter 2.1.3 and Angwin, 2012 for a review). Quah and Young (2005) found that in case of vertical mergers or acquisitions between companies that serve the same customers, it was crucial to avoid a high turnover rate, particularly in case of

management. Authors suggested that a transition period to accommodate the knowledge and expertise transfer to the acquirer might be vital for the new organization to maintain and preserve its customer relationships. Rapid replacement of the top management team was found to be detrimental to the long-term success of the merger. Nevertheless, the replacement of top executives seemed to have contributed to the successful implementation of the desired integration changes, as much of the resistive behaviour was eliminated. This study offers a new perspective on the implications of management turnover. It would be useful that these findings are also tested in further quantitative studies. An older study by Walsh (1988) showed that the acquisition types with the highest turnover rates were the market extension ones. This type of acquisitions refers to those situations where both the acquirer and acquiree operate in similar industries or manufacture similar products but sell in different geographic markets (Walsh, 1988). It seems that in geographical expansions through acquisitions, top management runs the highest probability of departure, namely 37% in year one, only to follow a consistent upward trend to 64% in year 5. In concert with these findings, mergers and acquisitions literature examining the effect of domestic versus cross-border transactions showed this may be associated with employee turnover (Krug & Nigh, 2001). Krug and Nigh (2001) carried a cross-sectional qualitative study on the differing perceptions of executives of the acquired firm in domestic versus cross-border M&A, and how these perceptions influence their decision to stay or leave the organization. The study found that compared to international M&As, in domestic acquisitions, executives felt more compelled to leave on account of poor leadership and vague corporate strategy, dishonesty and derogatory behaviour targeted against them, which lowered their satisfaction on the job, sense of security and autonomy, as well as their demoted status in the new organization. This study provides important qualitative evidence on the role of the geographical

scope of the merger or acquisition for managers' decision to depart. Further quantitative studies that can examine these relations in larger sample would further improve our understanding of the contextual factors leading employees to quit their jobs. A limitation to this study is that authors (Krug & Nigh, 2001) do not take into account the types of mergers or acquisitions in the sample (i.e. 142 acquisitions and 284 participants). Namely, we do not know the distribution of the sample across transaction types, such as vertical, conglomerate or horizontal acquisitions, as literature suggests relatedness in mergers and acquisitions may have an impact on employee turnover (Walsh, 1989).

Another context-related factor found to influence management turnover is firm autonomy removal and loss in job status (Hambrick & Cannella, 1993; Lubatkin, Schweiger & Weber, 1999; Krug & Nigh, 2001, Li, 2008). Mergers and acquisitions literature suggests that certain mergers or acquisitions may require the imposition of stricter controls over the acquired firm compared to the conglomerate firms or even vertical acquisitions where acquired organizations may be allowed to be operationally autonomous (Datta & Grant, 1990; Zaheer, Castañer & Souder, 2013). A stricter control may involve the removal of powers and responsibilities from the acquired firm. This may place incumbent executives in a position of inferiority, thus diminishing their perceptions of their relative standing (Lubatkin, Schweiger & Weber, 1999). This in turn, has been found to play a very important role in executives' decision to depart (Lubatkin, Schweiger & Weber, 1999; Krug & Nigh, 2001). Specifically, Lubatkin and colleagues found that autonomy removal explained up to 50% of the variance in first-year turnover rate, a decline in year 2 and 3, only to increase back to 42% in year 4. Hambrick and Cannella (1993) reported similar findings, namely a strong association between removal of autonomy of the firm and executives' propensity to depart. The impact of autonomy removal has been found to be

significant even in the fourth year since the merger or the acquisition (Lubatkin, Schweiger & Weber, 1999). A limitation to this study is that authors (Hambrick & Cannella, 1993) used archival data. This means that we do not know whether managers left their jobs voluntarily or they were forced to leave. Therefore, further evidence based on primary sources is needed to understand whether autonomy removal does constitute a motivation for managers' intention to leave, the relationship between their intentions to leave and actual turnover, or whether firm autonomy removal is in itself a means towards eliminating incumbent management.

Executives' propensity to depart has also been linked in the literature with the relative size of the two organizations and pre-acquisition firm performance (Hambrick & Cannella, 1993). Authors measured relative size as sales recorded by the acquired organization before the transaction as percentage of the acquiring firm pre-transaction sales. Hambrick and Cannella (1993) found that the effect of pre-merger/acquisition organizational size matters, but these effects were significant only in the first month since the acquisition (χ^2 : -0.007; $p < 0.05$). A limitation to these studies is that they are mostly focused on executives' tendency to quit the organization after a merger or the acquisition, which means these findings may not generalize to non-management employees. It may be that the aspects that motivate management turnover may not be as strong, if at all, for the non-managerial staff. For instance, maintaining a positive status in the new organization (Hambrick & Cannella, 1993) may be a more powerful motivation for management retention, while for the non-management employees, it may be that they value the security of their jobs and organizational support more than status (Makri & Ntalianis, 2012).

Nevertheless, on whether high management turnover in merged organization is indeed harmful for companies is open to question. Certain studies confirm the fact that remaining in the organization has significant impact on the successful implementation of the merger or some other

measure of financial performance post-acquisition (Cording, Christmann & King, 2008). In contrast, other studies argue the opposite (Papadakis, 2005). Cording and colleagues' study (2008) is in line with the perspective of the market for corporate control, which views the business environment as an arena where management teams are in competition for the vote of shareholders (Jensen & Ruback, 1983). Therefore, a replacement of the target management team would thus be an action to replace inefficient managers (Ruback, 1983), and hence, would naturally be reflected in superior post-merger performance. In contrast, Papadakis' (2005) study is in line with the resource-based view of the firm (Wernerfelt, 1984). The theory suggests that the retention of the target management team should result in better performance, as it represents a core component of the target firm's resource pool. Therefore, management retention should be conducive to better post-merger performance (Ellis, Reus & Lamont, 2009, Kiessling, Harvey & Moeller, 2012).

The literature thus provides conflicting interpretation of the management turnover as being either beneficial or harmful for the new organization in terms of performance. A recent meta-analysis meant to juxtapose the differing hypotheses (Butler, Perryman & Ranft, 2012) showed consistent support for the resource-based view. In particular, the analysis of 22 studies and a total of 5,394 firms provided support to the hypothesis of a negative or neutral relationship between management turnover rates and some financial performance measure (i.e., return-on-equity, return-on-assets, Tobin's q, cumulative abnormal returns).

Resistance. While there is evidence of withdrawal behaviours in organizations, the research on more deviant manifestations is scant. Instead, the umbrella term "resistance" is used to encompass a heterogeneous group of negative behaviours (van Oudenhoven & de Boer, 1995)

without narrowing it down to specific acts or overt expressions of intentions, in either minor or more serious forms.

Mergers and acquisitions literature suggests there are several contextual factors that contribute to the manifestation of such resistive behaviours (Stahl & Voigt, 2008). In terms of contextual factors, studies point to factors such as type of transaction (Stahl & Voigt, 2008), degree of integration (van Oudenhoven & de Boer, 1995), firm autonomy (Cartwright & Cooper, 1993). In terms of type of transaction, studies showed that the higher the relatedness of the two companies merging, the higher the likelihood of job overlap, of products, markets and technologies (Salter & Weinhold, 1979; Shrivastava, 1986). Similarly, a meta-analysis by Stahl and Voigt (2008) showed that in a merger or an acquisition between two related entities it is very likely that employees will engage in resistive behaviour and acculturative conflict arising from the depth and breadth of the post-merger integration (Stahl & Voigt, 2008). Another factor, degree of integration, has also been found to be associated with employee resistive behaviour (van Oudenhoven & de Boer, 1995). Namely, the higher the degree of integration, the higher employee propensity to engage in resistive behaviour. In case of middle management, Meyer (2006) suggested that the post-merger or acquisitions tensions between differentiation and integration elicits divergent responses on the part of the managers as a response to a symbiotic integration pattern. In contrast, other empirical studies show that the breadth of operational integration of the acquiring organization may be associated with a smoother knowledge transfer between the two merger partners (Vaara, Sarala, Stahl & Bjorkman, 2012; Puranam & Srikanth, 2007). Additionally, as a function of employees' group identities (Sachdev & Bourhis, 1987), employees of the low status group may show preference for integration plans that favour equality between employees and groups (Giessner et al., 2006), while high-status groups may prefer

merger patterns that would maintain their status position in the newly merged organization (Gleibs, Tauber, Viki & Giessner, 2013). In terms of firm autonomy removal, Cartwright and Cooper (1992, 1993) found that the ‘structural raids’ on the acquired organization are predictably resented and resisted with conflict and counteraction. Authors suggested that the more intrusive the ‘colonization’ of the target with the buyer’s ideology, the more employees will perceive the buyer’s actions as offensive and disdainful to the legitimacy of the acquired firm’s history and its own beliefs, assumptions and norms. Thus, these assaults on the acquired company predictably breed win/lose thinking and resistive action tendencies on the part of employees.

In terms of cognitive factors, Nikandrou & Papalexandris (2007) as well as other studies (Joslin, Waters & Dudgeon, 2010) found that a positive construal of the change has a negative impact on the development of resistive behaviour. As long as people perceive the other organization in positive terms, they also feel more secure about their jobs (Chung, Du & Choi, 2014). This is in line with the resource-related literature which suggests that a relative comfort with regards to the maintenance of employees’ jobs in the organization and a sense of clarity are associated with increased willingness on the part of the employees to dedicate extra effort in their jobs (Lyons, 1971; Bliese & Castro, 2000; Bray & Brawley, 2002; Väänänen et al., 2004b). A limitation to these studies is that the contextual factors are largely not considered in the analysis, such as degree or speed of integration (Nikandrou & Papalexandris, 2007; Chung, Du & Choi, 2014) which may influence employees’ willingness to perform on the job. Also, considering the practical limitations in conducting research in more than one organizations, more studies in more cases of mergers or acquisitions (Bruner, 2005) would increase the generalizability of these findings (Chung, Du & Choi, 2014; Makri & Ntalianis, 2012).

Additional studies provided support to the view that resistive behaviours develop as a function of other cognitive factors, such as perceptions of management trustworthiness, cultural dissimilarity (Searle & Ball, 2004), identification with the new organization and relative standing (van Dijk & van Dick, 2009; Basinger & Peterson, 2008), perceived uncertainty (Marmenout, 2010), perceived continuity (Jetten & Hutchinson, 2011) and perceived fit between the two merger partners (Gleibs, Tauber, Viki & Giessner, 2013; Chung, Du & Choi, 2014). While organizational cultural incompatibilities were found to be associated with resistance (Weber, 1996; Cartwright & Cooper, 1993; van Oudenhoven & de Boer, 1995; Peck, Tower & Gulliver; Quah & Young, 2005; Sarala, 2010; Vaara et al., 2012), in contrast, national cultural differences were not. In fact, national cultural distance not only that it does not seem to be associated with a decline in productivity, emergence of post-merger/acquisition conflict or organizational performance for the post-merger/acquisition organizations (Slangen, 2006; Stahl & Voigt, 2008), but actually, it seems to be a positive association between cultural distance and successful post-acquisition social integration (Minbaeva & Muratbekova-Touron, 2011) and knowledge transfer (Vaara et al., 2012). Therefore, a cultural diversity may in fact be a positive factor in how employees interact and work with each other. This may be due to the fact that organizations may in fact concentrate more integration efforts in culturally diverse settings, or employees are more conscious of the cultural differences and thus empathize more with the culturally different ways of behaving and interacting.

Conclusions. Resistive behaviour has been operationalized in research as a form of protest and neglect (Nikandrou & Papalexandris, 2007) or used to denote a more or less fierce opposition to the change event (Monin, Noorderhaven, Vaara & Kroon, 2013; Quah & Young, 2005; van Oudenhoven & de Boer, 1995). However, there is a lack of a concrete definition of the

behavioural markers that fall under the category of resistance as a composite construct. Within the social identity theoretical framework, Van Dijk and van Dick (2009) conceptualize resistance as a form of response of employees to threats to their identities. Motivated by employees' need to maintain a positive group or work identity, this resistance finds expression in self-enhancement strategies, namely individual mobility, social creativity or social competition. Authors found evidence of various self-enhancement tactics adopted by the employees such as changing salient social category memberships, the value of the social category memberships or promoting the ingroup and negating the outgroup. However, the constructs investigated are essentially employees' evaluations of the change event and the working environment as well as their responses to the change event and working environment as a function of their interpretation of these targets. Neither the evaluative constructs investigated in the study (attitudes towards the change and working environment) nor the responses to these attitudinal variations consist of an observable action component. Instead, when discussing resistive responses, authors use a cognitive conceptualization of resistance. The identified resistive strategies are essentially indications of higher-order conglomerate of dispositions meant to capture individuals' motivation to maintain a positive identity in the changing organizational context. The abstractness of the tactics identified makes it difficult to identify the particular actions employees may engage in and how they could actually translate these strategies into actions.

Furthermore, intentionality alone does not invariably lead to action, as there are several moderating variables that influence behavioural achievement, including, apart from the strength of individuals' subjective evaluations, subjective norms and perceived behavioural control (Ajzen, 1991). As a consequence, although there may be a relative consistency between the dispositional categories identified by the authors and certain actions performed by the

individuals, it is not clear if these actions carry a negative or a positive valence for either the organization or the outgroup as potential targets.

To summarize, in case of non-managerial workforce, employees may engage in withdrawal behaviours as a result of a) perceptions of unfairness; b) job resources; c) identification with the new organization; d) professional devaluation; e) psychological contract breach; f) leader-member exchange; g) perceived status; h) cultural differences (van Oudenhoven & de Boer, 1995). In case of top management turnover, their withdrawal tendencies may be a function of: a) pre-merger performance; b) pre-acquisition size; c) pre-acquisition status; d) cultural differences; e) autonomy removal. Withdrawal behaviours (particularly for employee departures) sometimes do and sometimes do not have a negative long-term impact on post-merger performance. The strength of this negative relationship is in need of further empirical support, as in both the case of managerial and non-managerial positions there are conflicting evidence (Butler, Perryman & Ranft, 2012; Ruback, 1983).

Employees' propensity to engage in resistive behaviour in mergers and acquisitions is a function of perceptions of management trustworthiness, cultural dissimilarity (Searle & Ball, 2004), involvement in the merger process (Basinger & Peterson, 2008), identification with the new organization and relative standing (van Dijk & van Dick, 2009), perceived uncertainty (Marmenout, 2010), perceived continuity (Jetten & Hutchinson, 2011) and perceived organizational fit (Gleibs, Tauber, Viki & Giessner, 2013; Chung, Du & Choi, 2014).

Future research directions. As discussed, there are several inconsistencies in the literature, which future work would need to reconcile in further empirical investigations as well as develop theoretically. Firstly, conceptual clarity on the higher-order construct of resistance is needed. Despite their widespread use in research, there is limited consensus on its definition and

assessment, but rather varied interpretations that reflect cognitive, attitudinal and behavioural concepts. In the absence of a specific and consistent operational definition, existing evidence have limited generalization capability. Further inquiry into the concept of resistance would provide more clarity and advance existing assessment strategies. For instance, it is yet not clear how resistive attitudes translates to negative or positive behaviour from the organizational standpoint, as both an attitude-behaviour consistency and dissonance would lead to the achievement of employee's goals of positive distinctiveness.

Secondly, it is not clear whether voluntary turnover of acquired employees have a negative or a positive long-term impact on post-merger performance (Butler, Perryman & Ranft, 2012; Ruback, 1983). There are theoretical justifications to sustain both hypotheses. On the one hand, pre-merger employees are more likely to engage in resistive behaviours (van Oudenhoven & de Boer, 1995) and thus, jeopardize the merger success. In this case, employee departure may in fact, be a necessary evil (Papadakis, 2005). On the other hand, employee retention ensures successful knowledge transfer and knowledge creation (Butler, Perryman & Ranft, 2012; Kiessing, Harvey & Moeller, 2012; Ellis, Reus & Lamont, 2009; Cording, Christman & King, 2008). A clarification of the factors that mediate the impact of employee turnover and post-merger performance would, I believe, be a fruitful research avenue to pursue.

2.3.2.2. *Behaviours directed towards the outgroup*

In the preceding chapter, I discussed the evidence of employees engaging in behaviours that affect the organization after the merger or the acquisition, directly (e.g. through resistive behaviours) or indirectly (e.g. turnover). However, literature suggests there is another cluster of behaviours that employees manifest in a merger or an acquisition context, which is not aimed at the organization, but rather at the employees of the partner organization, and which is a function of employees' organizational identification. In this chapter, I will discuss the evidence of employee behaviour targeted against the group of employees belonging to the partner organization, or the outgroup, such as differentiation strategies, ingroup favouritism and outgroup derogation.

Intergroup differentiation. The intergroup context created by the merger or the acquisition animates employees' intentional search for differences between the ingroup and the outgroup (Ailon-Souday & Kunda, 2003; Langley et al., 2012). The heightened attention towards the incompatibilities between the two groups seems to be triggered by taxing situations, such as failure to achieve expected outcomes or hindered intergroup cooperation (Vaara, 2000), as individuals search for a rational understanding of the causes of these problems. The real or fabricated cultural differences serve as convenient targets for the attribution of failure during the integration process.

The pervasiveness of this differentiation tactic seems to be a function of the extent of the change in the post-merger organization, and the disruptive potential of the change (Vaara, 2000; Smith et al., 2013). Hence, the larger the scale of the change as a result of the merger or the acquisition, the higher the emotional attachment to the group and tendencies to engage in cultural confrontations with the other group. Equally, the more severe the organizational reconfiguration

after the merger or the acquisition, the more employees will seek to front their ingroup qualities and expose outgroup irregularities, differences purposefully recruited to explain problems and resist the change (Vaara, 2000). In two surveys of merged organizations, van Knippenberg et al. (2002) found that perceived organizational differences were negatively linked to post-merger identification for the dominated group and positively for the dominant group.

In the case of cross-border mergers and acquisitions, employees' purposeful search for legitimate sources of differentiation is facilitated by constructing images of 'us' and 'them' as national collective (Tienari et al., 2005; Vaara, 2000; Smith et al., 2013; Drori, Wrzesniewski & Ellis, 2013). Conversely, in case of national mergers or acquisitions, individuals look for alternate sources of differentiation, such as organizational rather than national cultures (van Vuuren, Beelen & de Jong, 2010).

Ingroup favoritism. Individuals' quest for self-enhancement and positive group identity motivates people to favour ingroup members and think less of the outgroup members (Tajfel, 1981). Employees in mergers and acquisitions may exhibit ingroup favoritism, namely exaggerated positive evaluations and preferential treatment of members belonging to the same group (Dackert et al., 2003; Terry & Callan, 1998). Individuals may express this ingroup preference by elevating the ingroup along some relevant dimensions in the intergroup setting (i.e. the merged organization, van Vuuren, Beelen & de Jong, 2010). In a cross-sectional study of a newly merged airline company, Terry, Callan and Sartori (1996) showed that employees lower in perceived status compared to the outgroup displayed more ingroup bias compared to high-status employees. Individuals rated their ingroup more favourably than the outgroup on context irrelevant dimensions, such as communication, helpfulness and cooperation while lower levels of bias were found along dimensions directly related to the basis for status differentiation, such as

expertise and professionalism. Similar patterns were found in later studies (Terry & Callan, 1998; Dackert, Jackson, Brenner & Johansson, 2003; Amiot, Terry & Callan, 2007; Ailon-Souday & Kunda, 2003; Colman & Lunnan, 2011; Drori, Wrzesniewski & Ellis, 2013)

Outgroup derogation. While ingroup favouritism is mainly oriented towards establishing a positive identity for the group and for oneself, other strategies tend to be more aggressive towards the outgroup, such as outgroup derogation (Branscombe & Wann, 1994). Employees in mergers and acquisition seem to be very critical of the practices of the outgroup, their etiquette claiming a loss on service quality as a result of the merger between the companies (McEntire & Bentley, 1997; Weber & Camerer, 2003). The association with the other group occasioned by the merger is in and of itself a cause of degradation. Employees fear being associated with a seemingly “downmarket” firm, and thus avoid being “contaminated” (Empson, 2001). Individuals do not feel like they have anything to learn from one another and avoid contact, as in the case of the merger between Chrysler Corporation and Daimler-Benz, in 1998 (Apfelthaler, Muller & Rehder, 2002).

Employees dismiss the value and relevance of outgroup’s knowledge base. Not only they make no attempts to study the outgroup’s know-how and practices but reject them altogether (Chua & Goh, 2009), thus hindering any knowledge transfer between the acquirer and acquiree (Vaara et al., 2012). The access to ingroup knowledge base is limited to ingroup members and blocked for the outgroup in an effort to avoid exploitation by the latter (Empson, 2001). Employees are henceforth engaged in actions meant to protect their group status and resources. They keep the others at arm’s length as the others might use these resources (i.e. knowledge) to the ingroup’s disadvantage. At the same time, employees devalue the knowledge of an outgroup they deem as unprofessional and “provincial” in practices and standards. They refrain from

knowledge transfer opportunities as they feel they have nothing valuable or relevant to learn from the outgroup.

Conclusions. To conclude, mergers and acquisitions seem to create a fertile ground for the expression of group-based identities and intergroup processes (Hogg & Terry, 2000). Literature suggests both of the merged groups engage in various behaviours directed at the outgroup, such as in intergroup differentiation (Ailon-Souday & Kunda, 2003; Langley et al., 2012; Vaara, 2000), ingroup favouritism (Dackert et al., 2003; Terry & Callan, 1998) and outgroup derogation (McEntire & Bentley, 1997; Weber & Camerer, 2003; Empson, 2001; Apfelthaler, Muller & Rehder, 2002).

These behaviours may be differentially manifested across status conditions (Terry, Callan & Sartori, 1996), and as a function of employees' pre-merger group identification (van Knippenberg et al., 2004). Intergroup differentiation strategies may be employed as soon as employees perceive the other group in the merger or the acquisition as a threat (Amiot, Terry & Callan, 2007). In employees' search for sources of intergroup differentiation, national and organizational culture may present highly accessible opportunities for employees to distance themselves from the outgroup (Tienari et al., 2005).

These behavioural manifestations may ultimately jeopardize the success of the merger in various ways. For instance, antagonistic intergroup relations have been found to be linked with limited knowledge transfer (Empson, 2001; Junni, 2011), workplace conflict (Sarala, 2010), and merger implementation success (Drori, Wrzesniewski & Ellis, 2013).

Future research directions. According to social identity theory, people seek to establish a positive self-image. The group they are part of is thus instrumentalized in their search for positive distinctiveness and self-esteem (Tajfel, 1981; Mullen, Brown & Smith, 1992). One way

to achieve this is through intergroup bias, which manifests itself through ingroup favouritism and outgroup derogation (Tajfel & Turner, 1979). But while both are subsumed under intergroup bias construct, the two processes have been shown to be qualitatively distinct (Tajfel & Turner, 1986). While ingroup favouritism is directed against ingroup members, through inflated positive judgments, outgroup derogation refers to a negative evaluation of the outgroup (Tajfel & Turner, 1986). Devaluation of the outgroup may range from mildly positive to hateful (Voci, 2006). Negative outgroup affect and positive ingroup evaluation is rooted in the general tendency for human social systems to form and maintain group-based hierarchical systems (Sidanius, Levin & Pratto, 1996). Individuals attempt to achieve a positive group identity by stratifying the social system and occupying a privileged position. Thus, discriminatory behaviour of a high-status outgroup is meant to maintain group inequality through behaviours that justify and maintain the group's social position in the new system (Sidanius & Pratto, 1999).

Social dominance theory (Sidanius, Devereux & Pratto, 1992; Sidanius Pratto & Rabinowitz, 1994) proposes that high status groups should hold more strongly group-based social inequality beliefs than low-status group members. Individuals at the bottom of the hierarchy may yield to the social stratification and may devalue their own low-status group (Levin & Sidanius, 1999).

In the mergers and acquisitions literature, although there is strong evidence in support of ingroup bias (Lipponen, Olkkonen & Moilanen, 2004; Terry & Callan, 1998) it is not very clear the extent to which identification with the ingroup and the superordinate entity is associated with negative outgroup affect. While the creation and perpetuation of a power hierarchy is a process infused with conflict and antagonism, the literature points to a relative consensus in terms of dimensions that form the basis of the hierarchy (Terry & Callan, 1998). Additionally, perceptions

of permeability, that is, the extent to which individuals believed the intergroup boundaries to be open appear to be associated with higher organizational commitment, higher post-merger identification, job satisfaction and self-esteem (Terry, Carey & Callan, 2001). Results held only for the low-status group. Opposite pattern of results was obtained by Terry and colleagues (2001) for high-status employees. Therefore, low-status employees may show a preference for individual mobility towards the high-status group as a strategy for achieving a positive self-image. However, high-status individuals may engage in different strategies to maintain a privileged status position, such as derogatory behaviour (Chua & Goh, 2009; McEntire & Bentley, 1997). Although attempts have been made at modelling outgroup affect (Lipponen, Olkkonen & Moilanen, 2004) by introducing ingroup/outgroup evaluations, authors did not account for group status. Future studies that model both outgroup evaluations and perceived status may improve our understanding of the mechanisms underlying outgroup derogation and ingroup favouritism in mergers and acquisitions.

2.3.2.3. General conclusions about employees' behavioural responses to mergers and acquisitions

To summarize, there are various factors embedded in the characteristics of the merger or acquisition transaction, in the resources employees have and in the way they construe the merger or the acquisition that shapes their behaviour at work. In this chapter, I answered the second research question of this thesis, namely what does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees). The evidence

reviewed in this chapter suggests employees may engage in resistive behaviour against the organization (Nikandrou & Papalexandris, 2007) and oppose the organizational change (Monin, Noorderhaven, Vaara & Kroon, 2013; Quah & Young, 2005; van Oudenhoven & de Boer, 1995). Employees may also engage in withdrawal behaviours, such as turnover (Fried, Tiegs, Naughton & Ashforth, 1996; Stovel & Savage, 2005), they may reduce their effort on the job or become careless or indifferent towards their job (Bellou, 2008; Michela & Vena, 2012). They may not engage in cooperative behaviours with colleagues and become combative towards the others (Marmenout, 2010; Rafferty & Restubog, 2010). In terms of behaviours targeted against individuals and groups, reviewed evidence suggests employees in mergers and acquisitions may engage in intergroup differentiation (Ailon-Souday & Kunda, 2003; Langley et al., 2012), ingroup favouritism (Dackert et al., 2003; Terry & Callan, 1998) and outgroup derogation tactics (McEntire & Bentley, 1997; Weber & Camerer, 2003).

In terms of factors that lead to such behavioural outcomes, in this chapter I discussed how in hostile acquisitions, management may be more likely to leave the company compared to friendly acquisitions (Hambrick & Cannella, 1993). However, given the conflicting evidence on the impact of transaction mood on turnover rates (Walsh & Kosnik, 1993), further studies are needed to have a better understanding of the mechanisms by which hostile acquisitions do indeed lead to higher departure rates. I have also discussed how type of merger or acquisition or degree of relatedness may elicit withdrawal or resistive behaviours. Speed of integration, autonomy removal, whether it is a domestic or a cross-border merger or acquisition and organizational size also seem to influence employee's propensity to engage in negative behaviours. In terms of resources, I discussed how job security, job autonomy and perceived controllability influence employees' propensity to engage in negative behaviours. The main assumption I discussed was

that as long as people perceive their jobs as being safe, or that they can perform their jobs under minimal supervision, the less likely they will engage in negative behaviours. I continued with a review of evidence on the cognitive factors that trigger particular behaviours among employees in mergers and acquisitions. I discussed the impact of organizational identification, trust, organizational and national culture. It appears that employees' strong identification with the old pre-merger/acquisition organization and low identification with the new organization activates a range of behaviours targeted against the outgroup, such as ingroup bias, ingroup favouritism, outgroup derogation and discriminatory actions (van Vuuren, Beelen & de Jong, 2010; van Leeuwen, van Knippenberg & Ellemers, 2003; Boen et al., 2007, see Chapter 2.3.2.2 for a review of employee behaviours targeted against the outgroup). Additionally, a sense of distrust in the organization seems to be associated with employees' deliberate obstruction of knowledge transfer between the two groups of employees or turnover intentions (Bellou, 2007; Kiessling, Harvey & Moeller, 2012). Organizational cultural differences emerged as another factor in employees' behaviour in mergers and acquisitions, which may lead to resistive behaviour and turnover intentions.

Nevertheless, there are certain limitations to these studies, which future literature may address in further empirical research. Firstly, it may be useful to understand how contextual, resource availability and cognitive factors interact to trigger counterproductive employee behaviour, such as turnover. Existing literature does not take into account the influence of all these factors. Rather, these studies are limited to the investigation of a particular aspect of either employee cognition, resource or contextual factor. Secondly, many of the studies on employee turnover refer to those holding managerial roles. It may be that the aspects that motivate management turnover may not be as strong, if at all, for the non-managerial staff (Hambrick &

Cannella, 1993; Cartwright & Cooper, 1993). Therefore, we cannot generalize that certain factors do operate in a similar fashion in case of employees at lower levels of the organization. Thirdly, future studies would need to provide more clarity in reporting the sample characteristics. Namely, it would be useful to know the distribution of the sample across types of mergers or acquisitions, whether they are domestic or cross-border or the nationalities included in the sample. Lastly, as in case of the literature discussing employee emotions, the studies examining employee behaviour suffer from generalizability issues, mainly arising from the fact that the studies are carried in only one case of a merger or the acquisitions. This is understandable, because of the specific problems I have emphasized throughout that researchers often experience when approaching organizations experiencing a merger or an acquisition. Nonetheless, there is a need for more studies that can strengthen existing evidence on employee behaviours in mergers and acquisitions, or studies that can attract participants from more than one case of a merger or an acquisition.

2.3.3. Review of psychosomatic health and well-being of employees in mergers and acquisitions

In Chapter 2.3.1, I have discussed the extent to which the organizational context impacts individuals' positive psychological functioning from an affective standpoint. While I have addressed the range of positive and negative emotions experienced by employees at the workplace, one important aspect left out of an individual's mental and physical health is how the job-related antecedents link with various psychosomatic health complaints. This chapter will discuss the main findings in the mergers and acquisitions literature that deal with various markers of psychosomatic health and which answers the third research question of this thesis, namely:

RQ3: *What is the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions?*

In this chapter, I discuss the evidence of psychosomatic health problems experienced by employees in mergers and acquisitions, such as neurotic disturbances, emotional exhaustion and functional incapacity.

Table 6

Evidence of employee psychosomatic health

Somatic well-being markers	Selected references	Design	Sample size (cases of mergers/ acquisitions sampled)	Sample size (number of participants)	Analysis
Depression	Väänänen, Ahola, Koskinen, Pahkin & Kouvonen, 2011	Longitudinal	1	6511	Regression
Exhaustion	Väänänen, Pahkin, Kalimo & Buunk, 2004	Longitudinal	1	7850	Regression

Functional incapacity	Väänänen, Pahkin, Kalimo & Buunk, 2005	Longitudinal	1	7850	Regression
Ill-health	Makri & Ntalianis, 2014	Cross-sectional	1	140	Regression
Mental health	Cartwright & Cooper, 1993	Cross-sectional	1	157	Mean scores
Physical health	Cartwright, Tytherleigh & Robertson, 2007	Longitudinal	1	336	t-tests
Psychiatric disorder	Väänänen, Ahola, Koskinen, Pahkin & Kouvonen, 2011	Longitudinal	1	6511	Regression
Psychological distress	Joslin Waters & Dudgeon, 2010	Cross-sectional	1	250	CFA
Mental well-being	Cartwright, Tytherleigh & Robertson, 2007	Longitudinal	1	336	t-tests

Neurotic disturbances. In a study of a merger in a financial services industry, Cartwright and Cooper (1993) administered Crown-Crisp Experiential Index, formerly known as Middlesex Hospital Questionnaire (Burgess, Mazzocco & Campbell, 1987) to 157 employees of a merged organization. The instrument consists of 48 items, and contains 8-item subscales: free floating or generalized anxiety, phobic anxiety, obsessionality, somatic anxiety, depression and hysteria (Burgess, Mazzocco & Campbell, 1987; Ross & Hafner, 1989). While it is a multi-scale measure, it has been suggested (Birtchnell, Evans & Kennard, 1988) that the Crown-Crisp Experiential Index may better be used as a more general measure of the overall neurotic pathology, rather than for specific neurotic disorders.

The analysis of the employees in the merger case studied by Cartwright and Cooper (1993) revealed a good mental well-being compared to the normal population. Both companies' employees had a comparable or better mental health than psychoneurotic outpatients across all six subscales. However, not all employees had similar scores, one group displaying more adverse mental functioning. In particular, the company that was perceived to be assimilated who had to

relocate offices to the headquarters of their merger partner displayed higher scores across all subscales. 70% percent of the employees from the company perceived to have been assimilated rated the merger as highly stressful compared to 24% of the employees of the other organization. Authors also found significant differences between the two groups in terms of psychoneurotic disturbances, in the sense that there was a higher percentage of employees from the former organization scoring comparably with psychoneurotic outpatients and higher than normal population (20.7% on Free Floating Anxiety, 17.2 on Phobic Anxiety, 31% on Obsessionality, 13.8% on Somatic Anxiety, 17.2% on Depression and 34.5% on Hysterical Personality). Furthermore, as a stress response, authors found evidence of maladaptive coping strategies, such as increased consumption of nicotine, alcohol and food. However, the study, which was meant to measure the degree of cultural fit between the two financial institutions and the impact of the merger on the employees in terms of stress, organizational commitment, satisfaction and mental health, was carried 6 months after the merger, which makes it prone to recall and miscalculation biases. Therefore, employees may not reconstrue the experience shortly after the merger in the same way as they perceive it retrospectively six months later on. As this study covered only one case of merger, in the United Kingdom, more studies discussing employee psychoneurotic disturbances in mergers and acquisitions would be needed to cover multiple organizational setting. For instance, the findings may not necessarily apply to all cases of mergers or acquisitions that do not involve the breadth of changes employees experienced in the studied merger such as relocation. Lastly, the study is carried among managers of the two financial institutions, which, as authors indicated, was largely dominated by males. Therefore, no detailed statistical analysis is available for female managers. This means further evidence is needed to understand whether female managers do actually experience mergers or acquisitions differently

compared to men and what their coping mechanisms are. Also, the fact that the study was carried among managers, means that we cannot generalize these findings to other non-management employees.

In one of the most extensive studies carried in mergers and acquisitions, Väänänen et al. (2011) followed 6511 employees across a 5-year span. The cohort study had four cross-sections, namely twice before and twice after the merger of a multinational forest corporation. The study was aimed at examining the impact of a self-assessed change in individuals' situation on the onset of a psychiatric event. Authors used both questionnaire data and national data health registers. Participants with a history of hospital admissions or drug purchases related to psychiatric disorders were screened out from the survey. Of the 6511 participants with no history of hospital admission, 59 died (excluding suicide) during the study. By the end of the follow-up, 44 participants were admitted in hospital due to a psychiatric disorder, 199 were prescribed psychotropic medication, 5 committed suicide and 4 attempted suicide. In total 2.9% of the study population. Using several instruments to assess job characteristics, health-enhancing personality characteristic and self-reported psychiatric morbidity, authors found that a negative change in the organization following a merger or an acquisition was associated with a 60% higher risk of psychiatric events and onset of depression. This association remained statistically significant at time II with a hazard ratio of 1.53 (CI 1.06 to 1.99). Non-manual employees who experience negative change during the merger had a twofold risk of subsequent psychiatric event with a hazard ratio of 1.99 (CI 1.25 to 3.18). Employees with a psychiatric disorder were more often men (HR: 1.67; CI: 1.29 to 2.17), and older than 50 (HR: 1.03; CI: 1.01 to 1.04). Authors concluded that perception of a merger-related change as negative was conducive to the onset of a psychiatric disturbance at least within a 5-year post-merger/acquisition window. The most

affected occupational class seemed to be the white-collar workers, older employees, and men. Therefore, as authors suggested the proximity to the change itself and change agents increases the vulnerability of employees psychosocial functioning. However, there are certain limitations to this study. Extant literature suggests that there are several factors, such as national culture, that may influence the extent to which employees are predisposed to make certain attributions (Betancourt, Hardin & Manzi, 1992) or are naturally more optimistic than others (Heine & Lehman, 1995). Considering the fact that the study (Väänänen et al., 2011) was carried in one case of a merger between a company based in Finland and another one based in Sweden, further investigations into these health outcomes would increase generalizability to other M&A contexts. . Another limitation is that the authors did not conduct comparative statistical analyses between the two groups of employees, so we do not know if a particular group of employees does indeed have higher risk of psychiatric disorder compared to the other or not.

Emotional exhaustion and functional incapacity. Väänänen and colleagues (2004a) found in a merger of two Finnish companies that the structural changes after the merger had a significant impact on the level of emotional exhaustion and functional capacity of employees. The longitudinal study captured both pre and post-merger periods, which allowed a more thorough examination of employee health and the relations of causality between merger-related stimulus and health outcomes. The results showed a significant difference in emotional exhaustion across occupational classification. In particular, blue collar workers who perceived a decline in their job position following a merger or who considered the merger did not cause any change in their job position had significantly higher risk of exhaustion (odds ratio - OR: 3.80, $p < 0.001$ for perceptions of decline and OR: 2.24, $p < 0.05$ for perceptions of no change in job position). Also, blue-collar workers who perceived weak support from the organization had a

higher risk of emotional exhaustion versus white-collar workers (OR: 1.77; $p < 0.05$). In contrast, white collar workers did not experience the change as dreadful, though they did record significantly more sick leaves than their counterparts. The only category of white-collar workers with a high risk of exhaustion were those who perceived that their job situation has changed as a result of the merger, with an odds ratio of 3.09 ($p < 0.001$).

Authors (Väänänen et al., 2004) also measured the risk of functional incapacity, which represents the capability of the organism to reach certain goals (Nygård et al., 1991) and which is a component of the Work Ability Index (Tuomi et al, 1998). The functional incapacity subscale taps into the physical (divided into musculoskeletal and cardiorespiratory capacity), mental and social functioning. In the sample studied by Väänänen and colleagues, both occupational categories were affected in terms of physical and mental capabilities. Both blue and white collar workers who perceived negative changes in their job situation had a high risk of functional incapacity (OR: 4.27, $p < 0.001$ and OR: 4.62, $p < 0.001$ respectively). Also, both categories had a high risk of functional incapacity even when they did not perceive any change in their job position (OR: 2.22, $p < 0.01$ and OR: 2.45, $p < 0.001$). Perceptions of weak organizational support were also associated with higher risk of functional incapacity (OR: 1.72, $p < 0.001$ for blue-collar workers and OR: 1.71, $p < 0.05$ for white-collar workers). Other factors associated with high risk of functional incapacity for white collar workers were supervisor support (OR: 2.13, $p < 0.001$). A limitation to this study is that the experiment was carried in only one of the merger partner, namely the Finnish part, and there is no indication as to which of the two partners had a different status before the merger took place. Therefore, these results may not generalize to the employees of the other merger partner. Another limitation to this study is that authors only took into account the job resources, and did not measure personal resources. Personal resources, such as optimism

and self-efficacy (Hobfoll, Johnson, Ennis, & Jackson, 2003) provide support mechanism that may mitigate the impact of weak organizational support or job insecurity on employee health. Another limitation is that authors used employees' retrospective evaluation of their job situation following the merger. This might have lead participants to dramatize their job situation or be overoptimistic about their job changes. Thus, the findings are somewhat limited by methodological issues.

Conclusions. The literature investigating the psychosomatic health of employees in mergers and acquisitions reveals important information regarding the hazard rates of psychiatric disorders and the risks of emotional exhaustion and functional incapacity. Therefore, the answer to the third research question of this thesis regarding the existing evidence in the literature on psychosomatic symptoms among employees going through a merger or an acquisitions is that employees are highly vulnerable to depression (Cartwright & Cooper, 1993; Joslin, Waters & Dudgeon, 2010; Cartwright, Tytherleigh, & Robertson 2007), emotional exhaustion and functional incapacity (Väänänen et al., 2004). Väänänen and colleagues (2011) showed that perception of a merger-related change as negative may also be conducive to the onset of a psychiatric disturbance at least within a 5-year post-merger/acquisition window. Poor mental health of employees in mergers and acquisitions can lead to maladaptive coping strategies, such as excessive consumption of nicotine, alcohol and food (Cartwright & Cooper, 1993).

The reviewed studies above suggest that certain work-related factors make employees vulnerable to such psychosomatic disturbances. Changes in job position, relocation and lack of organizational support have been cited as important predictors (Väänänen et al., 2004), together with perception of the merger itself (Väänänen et al., 2004, 2011). White-collar workers, older

employees and men are the most susceptible to experience poor mental health following a merger or an acquisition (Väänänen, 2011).

Future research. The reviewed studies offer invaluable insights into the psychosomatic impact of organizational change on employees. It reveals the ways in which the uncertainty and anxiety associated with the merger can have some major repercussions on individuals' mental and physical health. The impressive number of participants sampled, coupled with the integration of both subjective and objective measures make its findings even more alarming for both practitioners and academics in the field. However, the research on the psychopathology of various somatic or psychological disturbances in mergers and acquisitions usually involves self-report measures of the prevalence of various symptoms, their frequency and duration. Though often desirable to include clinical assessment methods to establish diagnosis (Garb, 1998), the use of more sophisticated diagnostic methods may be impractical as a research method in an organizational setting. As a consequence, the findings of this strand of literature is interpreted with care, given the absence of a clinician's view of the participants interviewed/surveyed. Future studies that would sample more cases of mergers and acquisitions from more than one country, would fill the existing gaps in a way that would make the findings generalizable to the population. Also, empirical studies that would compare psychosomatic health scores between the merger partner employees would shed light on the extent to which the two or more groups of employees involved in the merger or the acquisition face different hazard ratios.

More studies in the area of psychiatric morbidity and physical symptomatology that would examine mental health markers in relation with factors such as status, pre-merger affiliation and organizational identification would substantially improve our understanding of

employee health outcomes amid major organizational changes. This would also contribute to more advanced, sophisticated treatment methods.

Furthermore, the range of psychiatric disorders covered in the studies is very limited to only few psychopathological domains (depression, alcohol-related psychiatric events and all-cause psychiatric events). Potential new avenues for research would be the inclusion of other abnormal cognitions of employees, such as paranoia and narcissism for managers. This could intuitively be significant in this context, given the scant evidence of hypervigilance (Searle & Ball, 2004; Harwood & Ashleigh, 2005) and managerial overconfidence (Vaara et al., 2014). These psychopathologies are less investigated in mergers and acquisitions, though their relevance has been documented in other non-clinical organizational contexts (Kramer, 1998; Kramer, 2001) and also suggested in qualitative studies of employees' subjective experience of the merger or the acquisition (Maguire & Philips, 2008).

2.4. Discussion

In the previous chapters, I discussed the evidence of employee emotions in mergers and acquisitions following Russel's (1980; Posner, Russel & Peterson, 2005; Gerber et al., 2008) circumplex model of affect (Chapter 2.3.1). I followed with the evidence on employee behaviour in mergers and acquisitions (Chapter 2.3.2) and finally, with the evidence on employee health in mergers and acquisitions (Chapter 2.3.3). My systematic literature review noted that there is a wide range of affective, behavioural and psychosomatic outcomes employees experience after a merger or an acquisition. My literature review showed that these outcomes are influenced by various contextual, cognitive and work-demands /resource-related factors. Here, I briefly summarize the results of my systematic literature review.

In reporting the results on the evidence of employee affect in mergers and acquisitions, I used the 4-class circumplex model of affect typology (Russel, 1980), whereby emotions may be highly arousing and positive or negative or low in arousal and positive or negative. In terms of high activation and positive affect (Chapter 2.3.1.1), my systematic literature review showed that employees may sometimes be less emotionally committed to the new organization (Schweiger & Denisi, 1991; Terry, Carey & Callan, 2001) or as committed as employees of companies under normal operating conditions (Cartwright & Cooper, 1993). These contradictory findings may be attributed to sampling variability. Namely, Cartwright and Cooper's (1993) sample of managers working in financial industry may not be comparable to non-managerial employees in the aviation industry (Terry, Carey & Callan, 2001). Another explanation may be that authors used different conceptualizations of status as predictor variable for employee commitment. Terry and colleagues (2001) measured status in terms of power differentials between the employees of the

two organizations involved in the merger or the acquisition, while Cartwright and Cooper (1993) only controlled for pre-merger/acquisition affiliation. Therefore, it is not clear which of the two groups of employees had a higher and a lower status. In addition, affective commitment also seems to be associated with perceptions of fairness and justice (Clarke & Salleh, 2011) and perceived necessity to stay in the organization (Michela & Vena, 2012). My literature review showed that a decline in affective commitment and continuance commitment may be associated with negative coping strategies on the part of the employees, such as avoidance and resignation coping (Armstrong-Stassen & Cameron, 2003). The main limitations to these studies (Clarke & Salleh, 2011; Michela & Vena, 2012; Armstrong-Stassen & Cameron, 2003) concern the limited generalizability to other countries (e.g. Canada - Michela & Vena, 2012) or industries (healthcare - Armstrong-Stassen & Cameron, 2003). Extant literature suggests that there is a diversity of factors that make mergers and acquisitions sensible to local factors, such as national culture (Frijns, et al., 2013) or industry (Miller, 1993), organizational culture (Silverthorne, 2004) or size of the organization (Sommer, Bae & Luthans, 1996). Therefore, in mergers and acquisitions empirical research, the number of cases of mergers/acquisitions investigated may be as important as the number of employees surveyed or interviewed. Consequently, it would be useful that future studies include more cases of mergers and acquisitions in their sample as a means towards strengthening the generalizability of the findings.

In terms of low activation and positive affect, my systematic literature review noted the evidence on satisfaction at the workplace (Schweiger & Denisi, 1991; Amiot et al., 2006; Amiot, Terry & Callan, 2007; Guerrero, 2008; Peck, Towell & Gulliver, 2001). The review showed that satisfaction at the workplace in mergers and acquisitions is influenced by contextual, cognitive and work demands /resource related factors. The antecedents to these outcomes that emerged in

my review are perceptions of group status (Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007; Makri & Hantzi, 2012), perceptions of group permeability (Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007), strength of identification (van Dick, Wagner & Lemmer, 2004), organizational trust, perceived uncertainty (Marmenout, 2010); job and personal resources (Gulliver, Towell & Peck, 2003; Krug & Nigh, 2001; Edwards & Edwards, 2014; Chung, Du & Choi, 2014); degree of integration (Makri & Hantzi, 2012), organizational reputation (Elstak et al., 2014), organizational identity (McEntire & Bentley, 1996; Kovoov-Misra & Smith, 2008) and role in transaction (Terry, Carey & Callan, 2001; Covin et al, 1996; Fischer et al., 2007). A high satisfaction at the workplace may trigger supportive and learning behaviour and a good psychosomatic health (Krug & Nigh, 2001). In contrast, a dissatisfaction at the workplace may generate resistance, withdrawal and ill-health (Tett & Meyer, 1993; Krug & Nigh, 2001). However, similarly to other strands, more studies that can address the variability in the situation or context in which the merger or the acquisition is conducted are needed. Due to the specific challenges of attracting participants who experience a merger or an acquisition at the workplace, many of the studies reviewed mostly sample one case of a merger or an acquisition, thus covering one industry or one culture (Schweiger & Denisi, 1991; Cartwright & Cooper, 1993; Terry, Carey & Callan, 2001; van Dick, Wagner & Lemmer, 2004). It may be that these findings will do not apply to other countries, industries or sectors. Another limitation is that many studies are carried among managers, such as those investigating the link between job satisfaction and turnover (Krug & Nigh, 2001). Therefore, further evidence is needed to better understand the role of affect in turnover in case of non-management employees going through mergers or acquisitions.

Mergers and acquisitions literature also showed employees may experience negative emotions that are high in arousal. There is evidence of employees feeling devalued (Piekkari et al., 2005) or of having little worth (Terry, Callan & Sartori, 1996), betrayed (Brown & Humphreys, 2003) or threatened (Zhou, Shin & Cannella, 2008) and anxious (Styhre, Borjesson & Wickenberg, 2006; Empson, 2001). These feelings may be triggered by a range of contextual, cognitive and work demands/resource-related factors. Cognitive factors that emerged from the systematic literature to be associated with high arousal negative emotions are the status of the group employees identify with (Terry, Callan & Sartori, 1996; Terry, Carey & Callan, 2001), trust in the organization or breach of psychological contract (Klendauer & Deller, 2009; Nikandrou & Papalexandris, 2008; Linde & Schalk, 2008; Bellou, 2007) perceived continuity (Jacobs, Oliver & Heracleous, 2013; Spicer, 2011; Colman & Lunnan, 2011) identification with one or the other groups involved in the merger or the acquisition (Amiot, Terry & Callan, 2007; van Vuuren, Beelen & de Jong, 2010) and perceptions of uncertainty (Goddard & Palmer, 2010; Lupina-Wegener, 2013; Searle & Ball, 2004). As to the contextual factors, degree of integration appears to be associated with employees' negative affect and which are high in arousal (Giessner et al, 2006). The aspects related to the demands of the job and resources employees have and which emerged as antecedents to this cluster of emotions are job security, career progression and benefits they receive from performing their jobs (Burlew, Pederson & Bradley, 1994; Clark, Gioia & Ketchen & Thomas, 2010; Kooor-Misra & Smith, 2008). Strict work demands that may seem impossible to meet emerged as another trigger for employees' negative affect (Kavanagh & Ashkanasy, 2006; Drori, Wrzesniewski & Ellis, 2013). These feelings may lead to resistive behaviour in terms of knowledge sharing (Empson, 2001; Junni, 2011; Mirc, 2012), turnover intentions (Piekkari et al., 2005) and cultural alienation (Styhre, Borjesson and

Wickenberg, 2006). A characteristic of the literature on emotions of employees in mergers and acquisitions is that the majority of the studies used qualitative methods (Piekkari et al., 2005; Langley et al., 2012; Jacobs, Oliver & Heracleous, 2013, Spicer, 2011, Colman & Lunnan, 2011). These studies offered important insights into employee affect in mergers and acquisitions. As a means toward improving the strength of this evidence, further studies using quantitative methods and larger sample sizes would be needed. The limitations identified are , low sample in terms of number of participants (Piekkari et al., 2005; Jacobs, Oliver & Heracleous, 2013; Spicer, 2011), lack of evidence from other cases of mergers or acquisitions (Piekkari et al., 2005; Terry, Carey & Callan, 2001; Łupina-Wegener, Schneider & van Dick, 2011), ambiguous selection of participants from one or the other organization involved in the merger or the acquisition (Brown & Humphreys, 2003) and lack of generalizability to non-management employees (Jacobs, Oliver & Heracleous, 2013; Colman & Lunnan, 2011). Therefore, further evidence is needed to improve our understanding of the statistical strength of these associations, in studies that can be generalizable to other industries and countries - which is particularly relevant for the treatment of cross-border mergers and acquisitions and vertical or conglomerate mergers or acquisitions - and to non-management employees.

Employees in mergers and acquisitions appear to experience also negative emotions that are low in arousal, such as psychological distress (Randall & Procter, 2013; Lawlor, 2013), emotional exhaustion (Cordes & Dougherty, 1993), sadness and withdrawal (Astrachan, 2004; Fried et al., 1996), feelings of insecurity (Guerrero, 2008), mourning, melancholia (Ray & McGee, 2006; Teram, 2010; Langley et al., 2012; Lawlor, 2013), frustration (Fried et al., 1996; Makri & Ntalianis, 2012). These emotions seem to be triggered by contextual factors, such as mood of the transaction (Guerrero, 2008). Unexpectedly, employees seem to adapt better in

terms of affect in hostile acquisitions rather than in friendly ones. There are also work demands/resource-related factors that seem to contribute to generate negative emotions among employees in mergers and acquisitions, such as a worsening of the working conditions (Väänänen et al., 2011), reduced personal resources such as perceived controllability (Fried et al., 1996; Demerouti, Friedhelm, Bakker & Schaufeli, 2001) or reduced job resources such as role clarity (McEntire & Bentley, 1996). The cognitive factors associated with negative affect and low in arousal that emerged in my systematic literature review are the strength of employees' identification with the pre- or post-merger identification and the associated constructs such as perceptions of group permeability and intergroup contact (Terry, Carey & Callan, 2001) and perceptions of cultural differences (Greenwood, Hinings & Brown, 1994; van Oudenhoven & de Boer; 1995). An important consideration is that identification and the associated constructs (i.e. group permeability and frequency of intergroup contact) functions in opposing ways for the two groups of employees. While for the low-status group, these aspects may have a positive impact on alleviating negative affect, for the high-status group, they may actually trigger such negative affect (Terry, Carey & Callan, 2001). Additionally, the role of perceived cultural differences in employee affect is little understood given the contradictory findings (Greenwood, Hinings & Brown, 1994; van Oudenhoven & de Boer; 1995). In certain cases, perceived differences may fuel feelings of frustration and confusion (Greenwood, Hinings & Brown, 1994), while in others, a cultural diversity may in fact lead to better integration of human resources (Minbaeva & Muratbekova-Touron, 2011) or knowledge transfer (Vaara et al., 2012). While the cited studies measure different outcome variables, they are nonetheless intuitively intertwined. More studies are needed to better understand the role of perceived cultural differences in employee emotions and behaviour. There are also certain limitations that future studies may address in future

empirical research, such as a narrow theoretical scope, meaning that studies do not always include any possible confounders from the onset suggested in previous research (Guerrero, 2008). Additionally, experimental methods used in the literature (van Oudenhoven & de Boer; 1995) may not be reliable in the study of employee psychology of mergers and acquisitions research due to the wide variety of contextual factors that can shape employees' emotions and behaviours. Thus, the simulated merger / acquisition environment may not accurately reflect real-life scenarios, and consequently the emotions of employees going through an actual merger or an acquisition.

Mergers and acquisitions literature suggests employees may engage in negative behaviours following a merger or an acquisition (Moonin, Vaara & Kroon, 2013; Stovel & Savage, 2006; Colman & Lunnan, 2011; Choi et al., 2011), that may be either directed towards the organization (Choi et al., 2011; van Dick, Wagner & Lemmer, 2004) or towards the employees of the other organization involved in the merger or the acquisition (Vaara, 2000; Smith et al., 2013; Tienari et al., 2005; Drori, Wrzesniewski & Ellis, 2013). In terms of behaviours against the organization, I have discussed the evidence on employee turnover and withdrawal behaviour of executives. Literature suggests there are several factors related to the demands of the new working environment and job resources that influence employees' tendency to engage in withdrawal behaviours such as turnover (Lubatkin, Schweiger & Weber, 1999; Weber, 1996; Armstrong-Stassen & Cameron, 2003) or reduction in productivity (Cording et al., 2014; Chung, Du & Choi, 2014). Several studies (Lubatkin, Schweiger & Weber, 1999; Weber, 1996; Armstrong-Stassen & Cameron, 2003) argue that employees may be motivated to leave the newly-created organization after the merger or the acquisition when they perceive that they do not enjoy a sense of autonomy on the job or of ownership of their work. Other job resources

found to be associated with employee turnover intentions are perceptions of organizational support (Chung, Du & Choi, 2014) and career growth opportunities (Joslin, Waters & Dudgeon, 2010; Chung, Du & Choi, 2014). The cognitive factors that emerged in my systematic literature review as causes of employees' propensity to engage in turnover or reduction in productivity are trust (Bellou, 2008; Lee et al., 2013), perceptions of breach of psychological contract (Rousseau, 1989, Robinson, 1996; Cording et al., 2014; Chung, Du & Choi, 2014); Kiessling, Harvey & Moeller, 2012), perceptions of uncertainty (Marmenout, 2010; Rafferty & Restubog, 2010; Schweiger & Denisi, 1991), loss of status (Piekkari et al., 2005), strength of identification (Colman & Lunnan, 2011; Makri & Hantzi, 2012) and perceptions of cultural incompatibilities (Lubatkin, Schweiger & Weber, 1999). In case of management employees, withdrawal behaviours have been found to be influenced by contextual factors such as mood of transaction (Walsh & Kosnik, 1993; Hambrick & Cannella, 1993), type of merger or acquisition (i.e. horizontal, vertical or conglomerate, Quah & Young, 2005; Walsh, 1988), geographical scope of the transaction (Krug & Nigh, 2001), firm autonomy (Hambrick & Cannella, 1993; Lubatkin, Schweiger & Weber, 1999; Krug & Nigh, 2001, Li, 2008) and relative size of the organizations involved in the merger or the acquisition. The systematic literature review showed employees may also engage in negative approach-oriented behaviours targeted against the organization, such as resistance (Stahl & Voigt, 2008). Employee resistive behaviours seem to be a function of contextual factors such as type of transaction (Stahl & Voigt, 2008), degree of integration (van Oudenhoven & de Boer, 1995), firm autonomy (Cartwright & Cooper, 1993), of resource-related factors such as role clarity (Lyons, 1971; Bliese & Castro, 2000; Bray & Brawley, 2002; Väänänen et al., 2004b), group identity and relative standing (van Dijk & van Dick, 2009; Basinger & Peterson, 2008), perceived uncertainty (Marmenout, 2010), perceived continuity

(Jetten & Hutchinson, 2011), and perceptions of cultural compatibility (Gleibs, Tauber, Viki & Giessner, 2013; Chung, Du & Choi, 2014). However, there are certain limitations to the studies on employees' negative behaviours targeted against the organization. For example, the majority of these studies use data from only one case of a merger or an acquisition (Armstrong-Stassen & Cameron, 2003; Chung, Du & Choi, 2014; Makri & Ntalianis, 2012) which poses generalizability concerns when it comes to companies from other countries or other industries or sectors. Other studies use experimental methods which may produce artificial results (Marmenout; 2010). This method, I argue, is particularly problematic for mergers and acquisitions research where several contextual, cognitive and working environment variables influence employee affect and behaviour and which need to be accounted for in the simulated merger/acquisition situation. Another limitation is the different ways of measuring employee turnover rates. On the one hand, some studies take into account forced departures (Walsh & Kosnik, 1993), while others measure voluntary departures (Papadakis, 2005). As such, there are different motivational bases that influence employee departure, which makes these studies incomparable. Additionally, there are several qualitative studies discussing employee turnover in mergers and acquisitions and the links with other factors (Krug & Nigh, 2001; Quah and Young, 2005). More quantitative studies are needed to understand the statistical significance of these associations. Another limitation is the scarcity of demographic information about the companies or merger/acquisition transactions sampled (Krug & Nigh, 2001). It would be useful that future empirical studies provide additional details about the type of transaction (e.g. vertical, horizontal), its geographical scope (e.g. domestic, cross-border) or mood of transaction.

In terms of behaviours targeted against the outgroup, literature suggests employees in mergers and acquisitions engage in negative behaviours as a function of their group identities

(Dackert et al., 2003; Terry & Callan, 1998; Ailon-Souday & Kunda, 2003; Langley et al., 2012; Vaara 2000; Smith et al., 2013). There is evidence showing employees adopt intergroup differentiation tactics (Langley et al., 2012; Vaara 2000; Smith et al., 2013; Tienari et al., 2005; Drori, Wrzesniewski & Ellis, 2013), engage in ingroup favouritism (Dackert et al., 2003; Terry & Callan, 1998; Terry, Callan & Sartori, 1996; van Vuuren, Beelen & de Jong, 2010) and outgroup derogation (McEntire & Bentley, 1997; Weber & Camerer, 2003; Apfelthaler, Muller & Rehder, 2002). These behaviours seem to be elicited by the status of the group employees belong to (Terry, Callan & Sartori, 1996) or strength of identification with the group (van Knippenberg et al., 2004). These behaviours have been suggested to increase workplace conflict (Sarala, 2010), inhibit knowledge transfer (Empson, 2001; Junni, 2011) and ultimately, to curb merger or acquisition implementation success (Drori, Wrzesniewski & Ellis, 2013). However, the studies cited above suffer from major limitations in terms of theoretical scope and sampling, as these studies do not take into consideration the role of contextual factors. There is little understanding of the particular contextual variables that might discourage or accentuate behaviours targeted against the outgroup. For instance, it would be interesting that future research sheds light on whether type of merger or acquisition (in both the economic and geographical scope) influences employees' propensity to engage in negative behaviours against the outgroup. Additionally, it would be useful that future research examine the role of work demands / resource-related factors on employee behaviours targeted against the outgroup. In terms of the existing sampling limitations, future studies would need to address not only sample representativeness in case of number of participants recruited but also in case of number of mergers and/or acquisition cases studied.

Lastly, in my systematic review I also discussed the evidence of employee psychosomatic health in mergers and acquisitions (Chapter 2.3.3). Here I explored the evidence on neurotic disturbances, such as anxiety, obsessionality, somatic anxiety, depression, hysteria (Cartwright & Cooper, 1993) and psychiatric disturbances (Väänänen et al. 2011). Literature also suggests employees in mergers and acquisitions may also be predisposed to emotional exhaustion and functional incapacity (Väänänen et al., 2004). These mental health problems have been found to be associated with maladaptive coping strategies such as smoking, increases in drinking and binge eating (Cartwright & Cooper, 1993), particularly for the groups of employees that perceived to have been assimilated during the merger or the acquisition. These health problems among employees in mergers and acquisitions seem to be triggered by contextual factors, such as perceived degree of integration (Cartwright & Cooper, 1993) and various work demands or job resources, such as changes in their work situation (Väänänen et al., 2011; Cartwright & Cooper, 1993), organizational support (Väänänen et al., 2004) and supervisor support (Väänänen et al., 2004). However, there are certain limitations to these studies, such as the use of retrospective surveys (Cartwright & Cooper, 1993) which may not reflect the actual perceptions of the employees at the time of the merger, unbalanced sample distribution (male versus female; Cartwright & Cooper, 1993), the limited generalizability to categories of employees other than management (Cartwright & Cooper, 1993), or the exclusion of other variables from the model, such as group identity or personal resources, which, given the breadth of existing literature, might have had an influence on the onset of psychoneurotic disturbances (Väänänen et al., 2011). Given the relatively thin literature on employee psychosomatic health in mergers and acquisitions, it would be useful that future research further develops these propositions by addressing these limitations identified in my systematic literature review. Furthermore, given the

evidence in qualitative studies on employee suspicion (Harwood & Ashleigh, 2005), mistrust (Maguire & Philips, 2008) and insecurity (Guerrero, 2008; Edwards & Edwards, 2014) it would be useful that future studies broaden the theoretical scope to include other psychopathological domains in quantitative studies such as paranoid cognition or hypervigilance, as well as behaviours within the suspiciousness spectrum, such as cynicism.

2.5. Chapter conclusions about employees affective, behavioural and psychosomatic outcomes in mergers and acquisitions

In this chapter, I examined the evidence of various employee outcomes in mergers and acquisitions, in terms of affect, behaviour and psychosomatic health. The first chapter (Chapter 2.3.1) explored the results of the evidence of employee affective outcomes in mergers and acquisitions, in response to the first research question of this thesis, namely *What does published evidence tell us about the emotions of employees going through a merger or an acquisition?* (**RQ1**). In Chapter 2.3.2, I discussed the evidence on employees behavioural outcome in mergers and acquisitions, which corresponds to the second research question of this thesis, namely, *What does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)?* (**RQ2**). For the third research question, namely, *What is the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions?* (**RQ3**) I discussed the results of my systematic review in Chapter 2.3.3.

The objective of this literature review was to understand what are the employee outcomes in mergers and acquisitions in terms of affect, behaviour and psychosomatic health and the causes and consequences of these outcomes by using a gold-standard method to synthesize existing literature, namely PRISMA. To my knowledge, this is the first systematic literature review of employee outcomes in mergers and acquisitions that provides an updated and comprehensive synthesis of existing evidence, provides a critique of the literature, which is not limited to a specific psychological domain and which provides explicit criteria for article

selection and evaluation. The review protocol (detailed in Chapter 2.2.) allowed me to offer a better overview of the insights from various disciplines to cover context-related factors, dynamics of intergroup relations, employee affect, behaviour and psychosomatic health. Furthermore, this review is to my knowledge the first to provide a historical overview of the theories in mergers and acquisitions and how these perspectives evolved in concert with economic, social and legal developments. This historical account of how mergers and acquisitions changed over time was meant to offer a better intuition into how employees may actually experience fear-related affects or certain withdrawal or approach-oriented behaviours even before the actual merger or acquisition takes place. To that end, I believe the broad analysis of existing evidence provided in this systematic review has the potential to fundamentally advance our understanding of the mergers and acquisitions phenomenon and their effects on employees.

A general conclusion that can be drawn from this review is that employees may become less affectively committed to the organization (Terry, Carey & Callan, 2001), become less satisfied with their jobs (Schweiger & Denisi, 1991; Amiot et al., 2006; Amiot, Terry & Callan, 2007; Guerrero, 2008; Peck, Towell & Gulliver, 2001), they may feel devalued (Piekkari et al., 2005), betrayed (Brown & Humphreys, 2003), threatened (Zhou, Shin & Cannella, 2008) or anxious (Styhre, Borjesson & Wickenberg, 2006; Empson, 2001). They may also feel sad and become disengaged from the organization (Astrachan, 2004; Fried et al., 1996), frustrated (Fried et al., 1996; Makri & Ntalianis, 2012) or melancholic (Ray & McGee, 2006; Teram, 2010; Langley et al., 2012; Lawlor, 2013). As a consequence, they may leave the company (Lubatkin, Schweiger & Weber, 1999; Weber, 1996; Armstrong-Stassen & Cameron, 2003), reduce their efforts on the job (Cording et al., 2014; Chung, Du & Choi, 2014) or engage in resistive

behaviours (Stahl & Voigt, 2008; van Oudenhoven & de Boer, 1995; Cartwright & Cooper, 1993; Lyons, 1971; Bliese & Castro, 2000; Bray & Brawley, 2002; Väänänen et al., 2004). As a function of their group identities, employees in mergers and acquisitions may also engage in negative behaviours against the employees not belonging to their own groups, such as maximizing the differences between the two groups (Langley et al., 2012; Vaara 2000; Smith et al., 2013; Tienari et al., 2005; Drori, Wrzesniewski & Ellis, 2013), ingroup favouritism or ingroup bias (Dackert et al., 2003; Terry & Callan, 1998; Terry, Callan & Sartori, 1996; van Vuuren, Beelen & de Jong, 2010) and outgroup derogation (McEntire & Bentley, 1997; Weber & Camerer, 2003; Apfelthaler, Muller & Rehder, 2002). These behaviours seem to lead to increased work conflict, (Sarala, 2010), poor knowledge transfer (Empson, 2001; Junni, 2011) and lower merger or acquisition implementation success (Drori, Wrzesniewski & Ellis, 2013). Evidence of employee psychosomatic health revealed the severity of the impact of mergers and acquisitions on employees, with studies suggesting onset of depression (Cartwright & Cooper, 1993), psychiatric disturbances (Väänänen et al. 2011), emotional exhaustion and functional incapacity (Väänänen et al., 2004). Another general conclusion that can be drawn from the results of my systematic review is that these outcomes seem to be triggered by a myriad of factors, including aspects related to the context in which the deal is being carried, cognitive factors such as group identities (Terry, Callan & Sartori, 1996; Terry, Carey & Callan, 2001; van Knippenberg et al., 2004), culture (Greenwood, Hinings & Brown, 1994; van Oudenhoven & de Boer; 1995), trust processes (Klendauer & Deller, 2009; Nikandrou & Papalexandris, 2008; Linde & Schalk, 2008; Bellou, 2007) and perceptions of uncertainty (Goddard & Palmer, 2010; Lupina-Wegener, 2013; Searle & Ball, 2004).

However, there are recurring limitations in the mergers and acquisitions literature which I have detailed in Chapter 2.4 and will briefly summarize here. Firstly, there are sampling shortcomings in that the majority of studies examine only one case of a merger or an acquisition (van Dick, Wagner & Lemmer, 2004; Lipponen, Olkkonen & Moilanen, 2004; Carter & Pavor, 2003; Monin, Vaara & Kroon, 2013; Bartels et al., 2006; Amiot, Terry & Callan, 2007; Boen et al., 2007). This may be a concern towards the generalizability of the findings to other cases of mergers and acquisitions, as extant literature suggests that there are variations across industries (DeSantis & Durst, 1996) and cultures (Betancourt, Hardin & Manzi, 1992; Harris, Moran & Moran, 2004) in terms of employees' propensity to engage in particular behaviours or have particular emotions. Secondly, much of the literature, particularly the strand focusing on employee affect, is dominated by qualitative studies suggesting the existence of various types of emotions (Piekkari et al., 2005; Langley et al., 2012; Jacobs, Oliver & Heracleous, 2013, Spicer, 2011, Colman & Lunnan, 2011). While these studies are very informative in pinpointing the pervasiveness of these emotions in mergers and acquisitions, we do not have any information regarding prevalence or statistical significance of these outcomes or their association with various antecedents. Thirdly, another recurring limitation is the use of cover-all terms for constructs that are qualitatively different, invoke different cognitive mechanisms and elicit different types of emotions. One such example outlined in the previous chapter is the use of the term turnover as covering both forced and voluntary departure (Walsh and Kosnik, 1993; Papadakis, 2005). It would be useful that future studies on employee turnover provide adequate information in their methods section on whether employees were laid off or they chose to leave the company at their own discretion. Fourthly, another important and recurring limitation to mergers and acquisitions literature is the narrow theoretical scope of the studies, in the sense that,

despite evidence in previous literature, studies do not always account for the importance of contextual variables, work demands and resource-related factors or cognitive factors in employee emotions, behaviour and psychosomatic health. Rather, it is common that studies examine the role of only one category of antecedents on these affective, behavioural and health outcomes, and do not take into consideration any possible interactive effects (Wicker & Kauma, 1974; Schweiger & Denisi, 1991; Walsh & Kosnik, 1993; Terry, Calla & Sartori, 1996; Fried et al., 1996; Weber, 1996; Terry & Callan, 1998; Panchal & Cartwright, 2001). This narrow theoretical scope also reflects in authors not reporting all the theoretically relevant information about the sample. In other words, it is common that studies do not specify demographic information about the sampled cases of mergers or the acquisitions when more than one such case is examined, such as type of transaction, motive or mood of the transaction (Krug & Nigh, 2001).

Furthermore, the narrow theoretical scope does not only reflect in the selection of antecedents but also in terms of outcomes. Despite indications in the qualitative literature of certain cognitions such as suspicion, distrust and perceived uncertainty (Harwood & Ashleigh, 2005; Maguire & Philips, 2008; Guerrero, 2008; Edwards & Edwards, 2014), the quantitative psychosomatic health research is limited to only few psychopathological domains, such as anxiety (Cartwright & Cooper, 1993) or depression. However, existing research may provide sound theoretical justification for the exploration of symptoms within the spectrum of other mental pathologies such as paranoia or hypervigilance and associated behaviour, such as cynicism. This limitation regarding the narrow theoretical scope implies that the existing knowledge of mergers and acquisitions is largely bounded by theoretical perspectives and by discipline. The mergers and acquisitions literature is, therefore, in strong need of a more integrative empirical and theoretical approach that can encompass the basic building blocks

highlighted by each perspective and address the variations arising from the heterogenous nature of the merger/ acquisition phenomena. An integrative model that would reconcile these perspectives would help us gain a better and a more in-depth understanding of employee psychology in mergers and acquisition. Nevertheless, the empirical investigation of the multitude of constructs and variables that emerged from this systematic literature review both in terms of antecedents and outcomes may be impractical regarding data collection and data analysis. In terms of data collection, we can devise new instruments that can better capture employee outcomes more effectively such as the range of employee emotions that emerged from the systematic literature review (Kamau-Mitchell & Oancea, 2019). However, in case of antecedents to various employee outcomes, the variety of factors that may contribute to negative employee outcomes as found in this systematic literature review may cause an unnecessary complexity in data collection. It is important, therefore, that psychometric tools are designed with the principle of parsimony and contains only factors that are empirically supported across studies. In this sense, meta-analyses are useful in providing answers regarding the empirical validity of these theoretical perspective as the results obtained across studies are integrated to determine the strength of the statistical relations. However, while meta-analytic evidence exists for certain perspectives (i.e. culture, Stahl & Voigt, 2001), the empirical evidence from others (i.e. social identity theory) has not been integrated in meta-analytic studies to justify their inclusion. For instance, in their meta-analysis of 46 studies, Stahl and Voigt (2001) did not find a significant link between cultural differences and post-merger/acquisition organizational performance. Given that employee's identification with an organization has been suggested to be a function of employees' commitment to that particular organizational culture (Albert & Whetten, 1985; Whetten, 2006), it may be that social identity-related factors may be more relevant predictors of

employee outcomes and organizational performance than organizational culture. Therefore, given the strong support for the link between social identity factors and employee outcomes found in the studies reviewed in this systematic literature review, meta-analytic studies are needed to understand whether social identity factors are indeed more relevant in a merger or an acquisition context.

In case of data analysis, there are several problems. Firstly, we may not have sufficient theoretical justification for certain hypotheses, given the implications of the narrow theoretical scope discussed above, such as the link between, for instance, type of transaction and depression, or between mood of transaction and employee paranoid cognitions. Such relationships between constructs may not have been investigated in prior empirical research, neither in mergers and acquisitions literature nor in extant literature. Therefore, we would not have any theoretical justification for hypothesizing such associations, even though in a real merger or acquisition scenario, they may actually exist. Secondly, certain relationships may function in ways that are not necessarily evident or intuitive in academic research nor in practice, which would be the case with continuous predictor variables (e.g. pre-merger/acquisition organizational size or employee tenure) having an effect on certain outcome variables only between specific cut-off points. To give an example, employees of small firms may be more predisposed to certain negative affective outcomes, those of mid-sized to other affective outcomes, while employees of large firms may construe the merger in more positive terms. However, we may not have an idea of where these cut-off points in organizational size might be. There is not sufficient evidence to produce such hypothesized cut-off points. As the hypothetical relationship above suggests, it might be the case that the association between predictor variable and predicted outcomes is not linear, which traditional linear models (e.g. regression or correlational analyses) would not

depict, but would, nonetheless, have both theoretical and practical relevance. Therefore, there is a need for new methodological approaches that can produce non-linear hypothesis functions, can be generalizable to the population, be able to uncover relationships between variables without prior theorizing and be able to predict risk of various employee outcomes.

This systematic literature review of employee affect, behaviour and psychosomatic health in mergers and acquisitions revealed important practical and theoretical implications. On a practical level, it emphasizes the need for the executives and managers responsible with the post-merger integration to be mindful of employees' ways of perceiving and interpreting the merger or the acquisition and the working environment. Employees may construe the merger or the acquisition in threatening terms and may fear of losing their jobs, status and culture, they may become dissatisfied with their work and lose commitment or feel like their skills or competences are no longer suited to the new working arrangements, so executives need to understand and empathize with these employee reactions in a supportive way that can alleviate their anxieties. This review also highlights the need of the employees to feel like they belong to the new organization so the integration efforts would need to include actions that facilitate employees' socialization into new working culture and routines. However, integration programs would also need to address the different ways the groups of employees construe the new working environment, in a way that both reinforces a high-status group's identity with the post-merger/acquisition organization but also addresses the low-status group's need to feel like they are being part of the new organization. Another practical implication of this review is that executives responsible with the post-merger/acquisition integration need to understand that the uncertainty surrounding the changes ensuing from the combination of the firms not only leaves employees confused about their tasks, organizational arrangements or procedures, but makes the

grapevine more active as anxious employees may share rumours. The information shared among employees may oftentimes be inaccurate but it may nonetheless lead to negative health outcomes among unknowledgeable employees or energize particular counterproductive work behaviours which may perpetuate over time, thus putting merger/acquisition implementation at risk.

Another implication from a practical standpoint is that it highlights the role of various factors which may ease employees' fears, anxieties and other negative affect and which managers may use for a successful post-merger / acquisition integration, such as clear, consistent and frequent communication with the team, cultivation of a socially supportive environment, and frequent intergroup socialization. The more employees are offered opportunities to communicate and work with each other in and out of the workplace, the more they will develop a common group identity. Also, the more employees feel like they can get help or advice from trustworthy colleagues and managers, they will better cope with the organizational changes following the merger or the acquisition. Frequent and clear communication about the implementation of the merger or the acquisition will prevent employee feelings of insecurity, confusion and anxiety. It will also help build trust-based relationships between the organization, managers and employees.

On a theoretical level, the study raises certain questions which would constitute interesting avenues for future research. Do hostile transactions have, in fact, a positive effect on employee affect, behaviour and psychosomatic health compared to friendly transactions? Evidence suggests employees in hostile acquisitions identify stronger with the organization and do not have similar negative emotions as employees in friendly acquisitions (Guerrero, 2009). They also do not seem to engage in withdrawal behaviour more so than employees in friendly deals (Walsh & Kosnik, 1993). One explanation to these findings may lie with the legitimization of the merger by the employees (Vaara & Tienari, 2011; Roundy, 2010). A hostile acquisition

may be construed as a legitimate resolution to an unproductive management or inefficiencies in the management of corporate resources (Fama, 1980). A takeover would thus be legitimized through a better use of the capital in the organization, while the rejection of the tender offers by the target management would be reasonably viewed as a defence strategy (Brennan, Daly & Harrington, 2010) against a loss of benefits and status. In this case, employees would construe the acquisition as a rescue attempt, rather than as a negative change dictated by other empire-building motives. The latter motive may be cognitively more accessible in case of friendly transactions. Another explanation may be that the open resolution of a power conflict ex-ante may attenuate the struggle for dominance post-acquisition (van Knippenberg et al., 2002) as individuals and groups already know their standing. As the implicit antagonism between the two organizations is defused prior to the conclusion of the transaction and team integration, employees may feel more compelled to adapt to change. They may concede the struggle for dominance rather than maintaining their previous organizational identity and engaging in intergroup differentiation pursuits (Langley et al., 2012). The clarity in terms of intra-organizational hierarchies, of employees' relative standing and of dictates of social relations would invalidate the motive for intergroup conflicts and struggles for power and dominance (Goddard & Palmer, 2011; Meyer, 2001; Meyer, 2006). In support of this explanation, Meyer (2001) suggested that the ambiguity and uncertainty inherent in a merger of equals versus outright acquisition may have a significant effect on how employees construe the merger or the acquisition and how group dynamics evolve. In case of a merger, the power relations and the imposition of the new corporate vision or strategy on one or the other party is left to contingency while in case of an acquisitions, such changes may be construed as legitimate necessities. Therefore, the role of mood of the transaction on employee affective and behavioural outcomes

as well as possible moderating factors such as perceptions of uncertainty or perceptions of merger/acquisition legitimacy, are, I believe worth pursuing in future research as they may provide a better understanding into how employees differentially construe a hostile takeover compared to a friendly one and the affective, behavioural and psychosomatic health implications.

This study also poses important theoretical questions about the differential impact mergers and acquisitions have on the groups of employees as a function of their strength of identification with the group. Specifically, in what ways do employees' emotions and behaviour differ as a function of the status of the group they belong to and identification with the new organization? While there seems to be a consensus on the fact that low-status employees are less satisfied with their jobs (Terry, Carey & Callan, 2001), are less committed to the organization (Panchal & Cartwright, 2001) or perceive the merger more threatening (Terry & Callan, 1998) some controversies exist as to whether that is indeed the case (Terry, Callan & Sartori, 1996; Cartwright & Cooper, 1993). Similar contradictory findings have been found also in case of the role of employees' social identities. Strength of identification with the new organization has been found to be associated with higher job satisfaction (van Dick, Wagner & Lemmer, 2004), lower intentions to quit (Makri & Hantzi, 2012), higher organizational commitment and employee well-being (Terry, Callan & Sartori, 2001). However, other studies did not find employees' identification with the new, post-merger/ acquisition organization to be significantly associated with employee outcomes, such as employee well-being (Makri & Hantzi, 2012). Therefore, there is a need for a pooling of these studies in a meta-analysis that can clarify whether variance in employee outcomes is indeed a function of group status and the extent to which these are indeed associated with employees' strength of identification with the new organization.

Furthermore, mergers and acquisitions research has largely focused on the low-status employees' negative affect and behaviour (van Dick & van Dick, 2009). However, the high status group has not been so prominent in terms of scientific interest and M&A narrative. It may be that identity threats are not as pervasive for high-status employees compared to low-status group members and hence, the affective, behavioural and psychosomatic health outcomes following the merger or the acquisition may not be as severe. As such, a perceived continuity may shield the high-status employees from the negative consequences of a disruption in their self-concept. It may also be that high-status group's privileged position insulates them from the effects of a deterioration in self-esteem. Nevertheless, high-status employees do appear to experience threats to their identities or to the underlying principles that form the basis of the status differentials within the intergroup context (Empson, 2001), but perceive the merger with another group or the acquisition of another organization as an *assimilation* of the outgroup rather than an *integration* with the outgroup. This interpretation may be in and of itself symbolically recruited as an affirmation of superiority. As such, responses of high-status employees to the merger or the acquisitions may be qualitatively different than those of the low-status group, as different mechanisms may come into play. They may collectively process the information differently versus the other group, their status positioning may alter their social perception as they set different goals for themselves and for their group. Therefore, these factors may influence how they feel about the merger or acquisition, about the other group and how they behave. Studies examining the differential impact of the merger or an acquisition on both groups of employees may be helpful in understanding the mechanisms by which high-status employees may sometimes resist integration or contact with the outgroup (Empson, 2001) and consequently, in creating post-merger integration programs that does not neglect them. Furthermore, meta-

analytic studies on the effect of group status on employee outcomes would clarify whether employees do in fact experience the merger or the acquisition differently as a function of the group they belong to.

Another related important question emerging from this systematic review is by what mechanisms do particular hierarchical arrangements emerge and what are the factors underlying a reinforcement of this hierarchy? Future research on the factors that promote or inhibit the emergence of a hierarchical system in a merger or an acquisition context, on the intergroup power dynamics and how the existing hierarchy gains legitimacy from both merger partners would, I believe, open up provocative new insights. Is status implicit in the role each organization has in the merger or the acquisition, or is it a matter of dominance and power (van Knippenberg et al., 2002), whereby hierarchy is negotiated with time? This would answer the question of the motivational mechanisms of such legitimizing thought patterns and whether the belief that people get what they deserve is a necessary prerequisite in mergers and acquisitions for the power differential to emerge and be justified by both groups. Another question this systematic review raises is what is the relation between contextual factors, trust, strength of identification with the group and psychosomatic health outcomes? It may be that in a merger/acquisition context where the identities of both groups are under threat by the presence of the outgroup and there is a normative pressure to cooperate with the latter, distrusting behaviour and cognition may exist among employees as predicated by their outgroup's membership and as a function of the degree of integration (i.e. threat to the group boundaries and identity). Perhaps the distrust inherent in the employees' relations with the outgroup and organization may induce vigilant appraisals of others' actions and intentions (Kramer, 2001; Deutsch, 1958), which may be symptomatic of instances of non-clinical paranoia.

There are also certain limitations to my systematic literature review. Firstly, my literature search was restricted to PsycINFO and PsycARTICLES databases. While this restriction was justified by the inclusion of studies that discuss psychology of employees, it may be that a broadening of the list of databases for literature search may result in a more comprehensive overview of the mergers and acquisitions literature. Secondly, this review only included articles that discuss employee emotions, behaviours or markers of psychosomatic health. This may have inadvertently led to the exclusion of articles that discuss employee cognition or any developments in the application of perspectives such as social identity theory in mergers and acquisitions.

In the next chapters of this thesis I aim to address the limitations identified in the literature and respond to some of the future research directions I have suggested in my systematic literature review. Firstly, in my meta-analysis (Chapter 3), I aim to clarify the role of status in the way employees experience the merger or the acquisition and the link between employees' strength of identification and satisfaction with one's work situation. I aim to answer two important questions: Are employees in the low status group more predisposed to feel threatened by the merger, detach from the organization and become dissatisfied with their job? Secondly, what is the strength of association between employees' identification with the new organization after the merger or the acquisition and their satisfaction at the workplace?

As a means towards refining the integrative theoretical model to be tested in my cross-sectional study, Chapter 4 is a pilot study where I discuss the findings of my organizational case study in an organization to be sold. Using personal experience and survey data, I aim to clarify what are the important factors for employee outcomes in mergers and acquisitions in order to address the need for broader theoretical models in the study of employee psychology in mergers

and acquisitions. Furthermore, the aim of my pilot study is also to discuss the performance and suitability of the measures to be used in my cross-sectional study.

Secondly, in my cross-sectional study (Chapter 5), I have recruited participants from different organizations that have experienced a merger or an acquisition, as a means towards strengthening the generalizability of the findings and responding to the major sampling limitation of existing research. In this study, I used quantitative methods that allow me to provide information on the statistical significance of the hypothesized relationships between variables as a means to address the limitations arising from the lack of statistical information in existing research. Thirdly, as a response to the narrow theoretical scope of the mergers and acquisitions literature, in my study, I tested contextual, cognitive, affective, behavioural and psychosomatic health variables, including hypervigilant cognitions and cynical behaviour with the aim to have a better understanding on the extent to which these factors identified in the literature are in fact, associated. Lastly, in order to respond to the need for more integrative empirical approaches in mergers and acquisitions that can encompass the basic building blocks highlighted by each perspective, in this study, I use, among other traditional statistical methods, decision trees and logistic regression with stepwise feature selection. These methods, which can be considered as partially inductive, eliminate the need of prior theorizing and can provide new theoretical insights into how contextual and cognitive factors produce certain affective, behavioural and health outcomes among employees. By taking into account contextual factors and multiple theoretical perspectives, these integrative models can not only deepen our understanding of how situational variability may influence employee psychology in mergers and acquisitions, but make them generalizable across different mergers/acquisition contexts.

Before discussing my cross-sectional study (Chapter 5), I first discuss the results of my meta-analysis (Chapter 3). I then review the results of my case study of an energy company going through an acquisition (Chapter 4). I follow with my cross-sectional study in Chapter 5, where I explore whether new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions (RQ4)?

Chapter 3: Using social identity theory to theoretically integrate evidence about employees' responses to mergers or acquisitions: a meta-analysis

Abstract

Objective: In this study I aim to address the lack of meta-analytic support for the social identity perspective emphasized in the systematic literature review. I also aim to explore the plausibility of social identity theory as an integrative theoretical framework for understanding employee psychology in mergers and acquisitions.

Method: Using random-effects model, I meta-analysed 20 effect sizes on the relation between group status and employee outcomes: job satisfaction (5 studies totaling 1145 employees), organizational commitment (4 studies totaling 949 employees), threat perception (4 studies totaling 1564 employees), and employee identification with the post-merger/acquisition organization (7 studies totaling 1787 employees) in a random-effects model. Additionally, I meta-analysed the correlations across studies between employee identification with the post-merger/acquisition and overall job satisfaction (7 studies totaling 1671 employees) in a random-effects model with artifact correction.

Results: Pairwise meta-analytic calculations showed employees belonging to groups lower in status in the merger or the acquisition context feel significantly less identified with the new organization (*Hedges' g* = 0.42, $p < .05$). Job satisfaction, organizational commitment and threat perceptions were not found to differ significantly by group status. Correlational meta-analysis showed strength of identification was significantly associated with employees' job

satisfaction ($z = 0.39, p < .001$). Moderator analyses revealed a significant effect of how status is measured on the relation between status and job satisfaction ($\beta = 0.66, p = .02$).

Conclusions: This study emphasized the importance of social identity processes in understanding employee psychology in mergers and acquisitions. It also emphasized the importance of reporting transaction demographics in future studies to allow more thorough inspection of possible moderators in effect size pooling.

3.1.Introduction

The systematic literature review highlighted the negative emotional, health and behavioural consequences of mergers and acquisitions on employees. Employees seem to feel anxious about working with colleagues from a different organization than their own (Empson, 2001; Styhre, Börjesson & Wickenberg, 2006) and because they seem to lack trust in the new organization after the merger or the acquisition (Searle & Ball, 2004). Employees appear to no longer feel psychologically attached to the new organization (Bartunek & Franzak, 1988; Schweiger & Denisi, 1991) and to gradually become dissatisfied with their work (Terry, Carey & Callan, 2001). The systematic literature review also emphasized employees seem to experience emotional distress arising from changes at work following a merger or an acquisition (Idel et al., 2003). Employees seem to experience feeling of fear and threat about the consequences of the merger on their career and future benefits (Kavanagh & Ashkanasy, 2006) and may show pronounced tendencies to quit their jobs (Rafferty & Restubog, 2010). However, literature suggested employees experiencing these emotions, health outcomes or engaging in certain behaviours differ as a function of the status of the merger or acquisition partner (i.e. defined by either objective measures such as pre-merger/ acquisition organizational size or prestige or subjective measures such as employee group¹ status perception). About one in seven studies reviewed discuss how employees in mergers and acquisition experience the change differentially as a matter of the merger/acquisition partner they belong to. Furthermore, these outcomes also seem to be linked to the extent to which employees develop a psychological bond (or they

¹ Social identity theory's cognitive definition of the social group refers to any kind of units or divisions, professions, organizations and so on, depending on the categorization schema utilized (Ashforth & Mael, 1989; Turner, 1982). Salience mechanisms determine which group and intergroup relation is psychologically salient (Turner et al., 1987). In mergers and acquisitions, research suggests the merger or the acquisition context makes individuals' employment with one or the other merger/acquisition partners a meaningful, highly accessible and contextually relevant category for intergroup separateness (Hogg & Terry, 2003). Therefore, I will use groups or merger/acquisition partners to refer interchangeably to merger/acquisition partners.

identify) with the new organization after the merger or the acquisition (Wicker & Kauma, 1974; Dackert et al., 2003; Terry et al., 2001). Considering the pervasiveness of the mergers and acquisitions phenomena and the impact on employees discussed in Chapter 1 and 2, it is important that we have a better understanding on why the merger or the acquisition appears to be more threatening for some employees than for others working in the same post-merger/acquisition organization and why some employees are more dissatisfied or less committed to the post-merger/acquisition organization versus others. It is also important that we understand how feelings of identification with the post-merger/acquisition organization influence employee outcomes, such as satisfaction on the job.

Meta-analysis quantitatively aggregates the results of primary studies in order to obtain a summary estimate. Some of the key advantages of meta-analysis are that it provides a more precise appraisal of evidence compared to narrative reviews, it increases the generalizability of the results of individual studies, helps resolve inconsistencies across studies, it allows for an estimation of publication biases and it helps identify potential moderating or mediating variables (Stone & Rosopa, 2017). Despite the breadth of research in the employee psychology of mergers and acquisitions, the majority of the reviews conducted in the field are narrative (Kale & Singh, 2009; Cartwright & Schoenberg, 2006) and lack a critique of the literature (Kale & Singh, 2009; Vazirani, 2015). There are also some meta-analysis carried (Stahl & Voigt, 2010; Larsson & Lubatkin, 2001; Stahl & Voigt, 2008; Homberg, Rost & Osterloh, 2009). However, these meta-analyses only cover specific facets of mergers and acquisitions management such as cultural diversity in multicultural teams (Stahl & Voigt, 2010), or cultural differences (Larsson & Lubatkin, 2001; Stahl & Voigt, 2008). Furthermore, the sample of studies included in the cited meta-analyses are not exclusively focused on mergers and acquisitions (Stahl & Voigt, 2010) or

they are outdated. Therefore, these reviews only cover one theoretical perspective, while others remain unintegrated in a meta-analytic research. It is not clear whether belonging to a merger/acquisition partner organization with a high or low status can explain the variance in how employees cope with the merger or the acquisition (in terms of job satisfaction, threat perceptions, affective commitment and feelings of identification), or how strength of identification with the post-merger/acquisition organization is associated with such negative outcomes (i.e. job satisfaction).

The goal of this study is therefore to address this gap in the mergers and acquisitions literature by conducting a meta-analysis of the relationship between the status of the merger / acquisition partner and employee outcomes, such as threat perception, job satisfaction, affective commitment and feelings of identification. In order to better understand the role of organizational identification, I conducted a meta-analysis of the relationship between employee identification with the post-merger/acquisition organization and employee job satisfaction. I accomplish these goals by selecting the eligible studies from the sample used in my systematic literature review. I discuss the meta-analytic procedures used to quantify the effect of status and organizational identification and the role of status operationalization and conclude with a discussion of the implications of the findings.

3.1.1. Social identity theory as an integrative framework

The systematic literature review highlighted social identity approach has generated a lot of interest within mergers and acquisitions research (Drori, Wrzesniewski & Ellis, 2013; Bartels, Pruyn & de Jong, 2009; van Vuuren, Beelen & de Jong, 2010, van Knippenberg et al., 2002), with about a quarter of the studies reviewed between 1974 and 2015 falling within this

perspective. Social identity approach suggests that in mergers and acquisitions, the relations between the merger / acquisition partners become competitive and antagonistic because employees do not relinquish their old identities (Hogg & Terry, 2000, Haunschild et al., 1994) and because of the emerging intergroup power relations (Randall & Procter, 2013; Giessner et al., 2006; Fischer et al., 2007). Social identity theory helped explained why employees may develop resistive attitudes after the merger or the acquisition (McEntire & Bentley, 1996; van Dijk & van Dijk, 2009), as well as changes in job satisfaction, commitment and well-being (Terry, Callan & Sartori, 2001). However, compared to other perspectives discussed in Chapter 1, this approach can serve as a plausible integrative framework. For example, contrasting social identity theory (SIT) with organizational culture perspectives (Cartwright & Cooper, 1993; Greenwood, Hinings & Brown, 1994; Weber, 1996; Lubatkin, Schweiger & Weber, 1999), extant literature shows identity may indicate the extent to which individual workers are committed to an organizational culture, meaning the extent to which they internalize the goals and values denoted by an organizational culture into their self-concept (Albert & Whetten, 1985; Ellemers, 2003). Another perspective discussed in Chapter 1 refers to the management of knowledge (Yoo, Lyytinen, & Heo, 2007) after a merger or an acquisition. Employees in a merger or an acquisition context seem to be reluctant to share knowledge (Junni, 2011), which may be interpreted within the social identity framework as a response by the employees to eliminate the threat posed by the outgroup. Furthermore, the loss of professional value following a merger or an acquisition, which is another focus of the knowledge management perspective (Collins & Wickham, 2002; Carter & Pavur, 2003; Piekkari et al. 2005), can be interpreted within the social identity framework as a basis for the emergence of power differentials between the groups of employees belonging to the different merger/acquisition partners. Additionally, trust and justice perspective

has been shown to be strongly linked with social identity processes in extant literature (Insko et al., 2005; Williams, 2001). Trust research suggests that in intergroup situations, individuals' degree of presumptive trust in outgroup is largely driven by the individuals' identification within a group and categorization of self and others into ingroup and outgroup (Yuki et al., 2005). Therefore, considering the fact that many of the perspectives reviewed in Chapter 1 and Chapter 2 can be explained by or are linked with social identity processes, social identity theory (SIT) can serve as a theoretical platform that could help explain social and cognitive psychological processes for employees in mergers and acquisitions.

3.1.2. Group status and employee outcomes

Apart from the theoretical integrative potential of SIT, the systematic literature review showed this perspective has received empirical support in mergers and acquisitions literature. The majority of the reviewed studies found some support to the idea that employee emotions, behaviours or health outcomes may be associated with combative relations between groups (Empson, 2001; van Vuuren, Beelen & de Jong, 2010; Lupina-Wegener, et al., 2014; Terry, Callan & Sartori, 2001), the resulting power differentials between these groups of employees (van Knippenberg et al, 2004; Giessner et al., 2006; Amiot, Terry & Callan, 2007), or the threat to employees' social identities the merger or the acquisition poses (Langley et al., 2012). These findings suggested employees differentially experience the merger or the acquisition as a function of the status of the group employees belong to.

Group status, which has been operationalized in mergers and acquisitions literature as either pre-merger/acquisition organizational prestige or size (Giessner et al., 2006) or employee perceptions of their group status (Terry & Callan, 1998; Amiot et al., 2007), has been suggested

to be linked with negative emotional, health and behavioural outcomes for the employees (Langley et al., 2012; Makri & Hantzi, 2012). In particular, negative outcomes seem to be more common for employees belonging to groups having lower status in the new post-merger/ acquisition organization (Terry, Carey & Callan, 2001) compared to high-status employees. Employees in a low status group are also more likely to experience more changes at work, such as office relocation or job position (Joslin, Waters & Dudgeon, 2010) which may have an impact on their job security, work-life balance, their relationship with their colleagues (Guerrero, 2008). These in turn may translate into reduced satisfaction with their work and organization or lower affective commitment to the new organization (Terry, Carey & Callan, 2001). They also appear to feel more threatened by the merger or the acquisition (Amiot, Terry & Callan, 2007; van Vuuren, Beelen & de Jong, 2010), and identify less with the new organization after the merger or the acquisition (van Knippenberg et al., 2002). However, some studies find no evidence of such differences between groups of employees (Cartwright & Cooper, 1993), suggesting all groups experience the merger/ acquisition in more or less similar fashion.

Despite the mixed findings on the role of group status on employee outcomes (Cartwright & Cooper, 1993), the dominant assumption in the literature is that low-status employees experience the merger differently. That is because they seem to be more likely to experience more changes at work following a merger or an acquisition (Joslin, Waters & Dudgeon, 2010; Guerrero, 2008). This may translate into reduced job satisfaction, lower affective commitment to the organization after the merger or the acquisition and enhanced threat perceptions. Furthermore, mergers and acquisitions research shows employees in the high-status group may perceive the new organization as “more like their own” than of the other group (van Knippenberg et al., 2002). In other words, high-status group employees perceive more continuity in the new

post-merger/acquisition organization versus employees in the low-status group. The former may perceive the new organization as more similar to the pre-merger/acquisition organization, while the latter may perceive greater discontinuity (van Knippenberg et al., 2002; Fischer et al., 2007; Jetten & Hutchinson, 2011; Giessner, 2011; Lupina-Wegener et al., 2014; Boen et al., 2007).

Therefore, the first research question is: Are employees in the low status group more predisposed to be more dissatisfied with their job, less committed to the post-merger/acquisition organization, feel more threatened by the merger, or identify less with the post-merger/acquisition organization versus employees in high-status groups?

Considering the dominant assumption in the mergers and acquisitions literature that employees in the low-status group are generally more predisposed to negative outcomes and are not psychologically attached to the new post-merger/acquisition organization, I expect that:

H1: Employees belonging to groups lower in status are more dissatisfied with their job compared to those belonging to groups higher in status

H2: Employees belonging to groups lower in status are less committed to the post-merger/acquisition organization compared to employees belonging to groups higher in status

H3: Low status employees feel more threatened by the merger/acquisition compared to high-status employees

H4: Employees in the low-status group identify less with the new, post-merger/acquisition organization compared to employees in the high-status group.

3.1.3. Post-merger/acquisition identification and employee outcomes

The systematic literature review showed employee outcomes also seem to be associated with the extent to which they identify with the post-merger/acquisition organization (van Vuuren, Beelen & de Jong, 2010; Giessner, 2011; Cartwright, Tytherleigh & Robertson, 2007). Feelings of belonging to the organization seem to be associated with positive employee outcomes (Terry, Callan & Sartori, 2001; van Vuuren, Beelen & de Jong, 2010). Developing a strong psychological bond to the new organization after the merger or the acquisition has been found to be also associated with higher job satisfaction (van Dick, Wagner & Lemmer, 2004), lower intentions to quit (Makri & Hantzi, 2012), higher organizational commitment and employee well-being (Terry, Callan & Sartori, 2001). In contrast, a low identification with the organization after the merger or the acquisition has been found to be associated with development of resistive attitudes (McEntire & Bentley, 1996; van Dijk & van Dijk, 2009), and poorer health and well-being (Terry, Callan & Sartori, 1996). However, other studies did not find employees' identification with the new, post-merger/ acquisition organization to be significantly associated with employee outcomes, such as employee well-being (Makri & Hantzi, 2012). The research question is therefore: what is the strength of association between employees' identification with the new organization after the merger or the acquisition and their satisfaction at the workplace?

Considering the breadth of evidence suggesting positive link between employee identification with the post-merger / acquisition organization and employee outcomes (van Dick, Wagner & Lemmer, 2004, Giessner, 2011) and the fact that being highly identified with the organization may automatically trigger more positive evaluations of the work situation (van Dick et al., 2004), I expect that:

H5: Strength of identification with the post-merger/acquisition organization is positively correlated with job satisfaction

3.1.4. Operationalization of status as moderator

For the operationalization of group status, certain studies use objective measures (Panchal & Cartwright, 2001) using information such as reputation of the two organizations before the merger or the acquisition, size or role in the transaction (i.e. acquiree/acquirer). In contrast, other studies use scale measurements to assess employee perception of status (e.g. Amiot et al., 2007) and contrast with some qualitative evaluation by the researcher. Considering these methodological inconsistencies, I aim to understand whether there is a difference in effect sizes when group status is measured via objective measures (e.g. reputation, transaction role, etc.) or via employee subjective ratings. The third research question is therefore: Is there a difference in effect size between studies that use subjective measures of status and studies that use objective measures?

Status and power literature suggests that subjective ratings of status may capture more subtle aspects of status that cannot be accessible through objective measures (Operario et al., 2004; Baum, Garofalo & Yali, 1999). Furthermore, it has been suggested that subjective ratings may better represent factors that underlie socioeconomic status differences in behaviour and health (Baum, Garofalo & Yali, 1999). Therefore, I expect that:

H6: The relationship between group status and employee outcomes (job satisfaction, affective commitment, threat perceptions and post-merger/acquisition identification) is stronger when status is measured using subjective measures than when objective measures are used.

3.2. Research questions and hypotheses

In this study, I aim to assess the strength of evidence regarding the role of group status and employee outcomes and the strength of the relation between employees' identification with the post-merger / acquisition organization and employee outcomes. For this goal, I will conduct a meta-analysis on the effect of group status, as specifically stated by authors in their empirical quantitative studies on employee outcomes (job satisfaction, affective commitment, threat perceptions and employee identification with the post-merger/acquisition organization) or experimental studies in between-subjects study designs. The aim of this meta-analysis is to obtain effect size estimates on the role of group status on employee outcomes, and address the lack of such studies in prior mergers and acquisitions research. Secondly, I conduct a meta-analysis on the link between employees' identification with the post-merger / acquisition organization and job satisfaction among studies using a correlational study design. The aim of this analysis is to quantitatively evaluate the relationship between employees' strength of identification with the new organization and employees' work evaluation. Furthermore, as I have discussed previously, researchers use various operationalizations of the construct of status. Some authors use objective measures, such as pre-merger / acquisition organizational prestige or size (Giessner et al., 2006), while in other cases, employee perceptions of their group status are measured in surveys (Terry & Callan, 1998; Amiot et al., 2007). Considering the lack of quantitative evidence as to whether the way group status is being measured on the outcome variables, I conduct a moderation analysis to understand whether this methodological aspect can explain heterogeneity across studies.

Nevertheless, while other outcomes emerged as relevant for employee psychology in mergers and acquisitions (e.g. turnover intentions, health outcomes), the sample of studies that

could ensure some degree of theoretical or methodological equivalence was too small to allow effect size computation. Coupled with the shortcomings emphasized in Chapter 1.8 regarding methodological or research protocol inconsistencies, in this meta-analysis I will only discuss a limited set of employee outcomes, namely job satisfaction, affective commitment, threat perceptions and employees' identification with the post-merger / acquisition organization. Considering these aims and limitations, this study addresses the following research questions which I reiterate below:

1. Are employees in the low status group more predisposed to be more dissatisfied with their job, less committed to the post-merger/acquisition organization, feel more threatened by the merger, or identify less with the post-merger/acquisition organization versus employees in high-status groups? I expect a significant effect of group status on employees' job satisfaction (H1), affective commitment (H2), threat perceptions (H3) and identification with the post-merger / acquisition organization (H4).
2. Secondly, what is the strength of association between employees' identification with the new organization after the merger or the acquisition and their satisfaction at the workplace? I expect a significant correlation coefficient between employees' strength of identification with the post-merger/acquisition organization and job satisfaction (H5).
3. Is there a difference in effect size between studies that use subjective measures of status and studies that use objective measures? Here, I expect that when subjective measures are used, the effect size of status on job satisfaction is higher compared to when objective measures are used (H6).

3.3.Method

This meta-analysis, as was the case with the systematic literature review (Chapter 2) adheres to the PRISMA protocols. Out of the 288 studies included in the systematic literature review, 16 unique studies remained that met the eligibility criteria to be included in this meta-analysis. I present the PRISMA flow chart for this meta-analysis which adds to the systematic review flow the additional eligibility assessment step (Figure 3).

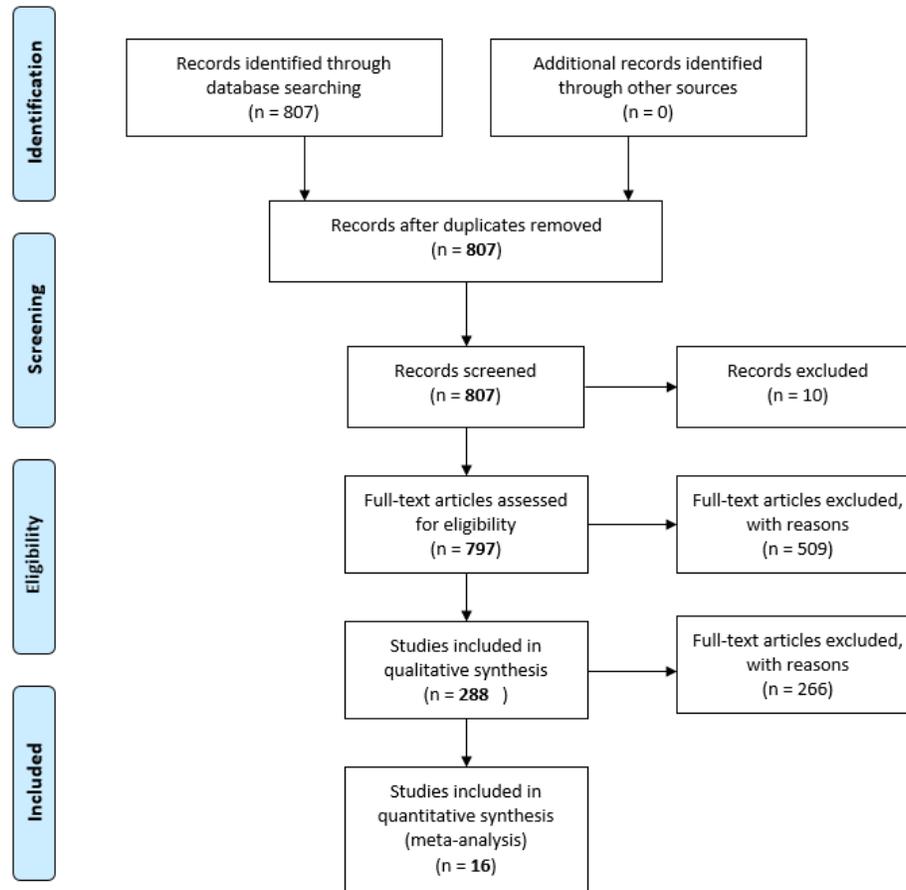


Figure 3. Prisma flow chart for the meta-analysis

3.3.1. Literature search

Identification of eligible studies was restricted to the articles already selected for the systematic literature review (288 studies). Since there was no separate literature search for this

meta-analysis but restricted to the pool of studies reviewed in Chapter 2, I refer the reader to the systematic literature review method described Chapter 2.2.

3.3.2. Inclusion criteria and sample

In order to be included in the meta-analysis, the study first and foremost needed to a) be empirical and quantitative and b) be carried among employees experiencing a merger or an acquisition or the merger / acquisition to be simulated in an experiment. I have included the studies measuring employee outcomes either after the conclusion of a merger / acquisition or official announcement of the acquisition. To be included in the meta-analysis of employee outcomes as a function of group status, the study needed to c) explicitly use the word status and operationalize it using either subjective measures (i.e. status perception survey administered to employees) or objective measures, (i.e. status inferred from pre-merger/acquisition organizational size, prestige, etc. d) measure job satisfaction, organizational commitment, threat perceptions and employees' identification with the post-merger / acquisition organization in a between-subjects design. Inclusion also required that d) authors report sufficient information to allow effect size computation at the group level of analysis (i.e. sample sizes per group, F -statistics or group means and standard deviations).

To be included in the meta-analysis of correlates of employee identification with the post-merger organization, the study needed to measure: a) employees' identification with the post-merger / acquisition organization and job satisfaction in a correlational study design; and b) report the correlation coefficient (i.e. Pearson r) to allow for standardized effect size computation.

When essential statistical information was missing, this was requested from the authors before calculating the effect sizes (Idel et al., 2003). There was also the case that different studies

relied on the same sample. Such was the case with Amiot et al., (2007) longitudinal study which relied on the same sample for the first testing time as the cross-sectional study by Terry et al. (2001). In the meta-analysis I attributed the data for the first testing time to Terry et al (2001), while data for the second testing time to Amiot et al. (2007), and effect sizes were computed separately. This is justified by the fact that even though the study was carried in the same case of a merger / acquisition, there was limited overlap between the two samples (i.e. less than 48%), and the studies were carried at different points in time, thus ensuring a relative degree of effect size independence. When a single citation contained more than one study with different samples (i.e. Giessner et al., 2006), the effect sizes were computed separately in the meta-analysis.

Regarding the studies included in the correlation meta-analyses, I retained all effect sizes that used instruments that explicitly tapped employee job satisfaction. Recent trends in meta-analysis are oriented towards reporting pooled effect sizes from only one instrument or comparing the results from two or more instruments (Fryers et al., 2004; Thorlund et al., 2011). However, following the methodology applied by Cuijpers and colleagues (Cuijpers et al., 2007; Cuijpers et al., 2009), the diversity of instruments used to assess employee job satisfaction across the studies selected for this meta-analysis, and the limitations arising from low sample sizes of studies employing the exact same instrument, I combined the estimates of different outcome measures to assess employee job satisfaction. Given the high degree of overlap examined in extant literature between the work factors assessed by each of the instruments used, namely Job Diagnostic Survey (Hackman & Oldham, 1980), Minnesota Satisfaction Questionnaire (Traynor & Wade, 1993), Job Satisfaction Scale (Caplan et al., 1975) and Job Satisfaction Questionnaire (Warr et al., 1979), I do not expect the variability in instruments used to be a major source of heterogeneity. Applying the above criteria resulted in a final sample of 16

unique studies. 20 effect sizes were included in the meta-analysis on the impact of group status and 7 in the correlation meta-analysis.

3.3.3. Coding of studies

Apart from the effect sizes collected for the pairwise comparison (e.g. means and standard deviation, F-statistic or t-statistic) and correlational meta-analysis (e.g. Pearson r), I have also collected information on sample size and statistical artifact information, such as the reliability of the scales used to measure employee outcomes. In order to address the last hypothesis of this study, I have also collected information on the operationalization of group status. In order to test whether objective evaluation of a company's status relative to the other (e.g. reputation of the two organizations before the merger or the acquisition, size or role in the transaction, Panchal & Cartwright, 2001) or subjective measures (e.g. employee perception of status, Amiot et al., 2007) cause a difference in effect sizes, I also included information about how status was operationalized. I coded 1 the studies that used subjective or a combination of subjective and objective measures, and 0 the studies that used objective measures exclusively (e.g. role in the transaction, pre-merger/acquisition organizational prestige, etc.).

While I initially included other possibly important theoretical moderators (i.e. country and industry), due to the low sample size it was not possible to assess the moderating impact of these factors.

3.3.4. Meta-analytic procedure

Pairwise comparisons

In order to evaluate the role of group status on employee outcomes across studies, I used a random-effects meta-analytic approach (Borenstein et al., 2009). In this meta-analysis, *Hedges'*

g was defined as the difference between the means of the two groups of analysis, which were later divided by the pooled standard deviation and then adjusted for the bias due to the small sample sizes (Hedges & Olkin 1985). The effect sizes of all pairwise comparisons were computed using the means and standard deviations reported in the studies. When standard deviations were not reported and only means were displayed, test scores (t or F values) were used to compute effect sizes.

For quantifying the amount of variance of the distribution of the true study effects (τ^2), several estimators exist that vary in popularity in complexity (see Veroniki et al., 2016 for a review). While DerSimonian and Laird (1986) estimator is more popular, also given the implementation in various meta-analysis software, recent research suggests that DerSimonian Laird estimator may underestimate the true between-study variance, potentially producing overly narrow confidence intervals (CIs) for the mean effect (Cornell et al., 2014), especially when the between-study variance is large (Novianti et al., 2014). Therefore, in order to account for the small sample size used in this study, I followed Hartung-Knapp-Sidik-Jonkman method, with Sidik-Jonkman variance estimator and Hartung-Knapp adjustment for random effects, which has been shown to produce robust estimates of pooled effect between-study variance (IntHout, Ioannidis & Borm, 2014) and more conservative estimates of τ^2 . Similar meta-analytic method has also been used more recent psychological research (Hilton et al., 2017) and clinical studies (Seyffert et al., 2016; Koh, Pronin & Hughes, 2018).

Correlational meta-analysis

In order to meta-analyze the strength of association between identification and employee job satisfaction, I meta-analyzed the correlation coefficients (Pearson r) as effect sizes. I followed the random-effects meta-analytic method following Hunter and Schmidt's artifact

correction approach (Hunter & Schmidt, 2004). Firstly, effect sizes were corrected for sampling error, in order to account for the variation in study validity. Secondly, in order to account for measurement error, I conducted a correction for attenuation (Hunter & Schmidt, 1990; 2004; 2014). This was done following Hunter and Schmidt (2004, 2014)'s correction for attenuation formula, where I divided the individual effect sizes by the square root of the reliability estimates of the two corrected variables. I used the internal consistency coefficients reported in the studies as reliability estimates. Similar meta-analytic methods have been applied in prior organizational psychology research (Wit, Greer & Jehn, 2012).

Moderator analyses

For the moderation hypotheses in this study (H6), I further developed a random-effects regression model to enable exploration of sources of heterogeneity in the employee outcomes as a function of group status and correlation between employees' identification with the post-merger/acquisition organization and employee satisfaction with the job. Status operationalization which I hypothesized to moderate these relations based on the systematic literature review, was included as separate covariate to the regression models (Viechtbauer 2010).

3.3.5. Sensitivity and risk of bias analyses

For both the pairwise comparison and correlation random effects meta-analysis, I use Cochran's Q- statistic and the Higgs I^2 test for detecting heterogeneity. Publication bias was inspected visually with funnel plots. Considering the small size of the sample, I have used both Egger's test of plot asymmetry (Egger et al., 1997) and LuisFuruya-Kanamori (LFK) doi plot asymmetry with LFK index of asymmetry (Furuya-Kanamori et al., 2018). A LFK index value of less than $|1|$ indicate no asymmetry, a value between $|1|$ and $|2|$, minor asymmetry, and a value

higher than |2|, indicate substantial asymmetry. Influence and outlier diagnostics were calculated following Viechtbauer and Cheung (2010), by conducting leave-one-out sensitivity analysis. All calculations were carried using meta (version 4.9-5) / metafor (version 2.0-0) packages in R.

3.4.Results

3.4.1. Study selection

The search strategy outlined above resulted in a total of 807 papers. 509 of the papers were excluded after screening because the studies were not investigating a merger or an acquisition or did not discuss any employee psychology construct. 288 of the studies were included in the systematic review discussed in Chapter 2. Out of these, 16 unique papers were included in this meta-analysis after being evaluated against the eligibility criteria discussed above. The PRISMA selection flow chart is presented in Figure 12.

For the meta-analysis on the effects of group status, 20 effect sizes that specifically used the term status to refer to the groups involved in the merger or the acquisition were meta-analysed (see Table 7). 5 studies measured employee job satisfaction (Panchal & Cartwright, 2001; Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007; Joslin, Waters & Dudgeon, 2010; Makri & Hanti, 2012), 4 studies measured organizational commitment (Panchal & Cartwright, 2001; Terry, Carey & Callan, 2001; Armstrong-Stassen & Cameron, 2003; Joslin, Waters & Dugeon, 2010), 4 studies measured employee threat perception (Terry & Callan, 1998; Giessner et al., 2006 – 2 independent studies; Amiot et al., 2007) and 7 studies measured employee identification with the post-merger organization (Terry, Carey & Callan, 2001; Fischer et al., 2007; Amiot, Terry & Callan, 2007; Guerrero, 2008; Gleibs, Mummendey & Noack, 2008; Makri & Hantzi, 2012; Lupina-Wegener et al., 2014).

Table 7

Studies included in the meta-analysis on the effect of group status on employee outcomes

Study	Status metric	Details on status operationalization	Dependent variable	Instrument	Reliability	Design	Sample size	Testing time (in months since the acquisition)	Findings
Panchal & Cartwright, 2001	Objective	Based on the role in the transaction: acquirer organization assigned a high status and acquiree organization a low status.	Organizational commitment	Pressure Management Indicator (Williams & Cooper, 1996)	0.92	Cross-sectional	95	Not reported	Low-status employees were significantly more satisfied than high-status employees.
Terry, Carey & Callan, 2001	Subjective	Status defined based on pre-merger/acquisition organizational size and role in the transaction and then validated with participant perception	Organizational commitment	Organizational Commitment Scale (Porter & Lawler, 1968)	0.76	Cross-sectional	445	3	Employees of the low-status premerger organization were less committed to the new organization versus high-status employees

Armstrong-Stassen & Cameron, 2003	Objective	Based on the role in the transaction: acquirer organization assigned a high status and acquiree organization a low status.	Organizational commitment	Organizational commitment (Allen & Meyer, 1990)	0.82	Longitudinal	159	12	Employees in the acquired organization are less committed to the organization versus acquiring organization employees
Joslin, Waters & Dugeon, 2010	Objective	Status defined based on the degree of changes (i.e. relocation to new offices)	Organizational commitment	Organizational Commitment Questionnaire (Mowday et al., 1979)	0.85	Cross-sectional	250	12	Employees in the relocating group were more committed to the organization versus employees in the host organization.
Panchal & Cartwright, 2001	Objective	Based on the role in the transaction: acquirer organization assigned a high status and acquiree organization a low status.	Job satisfaction	Pressure Management Indicator (Williams & Cooper, 1996)	0.92	Cross-sectional	95	Not reported	Employees in low status are more dissatisfied with their jobs than high-status employees.

Terry, Carey & Callan, 2001	Subjective	Status defined based on pre-merger/acquisition organizational size and role in the transaction and then validated with participant perception	Job satisfaction	Job Satisfaction Scale (Caplan et al., 1975)	0.82	Cross-sectional	445	3	Low-status employees are significantly less satisfied than employees in the higher status.
Amiot, Terry & Callan, 2007	Subjective	Status defined based on their size (international vs domestic) validated with employees' perceptions of status (1 item)	Job satisfaction	Job Satisfaction Scale (Caplan et al., 1975)	0.79	Longitudinal	215		Employees in low status are not significantly more satisfied than employees in the high status group
Joslin, Waters & Dugeon, 2010	Objective	Status defined based on the degree of changes (i.e. relocation to new offices)	Job satisfaction	Overall Job satisfaction scale (Brayfield & Rothe, 1951)	0.9	Cross-sectional	250	12	Employees needing to relocate were less satisfied with their jobs vs. those who did not have to relocate.
Makri & Hantzi, 2012	Subjective	Status on economic dimensions (e/g/ market share, size, etc.) validated with participant perception of status (2 items)	Job satisfaction	Job Satisfaction Questionnaire (Warr et al., 1979)	0.88	Cross-sectional	140	Not reported	Employees in the low status group are less satisfied with their job vs. employees in the high status.

Terry & Callan, 1998	Subjective	Status defined based on a set of relevant dimensions emerged from survey	Threat perception	Appraised stressfulness (Terry, 1994)	0.83	Cross-sectional	1104		Low-status employees appraised the merger as more threatening versus high-status employees
Giessner et al., 2006_ST1	Objective	Status was manipulated by describing the merging companies differently on economic dimensions.	Threat perception	Manipulated in the experiment	0.89	Experimental	148	0	The employees of the low-status group felt more threatened vs members of the high-status group
Giessner et al., 2006_ST3	Subjective	Status perceptions measured in survey to students of the merging universities	Threat perception	Adapted measure of perceived threat (Giessner et al., 2006)	0.79	Cross-sectional	97	0	Employees in the low-status group perceived the merger more threatening than high-status employees
Amiot et al., 2007	Subjective	Status defined based on their size (international vs domestic) validated with employees' perceptions of status (1 item)	Threat perception	Perceived threat (Terry & O'Brien, 2001)	0.86	Longitudinal	215	24	Members of the low-status group did not perceive the merger or the acquisition as more threatening than high-status employees

Terry, Carey & Callan, 2001	Subjective	Status defined based on pre-merger/acquisition organizational size and role in the transaction and then validated with participant perception	Post-merger/acq. identification	Social identification (Terry & Hogg, 1996)	0.86	Cross-sectional	445	3	Participants from the high-status premerger organization identified more strongly with the new organization vs. low-status employees.
Fischer et al., 2007	Objective	Manipulated in the experiment. Based on pre-merger group performance	Post-merger/acq. identification	Organizational identification (Abrams, Ando & Hinkle, 1998)	0.86	Experimental	82	0	High status employees identified more strongly with the new organization vs. low-status employees
Amiot, Terry & Callan, 2007	Subjective	Status defined based on their size (international vs domestic) validated with employees' perceptions of status (1 item)	Post-merger/acq. identification	Organizational identification (Brown et al., 1986)	0.77	Longitudinal	215	24	Members of the high status group identified more with the new organization vs. members of the low status group
Guerrero, 2008	Objective	Based on the role in the transaction of the organizations and their pre-merger/acquisition organizational performance	Post-merger/acq. identification	Social identification (Terry et al, 2001)	0.84 - 0.87	Longitudinal	52	18	Members of the low status group identified less with the new organization compared with high-status group members

Gleibs, Mummendey & Noack, 2008	Objective	Status evaluated by the authors in terms of pre-merger organizational prestige	Post-merger/acq. identification	Organizational identification (Doosje, Ellemers & Spears, 1995)	0.88	Longitudinal	157	12	Members of the low status group identified less with the new organization vs high-status employees
Makri & Hantzi, 2012	Subjective	Status on economic dimensions (e/g/ market share, size, etc.) validated with participant perception of status	Post-merger/acq. identification	Organizational identification (Mummendey et al., 1996)	0.71	Cross-sectional	140	Not reported	Employees in the high status group do not identify with the new organization significantly more than low-status group
Lupina-Wegener et al., 2014	Objective	Status assessed based on pre-merger/acquisition reputation, brand equity	Post-merger/acq. identification	Organizational identification (Mael & Ashforth, 1992)	0.84	Longitudinal	693	12	Acquired organization members identified more with the new organization versus acquiring organization employees

7 studies (see Table 8) were meta-analysed for the correlation between post-merger/acquisition identification and job satisfaction (van Dick, Wagner & Lemmer, 2004; Amiot et al., 2006; Amiot, Terry & Callan, 2007; Guerrero, 2008; Gulliver, Towell & Peck; Terry, Carey & Callan, 2001; Makri & Hantzi, 2012).

Table 8
Studies included in the correlational meta-analysis

Study	Identification measure	Reliability - identification	Corelate measure	Reliability - satisfaction
van Dick, Wagner & Lemmer, 2004	Organizational identification (van Dick et al., 2004)	0.91	Job Diagnostic Survey (Hackman & Oldham, 1980)	0.78
Amiot et al., 2006	Social identification (Terry & Hogg, 1996)	0.87	Job Satisfaction Scale (Caplan et al., 1975)	0.79
Amiot, Terry & Callan, 2007	Organizational identification (Brown et al., 1986; Hogg et al., 1993)	0.77	Job Satisfaction Scale (Caplan et al., 1975)	0.79
Guerrero, 2008	Social identification (Terry et al, 2001)	0.87	Minnesota Satisfaction Questionnaire (Igalens & Roussel, 1999)	0.88
Gulliver, Towell & Peck	Identification (Onyett et al., 1997)	0.83	Job satisfaction - (Onyett et al., 1997)	0.87
Terry, Carey & Callan, 2001	Social identification (Terry & Hogg, 1996)	0.86	Job Satisfaction Scale (Caplan et al., 1975)	0.82
Makri & Hantzi, 2012	Organizational identification (Mummendey et al., 1996)	0.71	Job Satisfaction Questionnaire (Warr et al., 1979)	0.88

3.4.2. Publication bias and sensitivity analyses

Since all of the included studies were published, a publication bias analysis was conducted. I examined the possibility of publication bias distortion for all outcome measures.

Pairwise comparisons

In case of effect of group status on employee satisfaction, outlier diagnostic (Viechtbauer et al., 2010) showed that no study had an effect size confidence interval that did not overlap with the confidence interval of the pooled effect. Influence analysis showed the study by Joslin,

Waters and Dudgeon, (2010) had the highest contribution to the overall heterogeneity ($Q = 22.2$, $p = 0.0002$, $I^2 = 82\%$, 95% CI [58.5%; 92.2%], $\tau^2 = 0.13$), despite it not being very influential in the overall effect. Elimination of the study by Joslin, Waters & Dudgeon (2010) did not improve model heterogeneity, with the p-value remaining below 0.001. Additionally, inspection of the funnel plot showed no evidence of publication bias (Figure 4). Egger's test of plot asymmetry also showed there is no indication of publication bias ($t = -0.72$, $p = .52$). Given the low sample size, publication bias was also assessed using Luis Furuya-Kanamori index (LFK, Furuya-Kanamori et al., 2018). LFK index was 0.93 for this particular study, indicating no plot asymmetry.

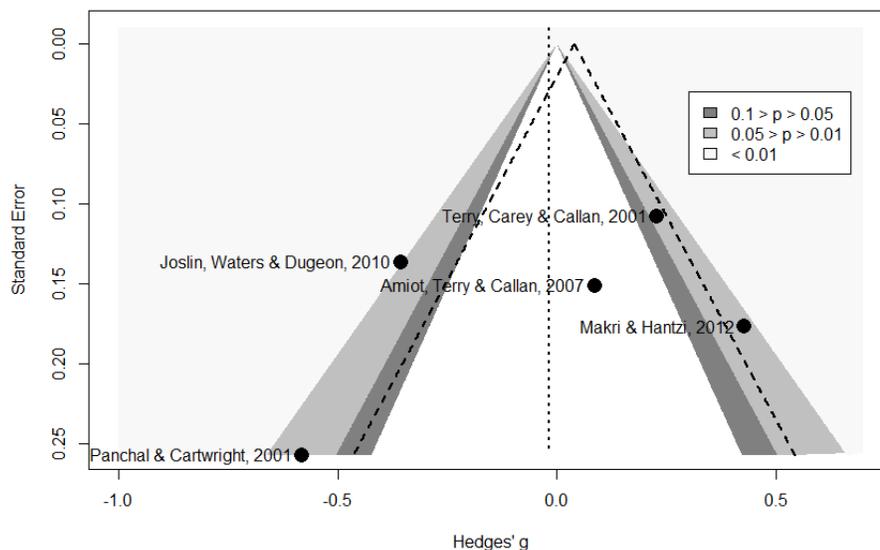


Figure 4. Funnel plot of publication bias for the effect of group status on employee job satisfaction

In case of the meta-analysis of employee commitment by group status, outlier diagnostic found no study to be outside of the confidence interval of the pooled effect, however, there was a high influence in case of the study carried by Panchal and Cartwright (2001). Heterogeneity was observed ($Q = 28.08$, $p < .001$, $I^2 = 82.20\%$, 95% CI [62.2%; 91.6%], $\tau^2 = 0.27$). However,

sensitivity analyses showed that the estimated pooled effect when each study is left out from analysis was inside the confidence interval of the pooled effect. Therefore, all studies were included in the analysis. In case of publication bias, a close examination of the funnel plot showed major asymmetry (see Figure 5). In order to overcome the publication bias and adjust plot asymmetry, I used the trim and fill method (Duval et al., 2000). Two studies were imputed to the meta-analysis that mirror the effect sizes obtained by Cartwright and Panchal (2001) and by Armstrong-Stassen and Cameron (2003). The resulting distribution following the trim and fill procedure is displayed in Figure 5.

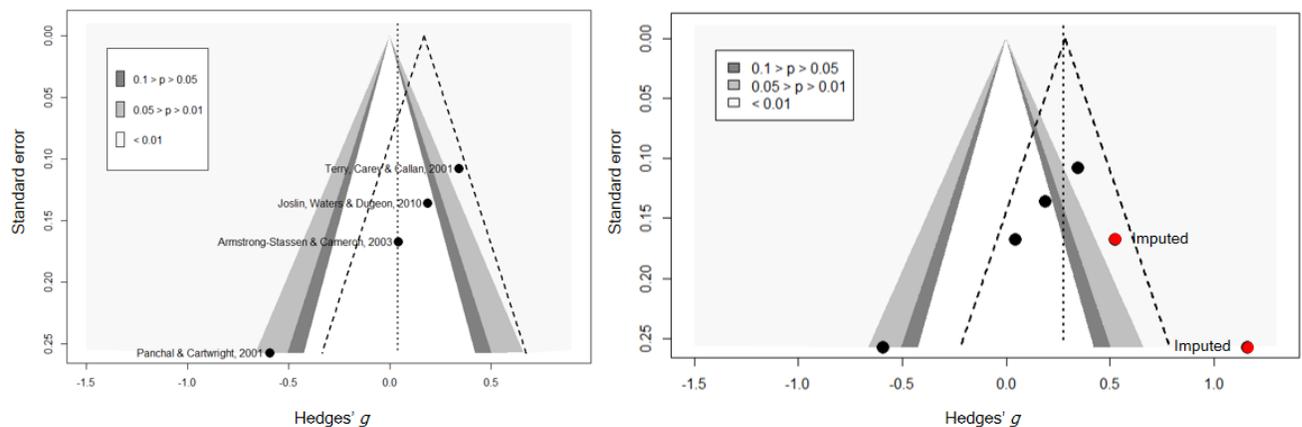


Figure 5. Funnel plot of publication bias for the effect of group status on employee commitment

In case of the meta-analysis of employee threat perceptions as a function of group status, outlier diagnostic revealed the study by Terry and Callan (1998) to be outside of the confidence intervals of the pooled effect. This was likely because of the large sample size authors used in their study, namely 1104. The samples used in other studies included in the meta-analysis were 215 (Amiot et al., 2007), 97 (Giessner et al., 2006 - study 3) and 148 (Giessner et al., 2006 – study 1). Therefore, the pooled effect size for this meta-analysis was heavily influenced by the

findings of Terry and Callan, (1998), by approximately 3 standard deviations. The high influence may also be attributed to certain moderators that I will analyse in Chapter 3.4.5., and to the small size of the sample of studies used in this meta-analysis, which may lead to an exaggeration of the heterogeneity statistics ($Q = 29.11, p < .001, I^2 = 89.7\%, 95\% \text{ CI } [76.5\%; 95.5\%], \tau^2 = 0.11$).

However, elimination of the study by Terry and Callan (1998) did not improve model heterogeneity, with the p-value remaining below 0.001. The funnel plot with the study effect sizes and confidence intervals of the pooled effect is presented in Figure 6. Asymmetry statistics showed minor to moderate influence of publication bias ($LFK = 1.01$; Egger's $t = -2.39, p = .13$).

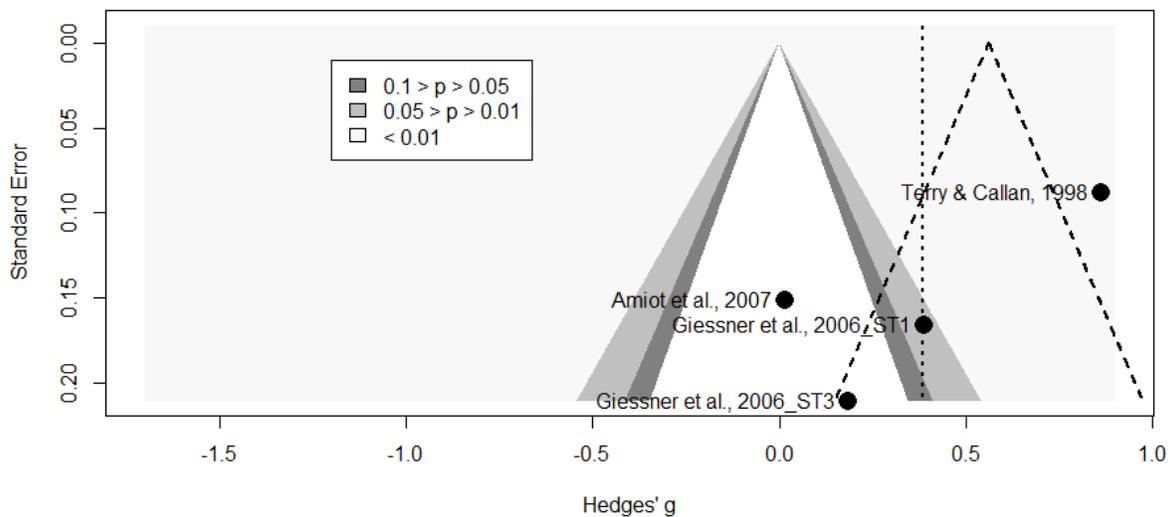


Figure 6. Funnel plot of publication bias for the effect of group status on employee threat perception

In case of the meta-analysis on employee identification with the post-merger/acquisition organization, outlier analyses found the study by Lupina-Weneger and colleagues (2014) to be outside of the confidence interval of the pooled effect. However, sensitivity analyses showed that the estimated pooled effect when each study was left out from analysis was inside the confidence interval of the pooled effect. Heterogeneity was observed ($Q = 38.23, p < .001, I^2 = 84.3\%, 95\%$

CI [69.4%; 92%], $\tau^2 = 0.08$). However, elimination of the study did not improve the heterogeneity statistics, the p-value remaining below .001. Therefore, all studies were included in the analysis. In case of publication bias, a close examination of the funnel plot did not show evidence of a major publication bias (see Figure 7). Egger's test of plot asymmetry ($t = 2, p = .10$) and LFK index ($LFK = 1.1$) showed a moderate asymmetry in the effect sizes.

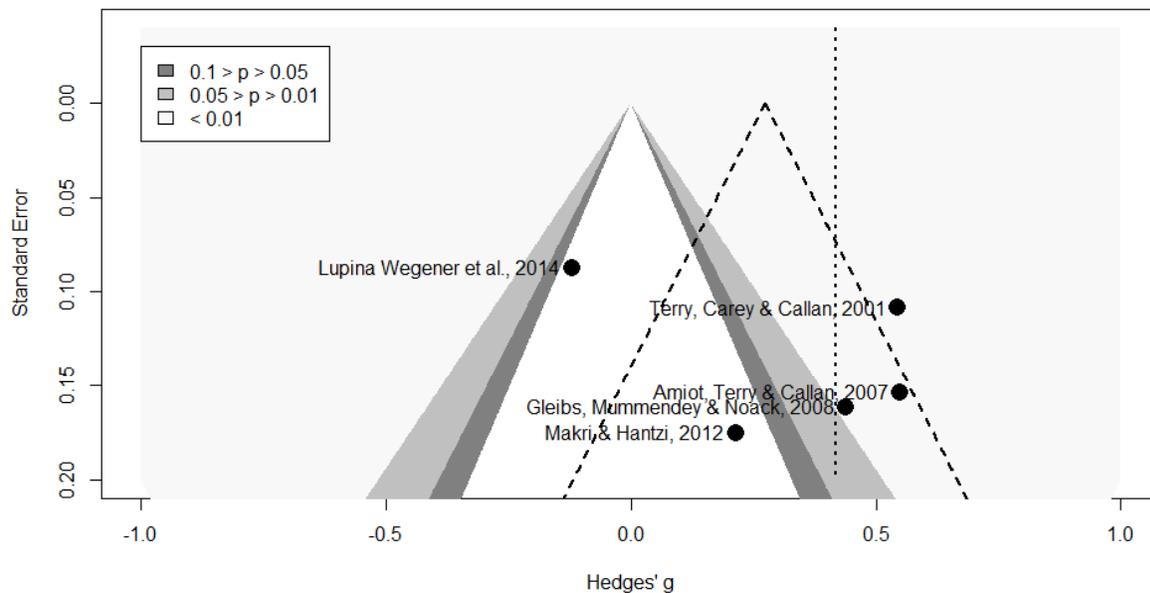


Figure 7. Funnel plot of publication bias for the effect of group status on employee post-merger/acquisition identification

Correlation meta-analysis

In case of the meta-analysis on the correlation between strength of identification with the post-merger identification and job satisfaction, outlier diagnostic showed one study was outside of the 95% confidence interval, namely the study by van Dick, Wagner & Lemmer (2004). However, the distortion to the pooled effect size may be caused by the small sample size of this meta-analysis (7 studies) and the large sample size of the study (459 employees). Inspection of standardized correlation coefficients did not show a major difference in scores compared to other

studies. Model heterogeneity statistics ($Q = 15.46$, $p = .01$, $I^2 = 53.04\%$, $\tau^2 = 0.0074$) did not show an increase above significance level, and remained below 0.05 threshold. Considering all the above, the effect size was retained. In terms of publication bias, Egger's regression was not significant ($p = 0.852$). LFK index was 0.9 showing there is a relative plot symmetry for the corrected correlation coefficient. Funnel plot of corrected correlation coefficients is displayed in Figure 8.

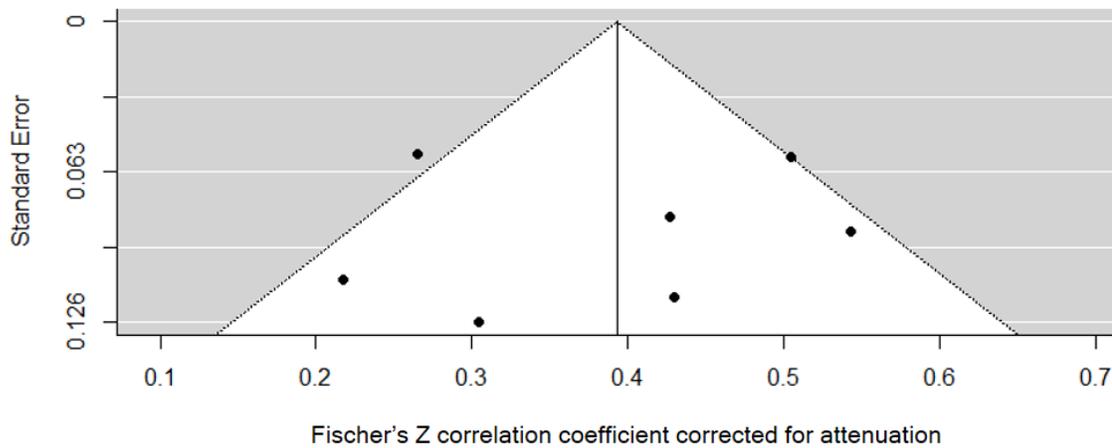


Figure 8. Funnel plot of publication bias for the correlation between post-merger/ acq. identification and job satisfaction

3.4.3. Effect of group status on employee outcomes

In table 9 I provide a summary of the findings of the meta-analysis of employee outcomes as a function of group status.

Table 9

Results of the random-effects meta-analysis on the effect of group status on employee outcomes

Measure	No of effect sizes	Aggregate sample size	Hedges <i>g</i>	95% CI for <i>g</i>
Job satisfaction	5	1145	-0.02	[-0.51 0.48]
Affective commitment	4	949	0.27	[-0.30 0.86]
Threat perception	4	332	0.38	[-0.22 0.98]
Identification with post-merger/acq organization	7	1787	0.42*	[0.10 0.73]

Note. * Significant at $p < .05$

Regarding job satisfaction, the results showed no significant difference between the high status and low status groups. The weighted effect size was $g = -0.02$, $p = 0.9$, indicating the two groups do not differ significantly in terms of job satisfaction. While there seems to be consistency across the majority of the studies on the fact that employees belonging to a group lower in status do become less satisfied at the workplace after a merger or an acquisition (Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007), there were two studies (Panchal & Cartwright, 2001; Joslin, Waters & Dudgeon, 2010) that did not find support for this hypothesis. Therefore, hypothesis 1 is not supported. Forest plot with the study effect sizes, confidence intervals and weight are presented in Figure 9.

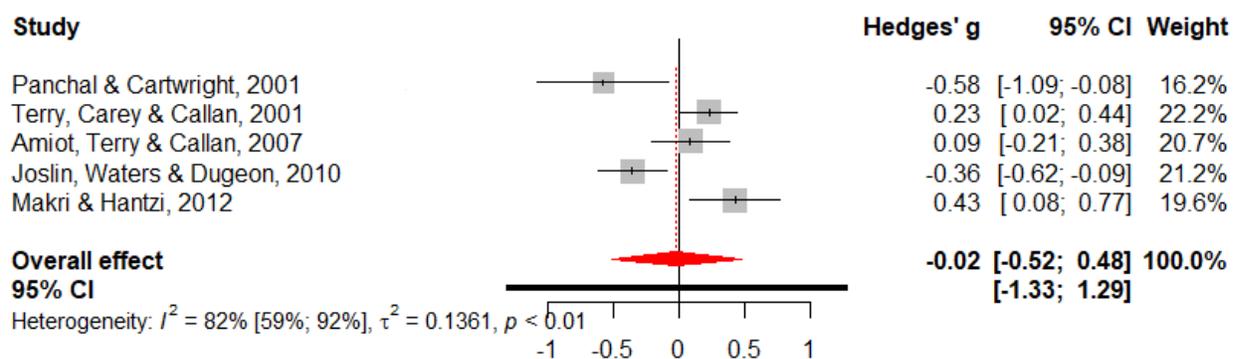


Figure 9. Forest plot of the effect of group status on employee job satisfaction

In terms of organizational commitment, the meta-analysis did not reveal any significant differences between the two groups of employees. Model estimate was $g = 0.27$, $p = .27$,

suggesting that employees in the dominated group are not significantly less attached to the organization versus employees in the dominant group. Once again, while there seems to be a consensus across the analysed studies on a relative difference in terms of organizational commitment between the two groups of employees, the study by Panchal and Cartwright (2001) did not find evidence of this. The study however, did find a significant difference when compared to employees who joined the organization after the merger / acquisition was completed. This aspect related to the study protocol may have added some degree of heterogeneity to the analysis. Hypothesis 2 is thus not supported. Forest plot with the study effect sizes, confidence intervals and weight are presented in Figure 10.

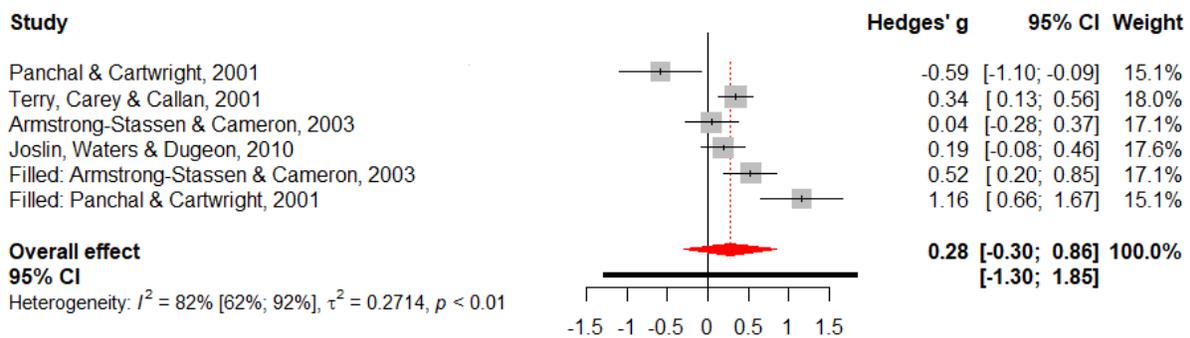


Figure 10. Forest plot of the effect of group status on employee commitment

In terms of threat perceptions, a meta-analysis of 4 effect sizes did not reveal any significant difference between low-status and high-status employees. The weighted effect size was $g = 0.38$, $p = 0.13$. All studies found a mean difference in terms of threat perception by group, indicating the low status employees may perceive the merger or the acquisition more threatening versus high status employees. However, the differences found by Amiot and colleagues (2007) were not significantly high, thus shifting the standard deviation of the pooled effect by 0.05. These results may be influenced by the testing time. Terry and Callan (1998) conducted their study shortly after the merger was announced. Amiot's study was a 2-year longitudinal study, whereby threat perceptions at the first testing time (3 months after the

merger/acquisition) was actually higher for the high status compared to low status, following to slightly reverse by time 2 (two years after the merger). In contrast, the first study by Giessner et al (2006) was an experiment where the merger situation was simulated. Hypothesis 3 is thus not supported. Forest plot with the study effect sizes, confidence intervals and weights are presented in Figure 11.

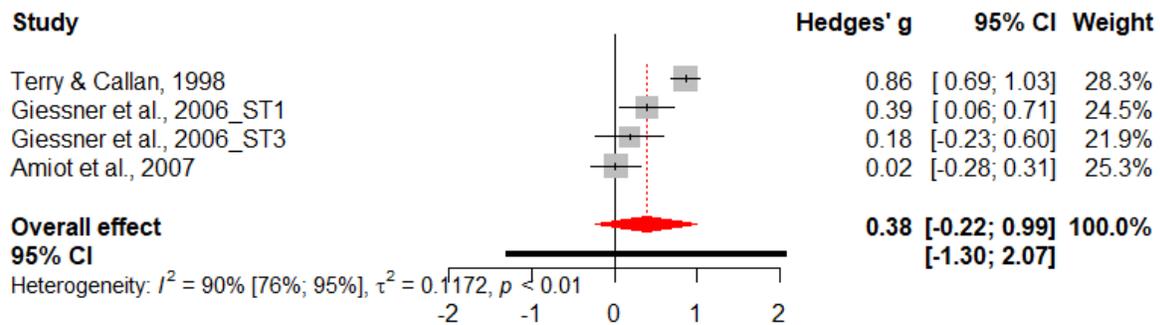


Figure 11. Forest plot of the effect of group status on employee threat perceptions

In terms of employees' identification with the post-merger / acquisition organization, the meta-analysis of 7 studies revealed a significant effect of group status. The analysis showed there is a 0.5 standard deviation difference ($g = 0.42$, $p = 0.02$) in how employees in low status versus high status identify with the post-merger/acquisition organization. Hypothesis 4 is thus supported. Forest plot with the study effect sizes, confidence intervals and weights are presented in Figure 12.

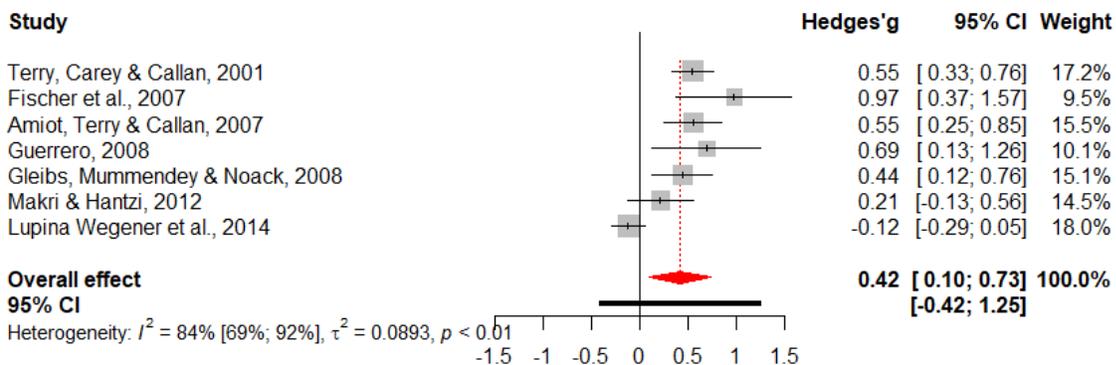


Figure 12. Forest plot of the effect of group status on employee job satisfaction

3.4.4. Employee identification with the post-merger/acquisition organization and job satisfaction

In Hypothesis 5, I predicted that for employees experiencing a merger or an acquisition, the more they identify with the new post-merger/acquisition organization, the more they will be satisfied with their work. The pooled correlation coefficient after sampling and measurement error corrections was significant (corrected $z = 0.39$, $p < .001$). As long as employees develop a psychological bond with the organization after the merger or the acquisition, they will be satisfied at the workplace. Hypothesis 5 is thus supported. The forest plot with the study correlation coefficients, confidence intervals and weights are presented in Figure 13.

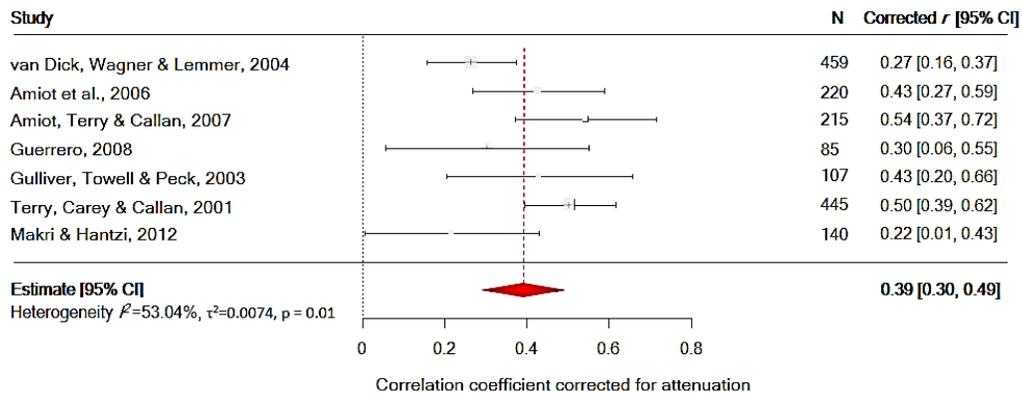


Figure 13. Forest plot of the standardized correlation coefficient between post-merger/acquisition organizational identification and job satisfaction

3.4.5. Moderator analyses

Effect of status measurement

In case of pairwise comparisons, operationalization of status (using either objective measures such as role in the transaction, pre-merger/acquisition reputation etc. or subjective measures) had a significant moderating effect on the relation between status and employee job satisfaction ($\beta = 0.66$, $p = .02$). When subjective measures are used, the effect size of status on

job satisfaction is higher compared to when objective measures are used. In case of organizational commitment, the effect of differential segmentation into high or low status on the relation between status and organizational commitment was not significant ($\beta = 0.4, p = .43$). Similarly, no significant moderating effect was observed in case of threat perception ($\beta = 0.16, p = .74$) and identification with the post-merger/acquisition organization ($\beta = 0.03, p = .89$). Hypothesis 6 is thus partially supported.

3.5. Discussion

The historical overview of mergers and acquisitions literature and the systematic literature review of the studies on employee psychology in mergers and acquisitions revealed a strong academic interest in the field, which resulted in a multitude of studies examining employee psychology from several theoretical perspectives, across different mergers and acquisitions contexts and types of teams. Considering the large number of studies from the social identity perspective (about a third of the studies included in the systematic literature review), there was yet no integration of this evidence in previous meta-analytic research. As is the case with many theoretical perspectives, some individual studies from the social identity perspective have sometimes produced disparate and contradictory results, limiting scholarly and practical insight. The purpose of this meta-analysis was to use 20 effect sizes to address three fundamental questions. First, are employees in the low status group more predisposed to be more dissatisfied with their job, less committed to the post-merger/acquisition organization, feel more threatened by the merger, or feel less identified with the post-merger/acquisition organization versus employees in high-status groups? Secondly, what is the strength of association between employees' identification with the new organization after the merger or the acquisition and their satisfaction at the workplace? Thirdly, is there a difference in effect size between studies that use subjective measures of status and studies that use objective measures? In order to address these

questions, I meta-analyzed the effect of group status on employee outcomes and the association between employees' identification with the post-merger/acquisition organization across studies. In order to address the last research question, I explored the sources of heterogeneity across studies by investigating the moderating impact of how status is operationalized in research.

Meta-analysis of comparative studies measuring employees' job satisfaction, affective commitment and threat perceptions, showed status may not play such an important role as found in certain studies (Terry, Carey & Callan, 2001; Amiot, Terry & Callan, 2007). This study found support to the results obtained by Panchal and Cartwright (2001) and Joslin and colleagues (Joslin et al., 2010). It may be that that certain cases of mergers and acquisitions create a particular context in which power differential may be more emotionally taxing for the employees, but this hypothesis does not hold for all cases of mergers and acquisitions, as this meta-analysis suggests.

However, the results of the pairwise comparisons showed that the employees belonging to a group with a low status in the new organization after the merger or the acquisition identify with the new organization significantly less compared to employees with a high status (*Hedges' g* = 0.42, $p < .05$). Sampled effect sizes suggested that low status group employees do not identify with the new organization as much as employees belonging to a high-status group. This may be probably due to the fact that low-status employees may construe the merger / acquisition event more as a break from the past while the high status group may perceive more continuity of their pre-merger / acquisition identities in the new organization. This idea found some support in empirical qualitative and quantitative studies (van Vuuren, Beelen & de Jong, 2010; Jetten & Hutchinson, 2011; Giessner, 2011; Giessner et al., 2006; Boen et al., 2007). In a study of a university merger, Van Vuuren et al. (2010) found that the perceived relation of dominance between the two groups of employees feeds a sense of discontinuity with employees' pre-merger organizational identity, thus ultimately leading to a lower identification with the new

organization. Similarly, in two other studies, Giessner and colleagues (2006) found that employees in low-status group support integration patterns that provide some sense of historical continuity of their pre-merger/ acquisition identities (i.e. one that would favour equality among the two groups). While in their two studies, integration patterns based on principles of equality triggered more positive evaluations of the merger and enhanced perceptions of legitimacy, assimilationist integration patterns triggered enhanced threat perceptions. Therefore, it seems that as long as employees experience a sense of continuity in the new organization, they are also more likely to maintain or strengthen their identification with the post-merger/acquisition organization, which in turn, may be positively linked with job satisfaction. This interpretation is also supported by the results of the correlation meta-analysis between strength of post-merger/acquisition identification and job satisfaction (Amiot, Terry & Callan, 2007; Terry, Carey & Callan, 2001). This study supports the idea that a high identification with the organization may automatically trigger more positive evaluation of the job (van Dick et al., 2004). These positive evaluations of the job and organization may be associated with stronger support for the organization.

Apart from the relations between group status and identification, the study also showed that objective measurement of status may not always overlap with employees' perceptions of status. Moderating analyses showed a significant moderating role of the ways status is operationalized in research on the pooled effect size. It appears that when subjective measure is used, or a combination between objective and subjective measures (i.e. employee self-report measures), the effect of group status on employee job satisfaction is more pronounced. This comes in accordance with studies on subjective social status, which refers to "an individual's perception of his or her place in the socioeconomic structure" (Quon & McGrath, 2014). Subjective social status perspective suggests individuals' perceptions of their position in a social hierarchy explains variance above and beyond more objective measures of socioeconomic status.

In contrast to objective measures of status, individuals' perceptions of their status have been found to have important implications for a range of life outcomes, such as mental or physical health problems (Operario, Adler & Williams, 2004; Adler et al., 1994; Singh-Manoux et al., 2005; Amir et al, 2019). This may be because subjective ratings may capture more subtle aspects of social status that are not accessible through objective measures (Operario, Adler & Williams, 2004; Baum, Garofalo & Yali, 1999).

However, considering the small sample size used in this study it is possible that the moderating role of status measurement method may have been exaggerated. Several studies report an overlap between subjective and objective measures of status (Amiot et al, 2006). Furthermore, in the studies included in this meta-analysis that use a combination of subjective and objective measures (Terry, Carey & Callan, 2001; Amiot et al., 2007; Makri & Hantzi, 2012; Giessner et al., 2006), the goal of using subjective measurement of status is to validate researchers' prior allocation of the groups into a high or low status based on some objective criteria, such as role in the transaction (i.e. whether one is the acquirer or the acquiree, pre-merger/ acquisition prestige, market share, and so on). There is a consensus in these studies on the fact that employees' interpretation of groups' status matched researchers' interpretation based on objective criteria (Terry, Carey & Callan, 2001; Amiot et al., 2007; Makri & Hantzi, 2012; Giessner et al., 2006). If these studies using a combination of subjective and objective measures show high concurrent validity, the question is then why do these studies using this participant allocation strategy show stronger relation between status and employees' identification with the post-merger / acquisition organization versus those studies using exclusively objective measures? An explanation for these conflicting evidence may be that direct survey measurement using conventional survey questions to employees about the status of their group relative to the outgroup may prime the respondent to consider the value they place on the focal social identity (i.e. pre-merger/ acquisition organization). Thusly primed, respondents may further internalize

this social identity and the status of their group and hence may be more likely to over / underrate their identification with the post-merger acquisition organization or other relevant outcomes so that are congruent with their identity and group status, thus leading to measurement bias (Brenner & DeLamater, 2016). More studies are needed to understand the implications of these participant allocation strategies in order to understand whether a subjective measurement technique is more effective at allocating employees into high or low status group, according to social status perspective (Operario, Adler & Williams, 2004; Baum, Garofalo & Yali, 1999) or it in fact leads to measurement bias (Brenner & DeLamater, 2016).

3.6.Theoretical and practical implications

In terms of implications, this study revealed several important theoretical and practical aspects. From a theoretical standpoint, this study emphasizes that status is an important factor in the extent to which employees identify with the new organization. High status employees seem to identify more with the post-merger / acquisition organization versus low status employees. However, when it comes to employee outcomes (i.e. threat perceptions, affective commitment to the post-merger/acquisition organization, job satisfaction), it appears that the way status is being operationalized in research does not have a statistically significant impact on the way employees construe the merger or the acquisition and how they evaluate the new work situation. In other words, employees belonging to a low-status group may not automatically perceive the merger or the acquisition as more threatening versus the employees in a high status group, they may not be automatically less committed to the new organization and may not be less satisfied with their work situation. Nevertheless, considering the significant role of group status on employees' identification with the post-merger organization and the significant link between employees' post-merger/acquisition and job satisfaction found in this study, this meta-analysis may provide a first indication that the influence of group status on employee outcomes may be indirect, perhaps

mediated by employees' strength of identification with the post-merger / acquisition organization.

Another theoretical implication is regarding the operationalization of status in empirical studies. This meta-analysis revealed a significant moderating effect of how status is operationalized on the relation between group status and job satisfaction. On whether subjective measurements tap into more subtle aspects of status inaccessible through objective measures or whether they actually lead to measurement bias, this meta-analysis revealed that when allocating employees in a merger or an acquisition into a high or low status in empirical research, it is important to consider the impact of each of these strategies. Indeed, there may be situations where smaller firms that are acquired may eventually occupy a more privileged position in the post-merger / acquisition organization on account of, for instance, more diverse and sought-after employee skills, a dynamic that may not be self-evident to the researcher and may produce inconsistent results if an objective allocation criteria is used. While in most cases there seems to be an overlap between objective and subjective measurements of group status (Amiot et al., 2006), there is also the case that in reality, the status position may be reversed during the integration process (van Knippenberg et al, 2002). In this case, an objective measurement of status may not always reflect the actual power situation in the post-merger/ acquisition organization. Nevertheless, given the small sample sizes used in this study, more research is needed to understand the role of group status, post-merger / acquisition power differential, and researcher's participant allocation strategy into high or low status groups on how employees evaluate the merger, acquisition, and the new working context.

In terms of practical implications, it is important that organizations are aware of the emerging intergroup hierarchy after a merger or an acquisition and develop sustainable strategies to manage the implications of it. It is important that organizations cultivate a sense of belonging for the low-status employees. Building a more inclusive and diverse organization that ensures a

relative continuity or representation also for the low-status employees in a way that it is not detrimental to the high-status employees (Boen et al., 2007) may translate into more satisfied employees who are more attuned to the new organizational goals and less resistive (Jetten & Hutchinson 2011).

3.7.Limitations and future research

The present results concerning the effects of group status and the moderator analyses suffer from heterogeneity problems. This is largely due to the small sample size which caused the sensitivity analyses and outlier diagnostic to exaggerate the impact of particular studies. More studies in the area of employee outcomes are needed to uncover the different ways employees in certain status position in a merger or an acquisition differentially experience the event and react to it.

Another limitation is that this study only assessed a limited number of employee outcomes (i.e. job satisfaction, organizational commitment, threat perception). As the systematic literature review noted, there are other emotional, behavioural and health outcomes that emerged as relevant for employees in mergers and acquisition. However, the number of studies investigating a particular affective, behavioural or health construct that could ensure a certain degree of homogeneity was too low to be meta-analyzed. Therefore, more studies investigating employee affect, health and behavioural markers in a quantitative way are needed and pooled to clarify the role of group status and post-merger/acquisition identification for employees.

Another limitation to this meta-analysis is that the results obtained may be confounded by other moderating variables not accounted for. For example, type of transaction (e.g. horizontal, vertical, etc. – Wickramasinghe & Karunaratne, 2009), scope of the merger / acquisition (domestic / cross-border – Larsson & Lubatkin, 2001) or mood of the transaction (e.g. friendly / hostile – Citera & Stuhlmacher, 2001) may be relevant moderating factors. However, this was

not possible in this meta-analysis because either the authors do not report detailed transaction demographics or because the sample providing such information was too low to account for the variation across these nominal scales. Therefore, more empirical research is needed that can provide a more detailed account of the transactions under study.

Another limitation to this meta-analysis is the fact that almost all studies included were carried in a single case of a merger or an acquisition (Panchal & Cartwright, 2001; Amiot et al., 2006; Amiot et al., 2007, Terry & Callan, 2001). This may represent important sources of heterogeneity in the meta-analysis which may confound the effect of group status and employee organizational identification on group outcomes. In order to overcome this problem in the literature, it is important that future research include more than one case of a merger or an acquisition.

3.8. Conclusion

My meta-analytic findings revealed an important impact of group status on employees' identification with the post-merger/acquisition organization and the strong association between the latter and employees' job satisfaction. These results also indicate that the strength of the group status-employee job satisfaction relationship is contingent upon the way employees are allocated into high or low status groups. These findings should reassure scholars that belonging to one or the other group that occupies a certain position in the post-merger / acquisition hierarchical structure and the extent to which they feel attached to the new organization is relevant for the way employees construe and evaluate the post-merger / acquisition work situation. This meta-analysis is, to my knowledge, the first to investigate, within the social identity framework, the effect of group status on employees' perceptions of threat, their satisfaction with their work, their affective commitment to the organization and the strength of identification with the post-merger / acquisition organization. It is also, the first meta-analysis to

my knowledge in the mergers and acquisitions literature to determine the association between employees' identification with the post-merger acquisition organization and satisfaction with work. To better understand the causes of various employee outcomes in mergers and acquisitions, scholars should not neglect the important role of group status and of employees' organizational identification. I hope this meta-analytic investigation will serve as a foundation for future research into this important topic of employee psychology of mergers and acquisitions.

Having discussed the findings of my systematic (Chapter 2) and meta-analytic review of the literature (Chapter 3), the second part of my thesis will discuss the results of my case study in an organization experiencing an acquisition (Chapter 4) and the results of my cross-sectional study among 108 employees experiencing a merger or an acquisition (Chapter 5). In the second part of the thesis, I will test the relation between the theoretical perspectives reviewed here, discuss how they can be reconciled both theoretically and methodologically, and explore whether the meta-analytic findings find empirical support in a study which samples employees from multiple cases of mergers or acquisitions (Chapter 5).

Chapter 4: Employee emotions, behaviour and health in mergers and acquisitions. A preliminary case study

Abstract

Objective: Previously, I discussed the role of employees' social identities in a merger / acquisition and discussed how group status shapes employees' relation with the new organization. Recognizing the limitations of existing literature and needs for more research that emerged in my systematic literature review and meta-analysis, in this chapter, I discuss the results of a case study in a utilities organization about to be acquired by a competitor smaller in size and market share. I explore employees' interpretation of the impending acquisition, their emotions and behaviours after the sell-off decision over a 9-month period and refine the theoretical model for a larger scale survey study.

Method: I use personal experience, company archival data and survey data to explore employees' experiences in a merger or an acquisition context from an emotional and behavioural perspective.

Results: The study found employees may experience feelings of abandonment after the sell-off announcement, distrust, threat and fear. These may lead to increased cynicism, hypervigilance and intensified grapevine communication. It also emerged that "us" versus "them" thinking may arise as early as in the post-acquisition period.

Conclusions: This study revealed the importance of trust, uncertainty and group identification as important antecedents to how employees construe the acquisition event, the post-merger / acquisition organization, and their professional future. From a theoretical

perspective, this study provides some initial evidence of organizational cynicism and hypervigilance in a merger or an acquisition context to be included in an integrative approach to the study of employee psychology in mergers / acquisitions.

4.1.Introduction

In the previous chapters, I addressed the first three research questions of this thesis. RQ1 asked what does published evidence tell us about the emotions of employees going through a merger or an acquisition. Chapter 2 found that employees may experience negative affect, such as frustration (Siegel, 2000; Langley et al., 2012), fear (Meyer, 2006) or feelings of being devalued (Ray & McGee, 2006), as a function of several antecedents, such as employee social identity processes, uncertainty perception or employee distrust in the new organization and new colleagues. I concluded that more integrative research is needed to better understand employee emotions at work. Furthermore, the systematic literature review noted cynicism and hypervigilance may be some of the plausible employee outcomes that have been previously overlooked in empirical research but are relevant nonetheless in a merger or an acquisition context.

RQ2 asked what does published evidence tell us about the way employees respond behaviourally to various factors induced by the merger or the acquisition (e.g. switching jobs, behaving in a rivalrous manner with other employees)? The systematic literature review highlighted employees in mergers and acquisitions tend to engage in negative behaviours, such as deliberately reducing work effort (Cording et al., 2014), derogating colleagues belonging to the other merger/acquisition partner (Empson, 2001; Chua & Goh, 2009), or quitting their jobs (Fried et al., 1996; Piekkari et al., 2005). I concluded that there are several methodological inconsistencies in the literature, such as the ambiguous operationalization of a set of behaviours clustered under the higher-order construct of resistance, the confusion associated with the

voluntary nature of employee departures, and how these behaviours are linked with antecedents such as employees' perceptions of uncertainty, social identity processes or employee trust.

RQ3 asked about the existing evidence of psychosomatic symptoms among employees going through a merger or an acquisitions. Chapter 2 found employees in mergers and acquisitions may experience several physical and mental health problems, such as anxiety, depression, or hysteria (Cartwright & Cooper, 1993; Cartwright et al., 2007), psychological distress (Dudgeon, 2010) or functional incapacity (Väänänen et al., 2005). The employees belonging to group with a lower status in the new organization were found to be more susceptible to these negative health outcomes (Cartwright & Cooper, 1993; Väänänen, 2011). I concluded that the small number of studies on employee mental and physical health raises important generalizability issues. Therefore, I concluded that there is a need for more studies investigating employee physical and mental health in mergers and acquisitions. Furthermore, more integrative studies that could link these outcomes with antecedents, such as employee social identity processes, uncertainty perception or trust processes are needed to understand the possible factors that can exacerbate these employee health problems.

These are employee emotional, behavioural and health problems that organizations involved in a merger or an acquisition face as soon as the merger/acquisition decision is announced to the staff (Cartwright, Tytherleigh & Robertson, 2007; Basinger, 2008). Organization R is one example of an organization that faced such challenges when it announced to its staff the decision to sell the entity to another organization. Organization R is a Swiss-based energy company with operations in several European countries, such as Switzerland, Italy, Germany, Romania. However, the European energy market suffered a crisis in 2013-2015, and Organization R was severely affected. This led the organization to divest some of its assets (e.g.

power plants) or branches as part of a bigger restructuring plan, which included its Eastern European branches, German and Romanian businesses. In early 2015, Organization R management announced its Romanian staff it would sell the local business to another organization that would be selected in a year-long bidding process. In this pilot study, drawing on personal experience while being employed with the Romanian Organization R (RR) entity, company archival data and survey data, I aim to better understand the empirical context, and the specific employee outcomes that may arise after a merger or an acquisition, as a means to refine the design for the cross-sectional study by analyzing employee experiences from the moment the sell-off decision was announced to the Romanian staff and until a buyer was selected. Considering the need for more empirical evidence on employee cynicism, hypervigilance or fear-related affect in mergers and acquisitions, I also aim to examine the feasibility of testing these outcomes in my cross-sectional study by analysing how employees in Organization RR develop such emotions as the sell-off process unfolded. Furthermore, considering the results of my systematic review of employee behaviour in mergers and acquisitions, such as retaliation (e.g. minor theft) or withdrawal, in this pilot study I aim to examine the feasibility of examining these behavioural outcomes in my cross-sectional study. I also examine how these behaviours are linked with employee organizational identification and trust processes. Lastly, in this study I try to address the need for more studies on employee health in mergers and acquisitions by analysing Organization RR employees' general health (e.g. anxiety, somatic health, social dysfunction problems). I will explore how these health outcomes are related to employee social identity processes, uncertainty perception or trust processes and the extent to which they co-occur with other affective or behavioural outcomes (e.g. intention to leave, commitment).

In this case study, I will draw on personal experience while being employed with Organization RR at the time of the sell-off, organizational documents and survey data from Organization RR employees. This reflexive approach (Scott & Hanley, 2012; Federer, 2013) combined with quantitative data will help me explore the evolution of employees' emotions, their behaviours and the extent to which this period between the acquisition announcement and the acquisition was causing stress and health problems to employees. Considering that the field of employee health in mergers and acquisitions, of emotions or behaviours not yet studied in prior literature, such as retaliation, cynicism or hypervigilance is not yet mature, as the systematic literature review emphasized, an exploratory reflexive approach may be more suited (Galliers, 1992; Myers, 1997).

This first-person method, whereby the researcher is subject of inquiry can provide valuable insight and systematic knowledge to social psychologists (Corti et al., 2015). This method, whereby the researcher relies on personal experience, has been termed in various ways, such as autoethnography (Ellis & Bochner, 2000), personal experience narrative (Denzin, 1989), auto-observation (Adler & Adler, 1994), reflexive ethnography (Ellis & Bochner, 1996), experiential texts (Denzin, 1997) and others (see Ellis & Bochner, 2000) that Ellis and Bochner (2000) suggest to include under the broad rubric of autoethnography. It denotes the form of inquiry whereby the researcher is a full insider, acquiring an intimate familiarity with the group or achieving full membership in the studied group (Ellis & Bochner, 2000). The central concepts in this method are the notions of reflexivity and reflectivity (Fook, 1999). Reflexivity as a position refers to the researcher's ability to locate oneself in the research context or the research act. In contrast, reflectivity refers to the researcher's ability to reflect on his or her own

experience, emotions and behaviours. The reflexive positioning and the reflective act ultimately become the research act itself (Fook, 1999).

Spry (2001) suggests that personal narrative is a critique of the situatedness of self with others in social contexts, thus highlighting the self-critical element inherent in self narrative. Personal accounts of experience, by virtue of being self-reflective, are deeply personal (Muncey, 2005). According to Richardson, 1994), when using personal experience, researchers must produce a personalized, revealing text in which an author tells stories about his or her own lived experience.

Giovannoli (2000) suggests that narrative research can be used to pilot a study and gather information that is relevant for the design of the most appropriate objective research tools. Furthermore, it can be used to gain greater depth into a small sample within the larger context of a population that has been surveyed with objective measures (Greene, 1994). Alternative study methods such as participant interviews would not I believe produced realistic or objective results that I could interpret. That is because I was employed with the organization at the time of the study and my insider position would have altered the extent to which my colleagues were able to give an unbiased account of their experience of the change, their feelings, attitudes and opinions about the merger or the acquisition.

Therefore, this approach will thus help produce a holistic understanding (Mason, 2002) of how employees feel and respond to the acquisition announcement, and help refine the design of my cross-sectional survey study. As such, my portrayal of the period leading to the acquisition and the survey data will I hope, add to the body of evidence discussed in Chapter 2 on employee emotions, behaviour and health because it looks at how these outcomes emerge and evolve before the acquisition and how they manifest at the level of depth and richness the reflexive

approach provides (Simons, 2009; Greene 2007). This approach will also, I hope, provide a more nuanced understanding of employee psychology before the actual acquisition event.

I will begin with a detailed account of the research context followed by an outline of the methodology. I will then discuss the analysis of employee emotions, behaviours and health and how these evolved throughout the sell-off process and correlate them with the results of my survey among the employees at Organization RR. Lastly, I will conclude with a discussion and implications for the cross-sectional study and future research.

4.1.1. Research context

Organization R is a multinational utilities organization based in Switzerland. Its operations involved energy and natural gas production, with plants in Switzerland, Italy and Germany, energy retailing, serving customers in Switzerland, Italy, Germany, Romania, and energy trading services for customers in central and eastern European markets. From 2014 onwards, the company was facing contraction of revenues due to unfavourable market developments. After a series of cost-cutting measures, the company decided to divest its small energy trading units in certain eastern European countries (e.g. Czech Republic, Bosnia and Herzegovina, etc.) and divest its operations in Germany. However, the increasing severity of the energy crises affecting the European markets in 2015 eventually lead the organization to adopt more drastic measures to reduce losses. As such, in 2015, the company decided to withdraw from the Romanian market and sell its business operations in the country, after only 5 years of presence. It was also through an acquisition of a local energy company that the Swiss-based organization entered the Romanian market in 2010. The company employed around 27 employees which included both former employees of the local organization employed with the

company before the Swiss company entry in 2010 and local employees belonging to the Swiss organization.

The focus of the present case study represents the Romanian subsidiary (Organization RR) of the energy organization that was being sold by the Swiss parent company. While the company experienced its first acquisition in 2010 (i.e. the Swiss organization purchasing a local energy retailer as a means to enter the Romanian energy market), this case study covers the second process of acquisition, in 2015, in which the Swiss organization was selling its operations in Romania. In November 2015, the management of the organization announced the employees that the organization would be sold. The sell-off process involved several steps, so the employees were informed from the start. Briefly, the process started with an open call by the seller, submission of letters of intent by interested parties, due diligence carried by the interested parties, expression of continued interest from the interested parties, and rounds of negotiations between the potential buyers and the seller. It is in this entire period, between the announcement of the acquisition to the employees and selection of the buyer that I explore my experience of the announcement and the impending acquisition from an emotional and behavioural perspective.

At the time of the study, I had been working for Organization RR for 4 years. After the announcement of the sell-off I was also involved in the bidding process, meaning I was responsible with preparing company documentation that was shared with the potential acquirers. The acquisition announcement itself, my role in the organization and the sell-off process represented a great opportunity for me to both gain first-hand experience of the transaction but also to reflect on how the acquisition announcement shaped me and my colleagues' emotions and behaviours over time. This study emerged out of the need for me to understand how employees perceive the acquisition, how these perceptions shape their emotions and behaviours and the

impact on their health. From a researcher perspective, gaining access to sample in organizations undergoing a merger or an acquisition is generally difficult, because the merger/ acquisition talks are usually confidential, or there are important integration work employees need to prioritize. Therefore, this occasion was a great opportunity for me to conduct my study and reflect on how I and my colleagues were construing the merger or the acquisition and how I react to these changes. Apart from the unique research opportunity that was presented to me because of the access to sample, the context and timing of the research were equally interesting. Most of the longitudinal studies in the mergers and acquisitions literature are conducted after the merger or the acquisition has taken place (Amiot et al., 2007). Very few studies actually examine employee psychological factors before the merger has taken place, some notable examples being the study by Cartwright, Tytherleigh, and Robertson (2007) or the study by Schweiger and DeNisi (1988). These studies emphasize that the period before the actual acquisition / merger is equally important from an employee psychology perspective.

4.1.2. Aims

This study aims to explore employee emotions after the sell-off announcement until the moment of the acquisition. In this study, I also aim to examine how these emotions are linked with negative behaviours such as retaliation through withdrawal or minor violations of workplace norms (e.g. minor theft). In this study I will explore Organization RR employees' general health (e.g. anxiety, somatic health, social dysfunction problems). I will explore how these health outcomes are related to employee social identity processes, uncertainty perception or trust processes and the extent to which they co-occur with other affective or behavioural

outcomes (e.g. intention to leave, commitment). Lastly, the aim of this analysis is to refine the study approach for my cross-sectional survey study.

In order to address the aims of this study, I will use personal experience and survey data which I will detail next. Using personal experience allows me to compensate for the possible reactivity that might bias the results of the quantitative research strategy. Furthermore it will help me draw relevant conclusions which I will be discussing in the context of the findings of my systematic literature review and meta-analysis and which will help refine the theoretical approach for the cross-sectional study.

4.2.Method

Case study research is generally thought as being useful to answer “how and why?” questions, and where in-depth research is needed using a holistic lens (Ebneyamini et al., 2018). In order to understand how employees evaluated the acquisition, how these emotions triggered certain behaviours, how these events have affected their health and how these were linked with social identity or trust processes, this case study follows the exploratory or descriptive tradition (Merriam, 1998). As data gathering technique, I use personal experience (Strauss & Corbin, 1990) while working for Organization RR at that time to describe how the sell-off process unfolded, the interactions between and with colleagues and analyse them within the context of the findings of my systematic literature review and meta-analysis.

DeWalt and de Walt (2002) suggest that the validity of the case study method is higher when it is complemented by additional data gathering strategies such as questionnaires or other quantitative methods. Therefore, I am also relying on data obtained from participants in an exploratory survey study among 13 of the employees with the organization (52% of the total

number of employees in the organization). I provide details about the sampling strategy, the study sample, all measures used, and the procedure followed below.

4.2.1. Participants in the survey study

Out of 27 employees in the organization, a total of 13 employees participated in the survey and were included in the analysis. This indicates a total response rate of approximately 50%, similar to or higher than the ones obtained in other studies in mergers and acquisitions (Terry & Callan, 1998; Lipponen, Olkkonen & Moilanen, 2006). Approximately 70% of the respondents were female and 30% were male with a mean tenure of around 5.4 years.

4.2.2. Design of the survey study

The research design of this study was correlational and examines the relationship between employee identification with the organization and employee behaviors (turnover intentions and psychological distancing) and affective commitment to the organization. In this study I also studied the co-occurrence of withdrawal and retaliatory behaviors and employee health outcomes. Lastly, I study the correlation between perceived uncertainty and withdrawal behaviors, health outcomes and employee hypervigilant cognitions.

While the objective of my larger cross-sectional study is to investigate, among others, employee identification with both pre- and post-merger/acquisition organization, the context of the organization at the time when I conducted my pilot study was not convenient for doing so. The organization was in the process of being sold, and at the time of the survey, there was no clear decision on the buyer, therefore, there was no post-acquisition organization for which I could have investigated employee identification with. In this case, I measured only identification with the existing, selling organization. For brevity, I will refer to organizational identification in

this pilot study, which is to be assumed implicitly as the identification with the pre-merger/acquisition company.

4.2.3. Measures used in the survey study

Demographics. In this pilot study I collected a set of demographic data about the participants. The demographic data that I collected included: gender, age, education, marital status, children, tenure in organization, department they were working in and whether they were involved in the merger or acquisition process (e.g. supplying financial reports for the bidding organizations, preparing presentations or any involvement in submitting data for the acquisition data room).

Organizational identification. Employees' identification with the organization was assessed using the scale developed by van Knippenberg, van Knippenberg, Monden & de Lima (2002). Participants indicated on a 5-point scale the extent to which they identified with the organization. Sample items were: "*When someone criticizes [organization], it feels like a personal insult*"; "*I feel strong ties with the organization*". Reliability coefficient (Cronbach's α) obtained by van Knippenberg and colleagues (2002) was .84 for pre-merger organizational identification and between .86 and .92 for post-merger identification.

Perceived uncertainty. Perceived uncertainty was assessed using Mottola, Bachman, Gaertner & Dovidio (1997) measure of employee threat. Participants indicated on a scale of 1 to 5 their level of agreement to various statements related to their future in the organization. Sample items are: "*I feel that the future of my career is uncertain*"; "*I worry that my job status and authority will be jeopardized by the merger*". Reliability coefficient (Cronbach's α) in the original study was .80 (Mottola et al., 1997).

Psychological contract. Violation of the psychological contract by the new organization was assessed using Robinson's (1996) 5-point Likert measure of obligations and fulfillment by the organizations. Participants were asked to rate the perceived obligation of the employer, such as promotion and advancement, high pay, job security, career development, and power and responsibility. In the second part, participants rated the extent to which they believe these obligations were fulfilled. The final psychological contract breach score was a subtraction of the obligation and fulfillment scores. Coefficient alpha in the original study was .78 (Robinson, 1996).

Withdrawal. Based on the literature review, I have included in the withdrawal cognitions category those intentional dispositions that involve a form of distancing or attempts at flight responses in the context of unfavourable evaluations of the merger event. Specifically, I have included psychological distancing, turnover intentions and affective commitment to the organization. Distancing cognitions were evaluated using the Cynicism Scale from Maslach Burnout Inventory (MBI-GS). Participants indicated on a frequency scale from 1 (never) to 6 (every day) how often they experienced various psychological withdrawal states. Sample items were "I have become less interested in my work since I started this job" and "I doubt the significance of my work". Recent studies report Cronbach's alpha value for this scale at .85 (Choi et al., 2019). *Turnover intentions.* Intentions to quit were evaluated using Taris, Schreurs and van Silfhout, (2001)'s 4-item scale on a 1-5 Likert scale. The items focus on the extent to which employees consider taking up or searching for another job within a year (Cronbach's $\alpha = .88$). *Affective commitment* was evaluated using Allen & Mayer (1990)'s ACS scale, on 1-6 Likert scale (Cronbach's $\alpha = .87$). Sample items include "I do not feel personally attached to this organization", and "This organization has a great deal of personal meaning to me".

Retaliatory behavior against the organization. Retaliatory behavior was assessed using an adapted version of Blader, Chang and Tyler (2001)' 2-item, 1-5 Likert scale measure of rule-breaking. Items included are “I often use sick leave when not sick”, and “I often take inexpensive items such as office supplies for personal use”. Studies report reliability coefficient (Chronbach's α) for this measure at .81 (Hui, Law & Chen, 1999; Blader et al, 2001).

General health. I used a 21-item adapted version of the General Health Questionnaire (Goldberg & Hillier, 1979) to evaluate the prevalence of several symptoms of psychiatric morbidity (somatic symptoms, anxiety and social dysfunction). Originally, the questionnaire included a fourth dimension, namely Severe Depression (Goldberg & Hillier, 1979), which, among other, measured suicidal ideation. Given the non-clinical context in which the questionnaire was administered, I have restricted the analysis to milder forms of health problems, namely somatic, anxiety and social dysfunction symptoms. These symptoms were rated by participants according to whether they have been experienced “not at all” (1) or “much worse than usual” (4). The reported Cronbach alpha coefficient for the GHQ is a range of .82 to .86 (Goldberg & Hillier, 1979).

Hypervigilance. In order to assess hypervigilant cognitions, I used Fenigstein & Venable (1992)'s 5-point measure. Authors used a questionnaire version derived from the Minnesota Multiphasic Personality Inventory (MMPI) as a method to assess paranoid cognition among normal college population. The questionnaire used in the referenced study has been designed specifically for non-clinical population, and assesses aspects of paranoia such as the belief that people or external forces are trying to influence one's behaviour, persecutory thoughts, suspicion or unwarranted mistrust in others and feelings of ill will or resentment. In this study I have slightly altered the items in order to reflect the focus on organizational members and

organizational climate. Sample items included “I have often felt that people in the organization (*original: strangers*) were looking at me critically” and “my superiors (*original: parents and family*) find it more fault with me than they should”. The original study reported reliability coefficients (Chronbach’s α) in the range of .81 and .87.

4.2.4. Procedure of the survey study

A questionnaire was sent to all employees in the organization. Employees received an email containing information about the objectives of the research as well as instructions on how to access and complete the questionnaire. Prior to sending out the invitations to the employees, I sought permission from key persons in the organization with decision-making authority. Prior to accessing the questionnaire available online, participants were asked to confirm they understood the nature of the study, that their research data would be kept confidential and anonymized, and that they can withdraw at any time without giving any reason. Any participant who did not respond yes to these questions were not directed to the survey.

4.3.Results

4.3.1. Findings from personal experience

From the sell-off decision announcement until the acquisition event, I observed several important and recurring aspects related to the way I and my colleagues interpreted the impending acquisition, our emotions and behaviours. Here, I analyze my personal experience of the period, and how I perceived the interactions between and with colleagues during this pre-acquisition period, which I clustered into emotions and behaviours in relation to the organization, employees’ evaluations of the work situation in the context of the acquisition, and projections of the future buyer.

Feelings of being abandoned and distrust in the organization

Since the announcement of the intention by the parent organization to sell the local branch, a feeling of abandonment seemed to have pervaded the work climate. Before the acquisition, the parent organization was involved in the business activities of the local organization having a supervisory role, while at the same time ensuring some degree of local managerial autonomy. The parent organization would often mediate in case of sensitive matters in the local organization and ensured organizational procedures and values were respected at all times. As a consequence, the parent organization was often perceived before the acquisition in rather paternal terms. When the decision to sell the local organization was announced and after that, it seemed like we were being left out or of rejected. These feelings seemed to surface even though the parent organization justified its decision to sell the local branch by the fact that the European energy markets were experiencing a severe crisis and that the organization was suffering major losses, so it had to discard some of its operations. While offering a rationale for the decision did help in gaining legitimacy for the sell-off decision, it somehow still felt like we did not do well enough to prevent the parent organization from selling the local entity.

However, with time, there was an interesting shift in how I perceived the organization which seemed to be in line with how my colleagues perceived as well. The more the sell-off process was extended, and the more “suitors” were being evaluated as potential buyers, the more distrustful and cynical we became towards the selling organization. It seemed that the most important criteria for the selection of the buyer was the price, and the price only. This perception remained pervasive throughout, even though the parent organization would often try to reassure us of their consideration of our careers within the new organization as an important criteria, other than price, in choosing the buyer.

Despite the negative emotions of distrust and abandonment, neither me nor my colleagues resisted the decision in any way. Since the sell-off announcement was made, the parent organization made sure to have regular communication with the local team and kept us updated on the process. Communication sessions would take place every 1 or 2 months, depending on the progress of the sell-off and whether there was any news to communicate at all. This decision to keep us informed and the feeling of transparency in communication has been important in my decision to remain in the organization. This was probably an important factor in my colleagues' decision to remain as well, and there was no employee departure in this period, contrary to what is usually expected in mergers and acquisitions (Bellou, 2008). Moreover, I collaborated very well with my colleagues in the work needed for the sale process (Marmenout, 2011). These communication sessions have probably encouraged us to wait and see who the buyer would be and only then make the decision to stay or leave.

Feelings of threat, uncertainty and job insecurity

Despite the fact that the parent organization and the team responsible with the sell-off would hold regular communication sessions, the idea that a new organization, new strategy, new colleagues and work procedures still appeared threatening, and I perceived a great sense of fear in the team. The entire selling process was to a certain degree confidential, in the sense that the parties interested in acquiring the local organization were not to be disclosed until an agreement was reached. Therefore, the communication sessions with us were restricted to information about the number of interested parties, subjective evaluations of the negotiations, next steps, etc. During these sessions, the name of the potential buyers were not mentioned on grounds of non-disclosure agreements, though some information about the companies were made available, such

as potential buyers' industry, geographical reach, etc. There was, thus, a significant uncertainty about who the buyers might be, and this seemed distressing, because it was impossible for me or my colleague to know or anticipate whether our jobs would be at risk within six months. So, these instated a sense of paralysis, because I did not know whether we should search for another jobs or remain in the organization hoping that the future employer would not make drastic staffing decision on grounds of a possible duplication of jobs.

As there was a lot of uncertainty about what would happen after the acquisition and our need for information, there was a lot of informal talk between colleagues about the potential buyers. We would soon find out their names, where they stand in terms of price offering and the quality of the relationship between the selling organization and the potential buying organization. This was an interesting aspect, because while formally, these names were not disclosed, we all knew who was on the shortlist. There was an intense grapevine communication, which had in some sense, reduced the relevance of the formal communication sessions. And that is because the management knew that we were aware of the names of the buyers on the shortlist, but the managers could still not name them in such formal sessions.

This revealed important aspects about the need to deal with the uncertainty and possible job insecurity posed by the forthcoming acquisition. Having the information gave me a sense of control over my professional life and career, I had more time for action in case the acquisition would lead to a job loss. This was reflected in the projections I would make when I learnt the names of the buyers on the shortlist. Together with my colleagues, we would try to anticipate possible job overlap or major staffing decision by the acquiring organization following the acquisition. This situation seemed to me it was more distressing for my colleagues working in the core functional level, such as payroll, accounting etc, where the biggest overlap potential

existed. Apart from possible job overlap, I found another aspect to be extremely relevant in dealing with the uncertainty of the post-acquisition changes. I felt the need to understand the buyers' organization culture, remuneration policies, reputation in the energy market and so on and sought this information from various sources such as articles published in the media about the organization, from contacts in the industry who had knowledge of the organization and so on. I would often weigh this information in comparison to the local organization. Buyers' cultures, size, reputation was contrasted with the local organization's. This was useful for me in anticipating the degree of integration, the autonomy the local organization would have after the acquisition, whether there would be changes in the benefits policies and so on.

Emergence of “us” versus “them” thinking

The uncertainty regarding our future in the organization after the acquisition lead me to do extensive search for information about all possible buyers. All this information has helped me cope with the need to anticipate my future after the acquisition and it seemed to me it has also helped my colleagues. However, most of the times, I found myself discussing with my colleagues about the acquisition and the ensuing integration changes in zero-sum terms. In other words, we would make projections into the future of what would happen to us in case of a duplication of jobs. Would us be the ones to lose our jobs or the employees of the acquiring organization? The discussion also focused on finding some relevant ground for differentiation that would justify keeping us in the organization after the acquisition in the event of such staffing decisions. The scenarios we were building involved seeing ourselves in competition with the employees of the acquiring organization. This dynamic seemed to have emerged when the names

of potential buyers were known, and became more pervasive as the buyers were further shortlisted.

4.3.2. Integrating personal experience with survey data

These emotions and behaviours seemed to have surfaced after the parent organization announced us about the decision to sell the local entity. These impressions which I have described from my personal experience seem to evoke a weakening of my and possibly my colleagues' psychological bond with the organization once we were announced about the sell-off, it seemed like we all became more cynical and disengaged. I described my experience of this period in terms such as abandonment, distrust with management and cynicism, and from my interactions with the colleagues, it seemed to me like these emotions were common in our group. I also found that uncertainty emerged as an important factor in how I construed the impending acquisition, my emotions, and this appears to have lead me and my colleagues to re-evaluate our work situation and take into consideration other career options.

Considering this preliminary insight, in my questionnaire I evaluated employees' identification with the organization, their commitment to the organization, uncertainty perceptions, breach of psychological contract, cynicism, hypervigilance, turnover intentions, retributory behaviour in the form of retaliation and health problems. Table 10 shows the means, standard deviations and reliability statistics for the variables measured in this study. Table 11 presents the zero-order correlations between the variables investigated.

Table 10**Means, standard deviations and reliability statistics**

	N	Min	Max	Mean	SD	Cronbach's Alpha
Identification	13	2.33	5.00	3.49	0.85	0.92
Perceived uncertainty	13	1.14	3.29	2.09	0.67	0.78
Psychological contract	13	-3.00	0.86	-0.76	1.28	0.87
Retaliation	13	1.00	3.00	1.54	0.65	0.75
Turnover intentions	13	1.25	4.00	2.50	0.68	0.80
Affective commitment	13	2.63	6.38	4.60	1.07	0.83
Cynicism	13	1.20	7.00	2.85	1.76	0.90
Hypervigilance	13	1.22	2.83	2.01	0.61	0.88
Valid N (listwise)	13					

Note. M=Mean; SD=standard deviation.

Table 11**Zero-order correlations**

	1	2	3	4	5	6	7	8	9
1. Retaliation									
2. Turnover intentions	.71**								
3. Affective commitment	-.45	-.58*							
4. Cynicism	.84**	.74**	-.52						
5. General Health	.60*	.25	-.04	.58*					
6. Psychological contract	.25	.29	.06	.42	.00				
7. Hypervigilance	.33	.46	-.25	.36	.02	.40			
8. Identification	-.06	-.39	.82**	-.23	.20	.38	-.02		
9. Perceived uncertainty	.72**	.74**	-.57*	.81**	.44	.02	.19	-.51	

Note. **. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Overall, the questionnaire results seem to support my interpretation of the period between the sell-off announcement and actual acquisition. Survey data show employees' weakening of their psychological bond with the organization following the acquisition announcement was linked to a reduction in their affective commitment to the organization ($r = .816, p > .01$). In case of cynicism, questionnaire results show a cognitive distancing from the organization was linked with employee health problems ($r = .577, p < .05$). Using personal experience, I also stressed that the uncertainty caused feelings of fear and threat by the acquisition. Questionnaire data revealed that employees' perceived uncertainty was indeed linked with psychological distancing ($r = .809; p < .01$), intentions to quit the organization ($r = .744, p < .01$) and their affective commitment to the selling company ($r = -.56, p < .05$).

Previously, using personal experience, I noted that after learning of the impending acquisition, I started distrusting the organization and the management responsible with the sell-off. However, both me and my colleagues, we still displayed a willingness to collaborate with the team responsible with the sell-off in the entire process. These conclusions resonate with the results of the questionnaire data. The latter show employees' emerging distrust or feelings of disappointment (i.e. a breach in psychological contract) did not translate into negative behaviours targeted against the organization in the form of compensatory retaliation (such as taking items from the office, taking sick leave without being sick etc.). Integrating personal experience insights and survey data, these findings may provide some support for the proposition that emerged in my systematic literature review. This refers to the fact that two trust processes may coexist in the organization after a merger or an acquisition. One is directed at the pre-merger/acquisition organization and another directed at the post-merger/acquisition entity, meaning that the target of retaliatory behaviour in mergers and acquisitions would be the post-

merger organization rather than the pre-merger or acquisition organization for which there may be a breach in a psychological contract (Chiu & Peng, 2008; Bordia et al., 2008; Tang et al., 2013).

4.4. Discussion

In this organizational case study, I aimed to better understand the research context, the feasibility of the research question and the method to be used in my larger cross-sectional study. In so doing, I have partially addressed the fourth research questions of this thesis, namely *Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?*

Using personal experience and survey data, I aimed to understand the relevant aspects that need to be investigated in the cross-sectional study. In so doing, I explored employees' emotions, behaviour and how they interpret the sell-off event, by taking Organization RR as a case study organization.

Integration of personal experience data and survey data revealed several important aspects which I will detail here. Firstly, the internal consistency of the measures selected for this study was above .70, which means the selected instruments can be used in the larger scale experiment (Cortina, 1993). Also, the findings of the study suggest the relevance of further investigating some key psychological constructs in a larger scale experiment, such as identification, uncertainty and trust, and their association with important affective, health and behavioural outcomes.

Secondly, this study revealed several associations above the minimum power level of .80 which exceeded the 0.69 threshold. However, an a priori power analysis will be carried for the

proposed experimental study in order to determine the sufficient sample size to detect significant interactions, along the three Cohen's conventions for the small, medium and large effect sizes in experimental research (Cohen, 1988).

The survey data and personal narrative revealed several important theoretical relations that can be explored in a larger-scale experiment. Firstly, the study revealed the negative consequences of uncertainty for the employees and the importance of further testing the determinants and effects of perceived uncertainty in a larger study among employees experiencing a merger or an acquisition. In this study I found that the more employees saw the period before the actual acquisition as uncertain, the more they considered seeking new jobs. Heightened perceptions of uncertainty seemed to have coincided with a weakening of employees' commitment to the new organization and a psychological distancing to the post-merger/ acquisition organization. I detailed how the perceived uncertainty in the pre-acquisition period had far-reaching implications which might have influenced the trust dynamics between the employees and the management. My experience during the pre-acquisition period was validated in survey data, where I found that employees' perceived uncertainty correlated with a psychological distancing. These results provide valuable indications of the relevance of uncertainty in a merger or an acquisition context and the need to gain a better understanding its effects in the larger cross-sectional study.

Secondly, the data collected both from employee survey and personal experience show that even though employees developed distrust in the organization after the sell-off announcement, this did not translate into retaliatory behaviour or outright resistance. Instead, there seems to have been a decision on the part of the employees to wait until more information about the buyer became available rather than engaging in negative behaviours against the

organization. This provides a first indication regarding the coexistence of two trust processes, namely a trust-destruction process (Bellou, 2008) and a trust-formation process that emerged in my systematic literature review (Searle & Ball, 2004). While the first refers to the exchange agreement between the employees and the former pre-merger organization, the second refers to the post-merger organization. It appears that as the basis of the psychological contract has not been negotiated yet, it may not provide the justification for the engagement in negative behaviours and cognitions. As this study was a pilot study, it provides some basis for hypothesizing and testing this proposition in the larger cross-sectional study.

Thirdly, this study also showed the importance of the psychological bond between the employees and the organization. The literature reviewed in Chapter 2 and meta-analyzed in Chapter 3 showed that employees in mergers and acquisitions think in terms of “us” versus “them”. While in this study there was no concrete “other” during data gathering, there was a tendency for the employees to adopt such intergroup thinking whenever names of possible buyers came up. Furthermore, the active search for information about the organizational culture of each potential buyer, their leadership style, size, procedures and HR practices and contrasting them with those in the own organization heralded the emergence of an intergroup hierarchy, which would take place after the conclusion of the transaction.

4.5. Theoretical and practical implications for the cross-sectional study

This study revealed the important role of uncertainty for employees in mergers and acquisitions. The personal experience data suggest grapevine communication can help in terms of ensuring a sense of control but may also cause excessive worry about potential job cuts, and

which may often be ungrounded. These results are in accordance with the findings of my systematic literature review, showing that perceived uncertainty seems to be associated with several negative outcomes such as resistance and withdrawal behaviour, anticipated conflict, negatively with employee willingness to collaborate, positively with employee intention to leave, and lower employee satisfaction (Marmenout, 2010). An implication of that is that perceived uncertainty is an important psychosocial stressor for employees, particularly in the pre-acquisition period which may lead employees to seek information or fabricate correlations between events that would help them solve the uncertainty about their professional future. Considering the limitations of existing research in terms of methodology (i.e. lab experiments among undergraduate students, Marmenout, 2010; Giessner et al., 2006), it will be useful that the cross-sectional study provides some statistically relevant information on the actual impact of uncertainty in an inductive way.

The data collected from survey data and through personal experience also provided some preliminary support for the idea that distrust and psychological contract breach may be directed against the pre-merger/acquisition organization, and not the new, post-merger/acquisition organization. These findings resonate with the conclusions of my systematic literature review on the co-existence of two trust processes. An implication of that is that there is a trust building process which essentially refers to the relation between the employees and the new post-merger/acquisition organization, whereby employees learn to trust the new management (Nikandrou & Papalexandris, 2008). On the other hand, there is a trust-destruction process, as detailed in my personal account of the pre-acquisition period, and which refers to the relation between the employees and the pre-merger/acquisition organization (Bellou, 2008; Kiessling, Harvey and Moeller, 2012). Considering the need for statistical validation of these processes, it

will be useful that the cross-sectional study provides some statistical evidence of this trust process and implications of them.

This study also found that the trust destruction processes may also coincide with employees adopting a cynical attitude towards the management and the organization. An implication of that is that employees may gradually become distrustful regarding the genuineness of the parent organization's care for the local employees in a pre-acquisition context, such as in shortlisting the potential buyers. These findings are in accordance with the extant cynicism literature (Cartwright & Holmes, 2006), . Employees may become disillusioned by the profit-making practices of greedy organizations concealed under social responsibility and humanitarian themes (Kanter & Mirvis, 1989; Andersson, 1996; Stanley, Meyer & Topolnytsky, 2005). They form an idealized image of the organization they work for, experience disappointment in the context of conflicting evidence and feel betrayed by their organization (Sievers, 2007). Considering the findings of this organizational case study and the lack of evidence in the mergers and acquisitions literature, it will be useful that the cross-sectional study closely investigates cynicism as a relevant employee outcome in a merger or an acquisition context.

Lastly, my personal experience of the pre-acquisition period suggests us and them dynamics may take shape even before the merger or acquisition takes place, but it is only after the transaction has taken place that perceptions of the "them" become crystallized, when there is a more concrete representation of the "other". An implication of that is that the acquisition announcement itself may not be sufficient for employees to develop a strong affiliation to group as a function of the presence of the outgroup and increased social identity salience (Wicker & Kauma, 1974; McEntire & Bentley, 1996; Carter & Pavur, 2003; Amiot, Terry & Callan, 2007). Therefore, in my cross-sectional study, I will carry the survey after the transaction has taken

place in order to better capture the dynamics of intergroup processes and social identity mechanisms that have been emphasized in the literature.

4.6. Limitations

There are several limitations to this study. Firstly, using personal experience as a data collection method is limiting in the sense that it presents only one voice, rather than many (McAteer, 2010). This inevitably raises generalizability issues. Despite its benefits to the integrity of the research process, personal reflexivity is inherently limiting in the sense that there are factors that may shape the research and the conclusions. Palaganas et al. (2017) discuss how researcher aspirations characters, values, philosophies, experiences, belief systems, political commitments, and social identities may shape the research. While I have tried to give a full and honest account of my personal experience of the pre-acquisition period in the organization, I recognize the generalizability issues inherent in using personal insight, and that more studies are needed to validate these findings. Furthermore, while I attempted to address the generalizability limitation by conducting a survey among the employees in Organization RR, the sample of employees in th survey was small (13). Therefore, it would be useful that future studies validate these conclusions in quantitative surveys that can improve generalizability of the findings to other cases of mergers and acquisitions.

Secondly, this study was conducted in one case of an acquisition. The specific context for the sell-off decision in the case of Organization RR may have facilitated the emergence of certain behaviours or emotions among employees. Concretely, these employee outcomes might have been influenced by contextual or internal factors, such as the quality of the communication climate (Schweiger & Denisi , 1991; Bartels, Pruyn & de Jong, 2009; Rafferty & Restubog, 2010) or the sense of legitimacy created for the sell-off decision (Guerrero, 2008; Joseph, 2014)

because of the financial hurdles in Organization R and industry crisis. This inevitably raises generalizability problems, meaning the findings of this study may not apply to other cases of mergers and acquisitions. It will be useful that future studies include more cases of mergers and acquisitions to increase generalizability of the findings.

4.7. Conclusions

To conclude, this study revealed, within the sample size limitations, that the theoretical and methodological background to the cross-sectional study can be used in a larger scale survey study, provided that a) the design of the study is appropriately adjusted to accommodate testing of several constructs (i.e. trustworthiness, identification), b) that the sample size is sufficient to allow generalizable inferences and that b) methodologically, it can provide a broader overview of the implications of important constructs identified herein, such as uncertainty perceptions.

In the next chapter, I will discuss the results of my cross-sectional study carried among 108 employees from various organizations involved in a merger or an acquisition. With this study, I aim to answer the last two research questions of this thesis, namely:

- **RQ4:** Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?
- **RQ5:** What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?

Chapter 5: An integrative model of employee psychology in mergers and acquisitions using structural equation modelling and decision trees

Abstract

Objective: In this study, I aim to address the need for an integrative approach to the study of employee psychology in mergers and acquisitions and test the idea that employee emotions, behaviour, health, cognitive and context are interconnected. Recognizing the limitations and research needs that emerged in the previous three studies, I explore the links between social identity processes, trust perspectives, context and employee affective (i.e. commitment), behavioural (e.g. retaliation, turnover intentions) and health outcomes (e.g. anxiety, somatic health) based on a survey among 108 employees.

Method: Using structural equation modelling and comparative analyses, I examined the links between social identity processes (employee organizational identification), trust (organizational justice, psychological contract breach), context (i.e. type of transaction, mood of transaction, degree of integration) and employees emotional, behavioural and health outcomes. Using data-driven statistical methods (logistic regression with stepwise feature selection and decision tree modeling) I examined the factors that emerged as the most important predictors of employee outcomes.

Results: Standard statistics results showed perceived uncertainty to be the most important predictor of negative employee outcomes. Using data-driven methods, I found we can assess risks of somatic health problems with 89% accuracy, risk of anxiety with 86%, risk of social

dysfunctions with 91% accuracy, risk of cynicism with 89% accuracy, risk of retaliation with 89%, and risk of turnover intentions with 82% accuracy.

Conclusions: I conclude that the theoretical perspectives can be reconciled in an integrative model of employee psychology of mergers and acquisitions. Data-driven methods, such as decision trees may be a valuable integrative tool for both the testing and generation of theories. I discuss the implications for theory, research and practice.

5.1. Introduction

The systematic literature review showed that employees in mergers and acquisitions may experience negative affect such as fear (Searle & Ball, 2004; Empson, 2001; Junni, 2011; Mirc, 2012; Smith et al., 2013), anxiety (Marmenout, 2010; Rafferty & Restubog, 2010; Astrachan, 2008), tension (Maguire & Philips, 2008), frustration (Greenwood, Hinnings & Brown, 1994), or they may not develop a psychological bond with the new organization (Weber, 1996; Terry, Carey & Callan, 2001) and so on. The case study discussed in Chapter 4 confirmed the findings of the studies on emotions reviewed in Chapter 2 and showed that employees may feel devalued after learning of an impending acquisition, abandoned and fearful of their future in the new organization. Employees may construe the acquisition in self-deprecating terms. However, considering the limitations to my case study outlined in Chapter 4 regarding the small sample size in the survey and the subjectivity bias inherent in using personal experience as a data collection method, there is a need for more quantitative studies that can validate these findings regarding employee emotions in mergers and acquisitions.

The systematic literature review also noted that employees in mergers and acquisitions may also engage in negative behaviours, such as obstruction of knowledge transfer (Empson,

2001; Apfelthaler, 2002), resistance to change (Quah & Young, 2005; van Dijk & van Dick, 2009; Jetten & Hutchinson, 2011), conflict (Vaara et al., 2012) or withdrawal behaviour (Choi et al., 2011; Makri & Hantzi, 2012). The case study discussed in Chapter 4 found that these negative employee behaviours directed against the organization reviewed in Chapter 2.3.2.1, such as resistance to the acquisition, may not fully manifest right after the sell-off decision. I conjectured that this might have been attributed to the regular communication sessions and the perceived openness and transparency about the process from the management of the organization. However, I found that us-versus-them thinking was taking shape before the actual acquisition, so it is possible that the behaviours directed towards the outgroup reviewed in Chapter 2.3.2.2 triggered by social identity processes became visible after the acquisition event. I concluded that more quantitative studies that can overcome the limitations of my case study regarding the sample size and subjectivity bias are needed to fully understand how and when these social identity processes manifest in a merger or an acquisition context.

In my systematic literature review, I also highlighted that employees may also experience health problems, such as emotional exhaustion (Väänänen et al., 2004), psychological distress (Joslin, Waters & Dudgeon, 2010) or depression (Väänänen et al., 2011). These outcomes have been suggested to be linked with contextual variables, such as mood of the transaction, namely friendly or hostile (Walsh & Kosnik, 1993; Hambrick & Cannella, 1993), type of merger or acquisition (i.e. horizontal, vertical, conglomerate; Quah & Young, 2005) or degree of integration (van Oudenhoven & de Boer, 1995), cognitive factors such as group identity (van Dijk & van Dick, 2009; Basinger & Peterson, 2008), cultural differences (Gleibs, Tauber, Viki & Giessner, 2013; Chung, Du & Choi, 2014) or trust (Maguire & Philips, 2008), and demand-resources factors, such as job security (Chun & Davies, 2010) or organizational support (Makri &

Ntalianis, 2014). The correlational pattern found in the quantitative analysis of the case study confirmed these findings of my systematic review that employee emotions, behaviour and psychosomatic health are interconnected. However, more quantitative studies addressing the link between employee emotions, behaviours and employee health that can address the methodological limitations of my case study are needed.

In my systematic literature I have noted several shortcomings which seem to be recurrent across studies. Briefly, these limitations refer to an undersampling, in the sense that only one case of merger or acquisition is considered in most cases (van Dick, Wagner & Lemmer, 2004; Lipponen, Olkkonen & Moilanen, 2004; Carter & Pavur, 2003; Monin, Vaara & Kroon, 2013; Bartels et al., 2006; Amiot, Terry & Callan, 2007; Boen et al., 2007), narrow theoretical scope, in the sense that other relevant employee outcomes have been underrepresented in the empirical literature such as hypervigilance or cynicism among employees as a matter of distrust in the colleagues and post-merger/acquisition organization. The two concepts emerged during my case study as relevant to be investigated in a merger context, considering the significant associations with other common employee outcomes such as turnover intentions.

Lastly, my systematic literature review highlighted there is a lack of an integrative approach to the study of mergers and acquisitions. Despite the breadth of evidence in employee psychology of mergers and acquisitions, the empirical literature remains bounded by theoretical perspective such as social identity theory (van Dick, Wagner & Lemmer, 2004; Bartels et al., 2006), trust and justice perspective (Clarke & Salleh, 2011; Monin, Vaara & Kroon, 2013), contextual perspective (Hambrick & Cannella, 1993; Weber, 1996). In this chapter, as a means towards an integrative model of employee psychology in mergers and acquisitions, I aim to address these shortcomings. While above I have provided an overview, I next reiterate the

specific questions left unanswered, limitations and research directions that emerged in the systematic literature review (Chapter 2), the meta-analysis on the effect of group status and employees' feelings of organizational identification (Chapter 3) and the organizational case study (Chapter 4). The aim in this chapter is not to repeat the individual sections from each study but to provide a brief overview of the most important topics and relate them to the aims of my cross-sectional study.

5.1.1. Employees' identification with the pre- and post – merger/acquisition organization and its association with emotional, behavioural and health outcomes

My systematic literature (Chapter 2) and the meta-analysis (Chapter 3) revealed the important role of employees' identification with the pre-merger/acquisition organization and post-merger organization on affective outcomes (van Dick, Wagner & Lemmer, 2004; Bartels et al., 2006), behaviour (Colman & Lunnan; 2011; Langley et al., 2012) and health (Amiot, Terry, Jimmieson & Callan, 2006). That is because employees appear to maintain a strong identification with the pre-merger/acquisition organization and fail to develop a psychological bond with the new post-merger/acquisition organization (Jetten & Hutchinson, 2011; van Knippenberg et al., 2002) thus raising antagonistic responses. Employees in mergers and acquisitions seem to display ingroup bias or favoritism towards their fellow members and devalue the outgroup (Lipponen, Olkkonen & Moilanen, 2004; Amiot, Terry & Callan, 2007; Terry, Callan & Sartori, 2001; Terry & Callan, 1998), possibly in an effort to maintain a stable sense of self-esteem as

deriving from their group affiliations (Abrams & Hogg, 1988) and reduce subjective uncertainty (Hogg & Abrams, 1993).

According to the social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Jetten, Spears & Manstead, 1996; Turner, 1982, 1985, 1987, 2010; Turner et al., 1987), these strategies for restoring a positive self-esteem are a function of members' strength of identification with the group, commitment to the group and level of perceived threat to their social identity (Verkuyten & Nekuee, 1999; Lipponen, Helkama & Juslin, 2003; Struch & Schwartz, 1989; Castano et al., 2002).

With regards to the link between employees' strength of identification and affective or behavioural outcomes, the systematic literature review showed employees in mergers and acquisitions may display an initial willingness towards shifting their identities from the pre-merger/acquisition organization to the post-merger/acquisition organization, but the boundaries of the outgroup may not be permeable for the shift (Terry, Carey & Callan, 2001; Lupina-Wegener, Schneider & van Dick, 2011). Failed mobility attempts may motivate employees to re-establish their pre-merger identities and engage in collective actions, such as ingroup bias (Terry, Callan & Sartori, 1996) or intergroup differentiation strategies (Langley et al., 2012; Smith et al., 2013; Drori, Wrzesniewski & Ellis, 2013). However, employees' strength of identification with the pre- or post-merger/acquisition organization may also trigger more passive strategies, such as quitting (van Dick, Wagner & Lemmer, 2004) or psychologically withdrawing from their jobs (Fried et al., 1996; Choi et al., 2011; Armstrong-Stassen & Cameron, 2003). The results of my meta-analysis (Chapter 3) found some support for these hypotheses, and showed that employees may differentially construe the merger or the acquisition event. The low status employees do not feel like they belong to the new organization, while the high-status employees feel like the new

organization is highly representative for their group. In turn, the meta-analysis supported the idea that a feeling of belonging to the new organization is associated with more support for the organization in the form of satisfaction with the current work situation. Considering the limitations of my meta-analysis regarding the low sample size, I stressed the need for more quantitative research discussing the implications of employees' identification with the post-merger organization.

However, as the systematic literature review noted, there are certain limitations to the existing literature, from a theoretical and methodological perspective. On the one hand, most of these studies are carried in one case of either a merger or an acquisition (Terry, Carey & Callan, 2001; Łupina-Wegener, Schneider & van Dick, 2011; Terry, Callan & Sartori, 1996; Smith et al, 2013; Drori, Wrzesniewski & Ellis, 2013; Fried et al., 1996) meaning that the context in which the study was carried may not be fully transferable to other cases of mergers or acquisitions. On the other hand, much of the empirical evidence is qualitative (Łupina-Wegener, Schneider & van Dick, 2011; Langley et al., 2012; Drori, Wrzesniewski & Ellis, 2013; Choi et al., 2011), meaning there is no information on the statistical significance of these findings. Furthermore, the systematic literature review revealed no clear link between employees' identification and specific behaviours employees engage in. For instance, employees may either take a more passive route and pursue withdrawal strategies or a more aggressive one and pursue retaliatory strategies.

With regards to the role of employees' group status in a merger or an acquisition context, the existing literature and my meta-analysis (Chapter 3) suggest employees' choice of tactics may also be influenced by where they stand in the post-merger / acquisition organizational hierarchy (van Knippenberg et al., 2002). As a function of the ingroup's psychological significance for the individual, employees' group status may trigger ingroup bias (Turner, 1987),

differentiation tactics (van Knippenberg et al., 2002) and retaliatory behaviour (i.e. abuse and theft). In two surveys of two merged public sector organizations, van Knippenberg et al. (2002) found that, both the dominant and the dominated groups harbour equally divisive attitudes, regardless of the status, but the association between intergroup differentiation and post-merger identification is what was found to be antipodal across the two conditions. Dominated group members who perceived the organizational cultures as highly discrepant were also the ones who identified the least with the new organization. Conversely, the dominant group members who perceived the two groups as very different were also the ones for whom the post-merger organization represented an important component of their self-concept. However, a limitation to this study is that sampling two merged organizations from the public sector may not be comparable to employees in private sector or in organizations going through an acquisition. Nevertheless, the meta-analysis on the effects of group status confirmed that there may be a significant difference in the way employees identify with the new, post-merger/acquisition organization. A lower identification with the organization after the merger/acquisition, the meta-analysis found, coincides with employees' dissatisfaction with their work situation. However, considering the heterogeneity problems discussed in Chapter 3, more studies are needed to validate these links between employee identification, perceived status and employee outcomes.

Recognizing the limitations of prior research regarding the role of employees' feelings of identification with the pre- and post-merger organization and of group status, I next provide a more in-depth overview of these topics and discuss them in relation to employee affective, behavioural and health outcomes in mergers and acquisitions and the hypotheses for this study.

5.1.1.1. Social identity theory and affective outcomes

Previously, I stressed that employees in mergers and acquisitions may engage in negative behaviours at work, (Lipponen, Olkkonen & Moilanen, 2004; Amiot, Terry & Callan, 2007; Terry, Callan & Sartori, 2001; Terry & Callan, 1998), possibly to maintain a positive self-esteem as deriving from their group affiliations (Abrams & Hogg, 1988) and reduce subjective uncertainty (Hogg & Abrams, 1993). These strategies for restoring a positive self-esteem may be a function of members' strength of identification with the group, commitment to the group and level of perceived threat to their social identity (Verkuyten & Nekuee, 1999; Lipponen, Helkama & Juslin, 2003; Struch & Schwartz, 1989; Castano et al., 2002). For instance, Panchal and Cartwright (2001) found that being in one or the other groups involved in the merger or the acquisition determines the level of satisfaction with the job and commitment to the organization. Other studies (Terry, Carey & Callan, 2001; Cartwright, Tytherleigh & Robinson, 2007; Joslin, Waters & Dudgeon, 2010) showed that the strength of identification with the pre- and post-merger/acquisition organization and perceived status are associated with employee affective commitment, in the sense that the higher the identification with the post-merger/acquisition organization, the higher the employee affective commitment. Therefore, I hypothesize that:

H1: Strength of identification with the post-merger / acquisition organization is positively associated with employee affective commitment.

5.1.1.2. Social identity theory and behavioural outcomes

In terms of behaviour, I have previously mentioned that employees' strength of identification may trigger more aggressive or more passive behavioural strategies. On the one hand, employees may be motivated to engage in collective actions such as ingroup bias (Terry, Callan & Sartori, 1996) or intergroup differentiation strategies (Langley et al., 2012; Smith et al, 2013; Drori,

Wrzesniewski & Ellis, 2013). The emergence of “us” versus “them” in mergers and acquisitions seems to be associated with a tendency on the part of the employees to favour their ingroup in relation to outgroup, in line with social identity theory (Tajfel & Turner, 1979). Therefore, I expect that:

H2: Identification with the pre-merger or acquisition organization is positively associated with ingroup bias. Conversely, employee identification with the post-merger organization is negatively associated with ingroup bias.

Apart from ingroup bias (Terry, Callan & Sartori, 1996) and intergroup differentiation strategies (Langley et al., 2012; Smith et al., 2013; Drori, Wrzesniewski & Ellis, 2013), employees’ strength of identification with the pre- or post-merger/acquisition organization may also trigger more passive strategies, such as quitting (van Dick, Wagner & Lemmer, 2004) or psychologically withdrawing from their jobs (i.e. being cynical; Fried et al., 1996; Choi et al., 2011; Armstrong-Stassen & Cameron, 2003). Despite the fact that intuitively, the more an individual identifies himself or herself with the new organization the more he or she will act in accordance with the organizational norms (van Knippenberg et al., 2002), and that through a strong identification with the organization, the individual is psychologically intertwined with it (Tajfel and Turner, 1986), the link between social identity and turnover intentions remains elusive. Considering the fact that social identification should be associated with elevated support for the organization, and that a withdrawal behaviour would be detrimental to one’s self concept under conditions of high identification, I hypothesize the following:

H3: A high identification with the pre-merger/acquisition organization is positively associated with withdrawal behaviours (cynicism and intentions to quit) and retaliatory behaviour. A high identification with the post-merger/acquisition organization is negatively associated with withdrawal (cynicism, intentions to quit) and retaliatory behaviour.

Furthermore, research suggests employees may also actively create or sustain the differences between the two groups (van Knippenberg et al., 2002). Authors found that employees' strength of identification may also be associated with employees' perceived intergroup differences. This suggests that even though the groups of employees involved in a merger or an acquisition may be relatively similar from a cultural point of view, they may still search for sources of differentiation. Studying a cross-border acquisition, Riad and Vaara (2011) documents the existence of certain attributional tendencies on the part of the employees for the various experiences during the post-merger/ acquisition integration process. In their study of 200 employees and using thematic semi-structured interviews, authors discuss the construction of cultural stereotypes and how employees deliberately search for differences between groups. In their study, claims to cultural differences and incompatibilities as well as employees' urge to defend their culture and downplay the positive features of the other group became a goal for the employees in and of itself. Therefore, I predict that:

H4: Pre-merger/acquisition organizational identification is positively associated with high levels of perceived cultural differences

5.1.2. The relation between trust, social identification and employee outcomes

The lack of theoretical integration is also visible in terms of the relation between employees' identification with the new organization and allocation of trust in an intergroup context, as well as the consequences ensuing from a generalized distrust, such as hypervigilance (Kramer, 2001). Extant literature shows that as a function of shared membership in a salient social category, individuals may be universally distrustful towards the outgroup (Tajfel & Turner, 1986). In other words, ingroup members may be perceived to be more trustworthy than outgroup members (Brewer, 2008; Swann, 2003; Orbell, Dawes & Schwartz-Shea, 1994; Brewer, 2008; Swann, 2003; Orbell, Dawes & Schwartz-Shea, 1994). This implies that individuals in an intergroup situations hold a negative outgroup schema that leads them to be distrustful towards the outgroup members and be highly suspicious towards them (Insko et al., 2005; Williams, 2001). In intergroup situations, individuals' degree of presumptive trust in outgroup is largely driven by the individuals' identification within a group and categorization of self and others into ingroup and outgroup (Yuki et al., 2005). Thus, in making trustworthiness judgments, in situations of high uncertainty, individuals tend to interpret ambiguous information in a way that is consistent with their outgroup stereotype (Tanis & Postmes, 2005), and overlook counter-stereotypic information. This leads to forms of irrational distrust and suspicion towards the outgroup (Insko et al., 2005; Deutsch, 1958; Kramer, 1994), or a rather vigilant appraisals of others' actions and intentions (Kramer, 2001). Irrational forms of distrust coupled with substantial uncertainty and heightened outgroup salience may create the psychological climate for the emergence of outgroup paranoia. This manifests through social information processing tendencies such as hypervigilance and dysphoric rumination (Kramer & Schaffer, 2014, Kramer, 2004).

In a merger/acquisition context the identities of both groups seem to be under threat by the presence of an outgroup (i.e. the other organization involved in the merger or the acquisition)(Clark et al., 2010) and there is a normative pressure to cooperate with the latter (Mirc, 2012). Therefore, it may be that in mergers and acquisitions, employees' distrusting behaviour and cognition may exist as predicated by their group membership and as a function of the degree of integration, which may be indicative of threat to the group boundaries and identity. This, in line with extant literature findings (Kramer & Schaffer, 2014, Kramer, 2004) may lead to hypervigilant tendencies. Therefore, I expect that:

H5: The greater the identification with the pre-merger/acquisition organization the higher the hypervigilance.

H6: The lower the identification with the post-merger/acquisition organization, the lower the trust measures (perceptions of organizational justice and perceptions of trustworthiness).

Furthermore, it seems that as long as individuals perceive the organization and its members as trustworthy, they are more inclined to develop psychological bond with the new organization and exhibit supportive instead of resistive behaviour (Nikandrou & Papalexandris, 2008). As employees perceive the process, procedures and treatment they receive as unfair, they also show little willingness to be vulnerable in an environment beset by confusion and uncertainty. The new organizational structure and culture does not seem to inspire trust among the employees nor does the new leadership or the supervision team (Nikolaou, Vakola & Bourantas, 2011). Individuals' confidence in the new organization and the actions of the new or old leadership and supervisors affects the extent to which they accept and internalize the

directions to which the merged company is going to, as well as the decisions and actions of the combined team (Nikolaou, Vakola & Bourantas, 2011). Equally, it has a significant influence over the level of employees' motivation to persevere in a job that no longer lends satisfaction or pleasure (Clarke & Salleh, 2011). However, a limitation to these studies is that the link between trust, justice, social identity and consequences of distrustful relations between the two groups and distrust in the organization have not been discussed in the literature.

Previously, I mentioned that category membership may elicit trustworthiness judgments that are not necessarily a function of interpersonal contact or historical development of relations between individuals (Kramer, 1998). Individuals' identification with a group necessarily induces biased trust cognitions about the members of the outgroup (Voci, 2006), and they are more vigilant towards the others (Kramer, 2001). Similarly, as predicated by their social identities, individuals may perceive the new organization's practices and norms differentially from where they stand in the new hierarchical structure, in terms of fairness and justice (Searle & Ball, 2004; Monin, Noorderhaven, Vaara & Kroon, 2013). Therefore, I hypothesize:

H7: There is a significant difference in terms of justice evaluations among employees by the role of their pre-merger / acquisition organization in the transaction, such that the acquired employees perceive the new organization as less just compared to acquirer or merged employees.

Furthermore, the systematic literature review and the case study revealed that mergers and acquisitions create a context where two opposite trust processes may co-exist. On the one hand, it may be that in mergers and acquisitions, there is among employees a trust-building process oriented towards the new post-merger/acquisition organization (Beccera, Lunnan &

Huemer, 2008; Nikandrou & Papalexandris, 2007) and another trust-destruction process oriented towards the pre-merger/acquisition organization (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008). Employees' may become distrustful towards the pre-merger organization as a matter of their construal of the merger as a trust-destroying event (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008). Simultaneously, there may also be a trust-building process oriented towards the new post-merger/acquisition organization (Beccera, Lunnan & Huemer, 2008; Nikandrou & Papalexandris, 2007). This implies that employees may not manifest instances of retaliation against an organization with which the psychological contract has not (yet) been negotiated, but may manifest against the pre-merger/acquisition organization as a result of employees' construal of the merger or acquisition itself as a trust-destroying event (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008). Therefore, employees' negative behaviours against the new post-merger/acquisition organization may not be a function of a breach of trust for the reason that the psychological contract between the employees and the new organization has not yet been negotiated. Hence, employees may not seek retributive or restorative justice from the new post-merger / acquisition organization by engaging in retaliatory behaviour. Instead, the link between the psychological contract breach and retaliation may fundamentally reflect the relationship between the employees and the organization before rather than after the merger or the acquisition. Therefore, I expect that:

H8: Psychological contract breach is not significantly associated with negative behaviours (intentions to quit and minor theft and abuse)

5.1.3. The additive role of context in employees' behaviour, emotion and health in mergers and acquisitions

The systematic literature review noted that there is a lack of theoretical integration that reflects in studies' failure to capture the additive role of contextual variables, work demands and resource-related factors or cognitive factors in employee emotions, behaviour and psychosomatic health. Rather, it is common that studies examine the role of only one category of antecedents on these affective, behavioural and health outcomes, and do not take into consideration any possible interactive effects (Wicker & Kauma, 1974; Schweiger & Denisi, 1991; Walsh & Kosnik, 1993; Terry, Calla & Sartori, 1996; Fried et al., 1996; Weber, 1996; Terry & Callan, 1998; Panchal & Cartwright, 2001). Contextual factors, such as type of merger/acquisition, mood of transaction (i.e. friendly/hostile), degree of integration (see Chapter 2.1.3) have been largely left out in the study of employee psychology in mergers and acquisitions.

Autonomy removal has been identified in the literature as an important antecedent to employee turnover (Lubatkin, Schweiger & Weber, 1999; Hambrick & Cannella, 1993), together with the related construct of degree of integration (van Oudenhoven & de Boer, 1995). The systematic literature review showed autonomy removal may play an important role in employee outcomes, such as turnover (Lubatkin, Schweiger & Weber, 1999; Hambrick & Cannella, 1993). In anticipation of a layoff or a loss in status, power and reputation, employees prefer to take alternate solutions less harmful for their wellbeing and decide to quit. While autonomy removal has been mostly discussed in the literature in relation to top management (Hambrick & Cannella, 1993), for lower-hierarchical positions, this is usually discussed in terms of degree of post-merger integration (Giessner et al., 2006; van Oudenhoven & de Boer, 1995). This strands suggests that the more assimilationist the integration after a merger or an acquisition (which may be triggered by a high degree of job overlap), the higher the probability of resistive behaviour

and acculturative conflict among employees. That is, the higher the degree of integration, the more antagonistic the behaviour of the employees (van Oudenhoven & de Boer, 1995), and the more the merger is framed as a threatening event (Giessner et al., 2006). Additionally, the more assimilationist the integration strategy, the longer it will take for the employees to identify with the new organization, the lower the satisfaction on the job, and the higher the turnover intentions and affective commitment (Giessner et al., 2006; van Oudenhoven & de Boer, 1995). I

hypothesize that:

H9: Level of integration mediates the relation between strength of pre-merger/acquisition organizational identification and employee affective commitment.

H10: Degree of integration is positively associated with employee intentions to quit.

A high degree of integration may also imply more changes at work following a merger or an acquisition. Existing research has also shown that the extent of changes in employees' ways of working, jobs, status etc. have a significant impact on their health. For example, Väänänen et al. (2011)'s longitudinal study of 6111 employees experiencing a merger or an acquisition found negative changes in the organization during the merger was associated with 60% risk of psychiatric events and onset of depression. This association remained statistically significant at time II with a hazard ratio of 1.53 (CI 1.06 to 1.99). Non-manual employees who experience negative change during the merger had a twofold risk of subsequent psychiatric event with a hazard ratio of 1.99 (CI 1.25 to 3.18). Employees with a psychiatric disorder were more often men (HR: 1.67; CI: 1.29

to 2.17), and older than 50 (HR: 1.03; CI: 1.01 to 1.04). In another study, Väänänen and colleagues (2004a) found in a merger of two Finnish companies that the structural changes after the merger had a significant impact on the level of emotional exhaustion and functional capacity of employees. The longitudinal study captured both pre and post-merger periods, which allowed a more thorough examination of employee health and the relations of causality between merger-related stimulus and health outcomes. The results showed a significant difference in emotional exhaustion across occupational classifications. In particular, blue collar workers who perceived a decline in their job position following a merger or who considered the merger did not cause any change in their job position had significantly higher risk of exhaustion (odds ratio: 3.80, $p < 0.001$ for perceptions of decline and OR: 2.24, $p < 0.05$ for perceptions of no change in job position). Apart from employee emotional exhaustion, authors found that both blue and white collar workers who perceived negative changes in their job situation had a high risk of functional incapacity (OR: 4.27, $p < 0.001$ and OR: 4.62, $p < 0.001$ respectively). Other studies support the idea that the bigger the changes after the merger or the acquisition, the more severe the health problems of employees (Lee et al., 2013; Edwards & Edwards, 2012). Therefore, considering that the extent of changes in employees' jobs and work procedures may be a function of degree of integration, I hypothesize that:

H11: Degree of integration is positively associated with employee health problems (anxiety, somatic health problems and social dysfunctions)

A high degree of integration may also involve a higher level of ambiguity for employees (Schweiger & Denisi, 1991; Michela & Vena, 2012). While the important impact of uncertainty

on individual health has been discussed in extant literature (Brothers, 2011), the mergers and acquisitions research does not integrate such a critical aspect of the merger/acquisition context in the discussion on employee affect, behaviour and health. The case study (Chapter 4) showed a strong link between uncertainty and outcomes such as such as employee retaliatory behaviour, dips in employee commitment, more pronounced intentions to quit and cynical attitudes among employees in mergers and acquisitions. Employees' inability to anticipate the future when they experience a merger or an acquisition appears to have a detrimental effect on employees' health and wellbeing (Schweiger & Denisi, 1991; Michela & Vena, 2012). Qualitative studies reviewed in Chapter 2 showed that employees' efforts to cope with the uncertainty of their future coupled with an inherent distrust towards the other may translate into a hypervigilant behaviour (Duffy & Ferrier, 2003), as individuals may seek clues of how the merger will play out. Moreover, it unavoidably amplifies individuals' emotional responses in the form of excessive worry and anxiety (Astrachan, 2004). Consequently, it may reflect in the choice of particular action tendency in an effort to increase clarity or escape an otherwise ambiguous climate where their future is not certain (Marmenout, 2010; Rafferty, Restubog & Loyd, 2010). I hypothesize:

H12: Uncertainty is associated with employee health problems (anxiety, somatic health problems and social dysfunctions)

H13: Perceptions of uncertainty is associated with withdrawal (psychological distancing and turnover intentions) and retaliatory behaviour.

H14: Uncertainty is positively associated with employees' propensity to be hypervigilant.

In a qualitative study conducted in a confectionery organization, Searle and Ball (2004) found that employees' level of trust in colleagues and organization declined, and authors speculated that a cause of this might have been the high level of uncertainty. Furthermore, employees' distrust manifested through heightened social information vigilance, which authors suggested might be indicative of paranoia (Kramer, 2001). Furthermore, extant literature suggests hypervigilance and paranoid thinking may be linked with a range of negative health problems, such as anxiety, poor social functioning and other psychiatric symptoms (Freeman et al., 2011). Therefore, I hypothesize that:

H15: The higher the perceived uncertainty, the lower the trustworthiness and organizational justice evaluations

H16: The greater the hypervigilance the more severe the general health problems (anxiety, somatic health and social dysfunction problems).

In my systematic review I also noted the impact of transaction mood on employee affect and behaviour (i.e. hostile or friendly, Hambrick & Cannella, 1993; Walsh & Kosnik, 1993). Fried and colleagues (1996) showed employees' change in job control (role ambiguity, participation in decision making, etc.) following a hostile acquisition was associated with feelings of helplessness and psychological withdrawal from work. In contrast, other studies suggest employees in hostile acquisitions identify stronger with the organization and do not have similar negative emotions as employees in friendly acquisitions (Guerrero, 2009). In terms of withdrawal behaviour, Hambrick and Cannella (1993) found that hostile acquisitions are associated with higher departure rates 0-24 months after the transaction, while Walsh and

Kosnik, (1993) showed that employees in hostile transactions do not seem to engage in withdrawal behaviour more so than employees in friendly deals. A limitation to these studies is that the authors measure either certain employee emotions such as feelings of helplessness (Hambrick & Cannella, 1993) or turnover (Walsh & Kosnik, 1993), or the findings regarding the positive or negative role of transaction mood on employee outcomes are conflicting. Therefore, we do not know whether employees in hostile transactions show a smoother adaptation in terms of emotion, behaviour and health compared to employees in friendly transactions or the other way around.

Nevertheless, an explanation to the conflicting findings may lie with the legitimization of the merger by the employees (Vaara & Tienari, 2011; Roundy, 2010). A hostile acquisition may be construed as a legitimate resolution to an unproductive management or inefficiencies in the management of corporate resources (Fama, 1980). A takeover would thus be legitimized through a better use of the capital in the organization, while the rejection of the tender offers by the target management would be reasonably viewed as a defence strategy (Brennan, Daly & Harrington, 2010) against a loss of benefits and status. In this case, employees would construe the acquisition as a rescue attempt, rather than as a negative change dictated by other empire-building motives. The latter motive may be cognitively more accessible in case of friendly transactions. Therefore, I hypothesize that:

H17: Employees in hostile acquisition display lower tendencies to engage in withdrawal and retaliatory behaviour compared to employees in friendly acquisitions.

H18: Employees in hostile acquisition show a better adjustment to the merger/acquisitions compared to employees in friendly acquisitions in terms of general health (anxiety, somatic health and social dysfunctions).

5.1.4. The need for an integrative statistical methodology

The systematic literature review and the case study findings suggest employees in mergers and acquisitions may be more predisposed to certain health problems and engage in certain negative behaviours, including retaliation such as abuse and theft compared to employees in normal conditions. In terms of health, mergers and acquisitions literature investigating the psychosomatic health of employees in mergers and acquisitions reveals important information regarding the hazard rates of psychiatric disorders and the risks of emotional exhaustion and functional incapacity. Employees are highly vulnerable to depression (Cartwright & Cooper, 1993; Joslin, Waters & Dudgeon, 2010; Cartwright, Tytherleigh, & Robertson 2007), emotional exhaustion and functional incapacity (Väänänen et al., 2004). Väänänen et al. (2011) concluded that perception of a merger-related change as negative was conducive to the onset of a psychiatric disturbance at least within a 5-year post-merger/acquisition window. Poor mental health of employees in mergers and acquisitions can lead to maladaptive coping strategies, such as excessive consumption of nicotine, alcohol and food (Cartwright & Cooper, 1993). Certain work-related factors make employees vulnerable to such psychosomatic disturbances. Changes in job position, relocation and lack of organizational support have been cited as important predictors (Väänänen et al., 2004), together with perception of the merger itself (Väänänen et al., 2004, 2011). From a behavioural perspective, employees may actively resist the merger or the acquisition and engage in deviant behaviours. Employees' propensity to engage in resistive

behaviour in mergers and acquisitions is a function of perceptions of management trustworthiness, cultural dissimilarity (Searle & Ball, 2004), involvement in the merger process (Basinger & Peterson, 2008), identification with the new organization and relative standing (van Dijk & van Dick, 2009), perceived uncertainty (Marmenout, 2010), perceived continuity (Jetten & Hutchinson, 2011) and perceived organizational fit (Gleibs, Tauber, Viki & Giessner, 2013; Chung, Du & Choi, 2014).

There are thus, multiple factors that can contribute to negative impact on employee health and behaviour. In order to identify the ways in which the various aspects of employee cognition, affect and contextual factors come together in a cohesive whole, there is a need of a model that can account for all these antecedents and which can help both academics and practitioners investigate the individuals at risk of poor health or of engaging in negative behaviours. In order to address one of the most important aims of this research, namely the integrative approach to employee psychology in mergers and acquisitions, this study will explore whether employee health (anxiety, somatic health problems and social dysfunction), withdrawal behaviour (i.e. intentions to quit, cynicism) and retaliatory behaviour (i.e. abuse and theft) in mergers and acquisitions can be predicted using data-driven statistical methods, namely decision trees and logistic regression. I aim to answer the question:

What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?

Overall, the examination of the existing research on employee psychology in mergers and acquisitions and the limitations that I have emphasized in the preceding chapters and briefly

reviewed above seem to suggest that there are several perspectives that can help us understand employee psychology in mergers and acquisitions and explain employee behavioural, health and well-being outcomes. It highlighted the fact that employee cognition, context, affect, behaviour and health interact in complex ways. But the way in which the field of employee psychology in mergers and acquisitions has evolved, that is, in a fragmentary manner (see Chapter 2), does not help us induce an integrative model that can work across the different contexts the merger or the acquisition takes place. For example, much of the research does not take into account contextual factors such as the mood of the transaction (Astrachan, 1995; van Oudenhoven & de Boer, 1995; Terry, Callan & Sartori, 1996), whether it is a domestic or a cross-border merger or acquisition (Terry, Callan & Sartori, 1996; McEntire & Bentley, 1996; Covin et al., 1996) and so on and demographic variables, such as tenure in the organization (Chun & Davies, 2010). Even if the importance of these factors may sometimes be acknowledged in research, most of the times it is impossible to account for them because the research is conducted in one case of a merger or an acquisition (Terry, Callan & Sartori, 1996; McEntire & Bentley, 1996; Covin et al., 1996; Fried et al., 1996; Terry & Callan, 1998) and so no comparative analyses can be made between cases of mergers and acquisitions in various combinations of contextual conditions. Acknowledging the importance of these perspectives and need for an integrative model for employee psychology of mergers and acquisitions, the question is then, how can we hypothesize relations between the variables in the absence of such theoretical or empirical justifications? How can we overcome the limited theoretical scope, sampling and generalizability problems in the literature in addressing the need for an integrative model for employee psychology of mergers and acquisitions?

These questions call for a deeper discussion on the nature of knowledge with regards to the divide between *confirmatory* and *exploratory* methods (Onwuegbuzie & Leech, 2005). Confirmatory paradigm is used to refer largely to quantitative methods in research, whereby researchers use quantitative analysis, and whereby the conclusions are drawn from logic, evidence, and argument (Trochim & Donnelly, 2001). In this paradigm, the intent is to test theories through deduction reasoning, meaning the researcher searches for evidence to support or to refute the hypothesis (Creswell & Plano Clark, 2007). In contrast, the latter paradigm is used to refer to qualitative research, whereby researchers gather data from participants and looking for common themes (Creswell, 1998). Qualitative research is usually based on inductive reasoning because it moves from specific observations about individuals and events to broader generalizations and theories. In the inductive research processes, the researcher begins with specific observations, and then moves to detecting themes and patterns in the data. This allows the researcher to form an early tentative hypothesis that can be explored. The results of the exploration may later lead to general conclusions or theories (Creswell, 1998; Soiferman, 2010). Therefore, the intent in this paradigm is to gather information from individuals to develop theories inductively (Creswell & Plano Clark, 2007).

While research tends to be one-dimensional in terms of the two paradigms (Onwuegbuzie & Leech, 2005), Trochim and Donnelly (2001) argue that it is rather the context, purpose, and types of research questions that must define the methodological foundations of a study. Therefore, in order to address the need for an integrative approach to the study of employee psychology in mergers and acquisitions in a way that responds to the limitations of existing research regarding generalizability, sampling and limited theoretical scope arising from a fragmented literature, there is a need for a new methodological approach where we can use

survey data from participants in the form of numbers which we can analyse statistically but allow patterns, relations, and theories to emerge inductively. In other words, a plausible methodological approach would be one that uses a data collection strategy that is specific to *quantitative* paradigm and a data interpretation strategy that is specific to the *qualitative* paradigm.

These needs for a combination of the two paradigms have been raised previously in medical and psychological research (Smalheiser, 2002), namely a need for more data-driven discovery. This refers to the possibility of analysing data in order to find associations, rules and patterns that are impossible to hypothesize because of a lack of a theoretical justification for these relations. A plausible approach to this may be to benefit of the latest advancements in the machine learning and artificial intelligence literature. This focuses on the use and development of computer systems that are able to learn rules of associations between variables without following explicit instructions, by using algorithms and statistical models to analyse and draw inferences from patterns in data (Goodfellow, Bengio & Courville, 2016). These algorithms or statistical models rely on the concept of learning, or more specifically, *empirical* or *inductive learning* because learning is accomplished by reasoning from externally supplied examples to produce general rules or procedures (Shavlik et al., 1990). In the machine learning literature (Shavlik et al., 1990; Goodfellow, Bengio & Courville, 2016), the learning task may be supervised or unsupervised. Supervised learning refers to the task of using a set of variables to predict a known outcome and apply the emerging rules or patterns to predict the outcome for new, previously unknown data. In other words, the algorithm involves extraction of rules or functions from the data for which we know the outcome to make predictions for which outcome data is not known. One example is to use the quantitative information contained in image pixels to classify pictures into cats or dogs, or to use the pixel information contained in CT scans to

diagnose patients as having cancer or not (Zhou et al., 2019; Burt et al., 2018; see Loh, 2018 for a review of machine learning applications in medicine). In contrast, unsupervised learning refers to the task of finding patterns or rules in the data for which there is no ground truth in terms of outcome. In this case, the task implies giving data to the algorithm to search for (i)regularities. One example is to use a retailer' customer data (e.g. frequency of purchases, average shopping value, products purchased) to group customers into high-value or low-value.

In this case, supervised learning algorithms may constitute a plausible approach to address the goal of this thesis, namely to develop an integrative approach to the study of employee psychology of mergers and acquisitions. That is because it allows us to use the data collection strategy specific for the quantitative approach but use inductive learning techniques inspired from machine learning literature, to understand how these employee psychology perspectives discussed in this thesis come together in a cohesive whole to predict a range of negative employee outcomes in terms of affect, behaviour and health. An algorithm that has been applied in prior psychological and health research is decision tree modelling (Smith & Roberts, 2002; LaValley et al., 2001). That is because it is easy to understand and use and the generation of tree is done recursively in an explainable fashion, compared to other more complex algorithms, such as neural networks. Another data-driven method that relies on linear relationships is logistic regression with feature stepwise selection.

This approach allows me to validate the existing theoretical assumptions without imposing any theoretical limitations by feeding specific variables to the model. It enables the predictive model to emerge out of the empirical data inductively rather than moving from theory to the data. By using advanced statistical methods that naturally uncover the relationships between the constructs investigated in ways a theoretically-informed deductive method could

not, has the potential to open up the space for new theoretical developments. Although the selection of the features to be investigated is fundamentally limiting within the theoretical frame in which the research is conducted, it is only through an inductive approach that the interaction between the features and their importance can then be cross validated with the pre-existing theoretical assumptions. Therefore, in answering the research question of the thesis, I will be using the two algorithms to understand how psychological factors investigated are linked to each other and the extent to which we can predict negative employee outcomes in terms of affect, behaviour and health. I will compare the performance of the two algorithms in terms of classification accuracy (share of correctly classified observations of total observations in the dataset), precision and recall of the model, which refer to the algorithm performance in correctly classifying observations in a particular class (Powers, 2007; Sammut & Webb, 2010). Next, I briefly describe these methods and provide a justification for their use in my cross-sectional survey.

Logistic Regression with forward feature stepwise selection

Logistic regression is a regression method for predicting a target y , where y takes only two discrete values. Usually, the target variable and the values it takes is construed as the presence (i.e. “1”) or absence (“0”) of something. The hypothesis function to solve in the logistic regression is:

$$h_{\theta}(x) = \frac{1}{1 + e^{\theta^T x}}$$

Where θ represents the matrix of coefficients, and x the matrix of predictor features in the model. In the logistic regression model, the coefficients are fit via maximum likelihood estimation, which is expressed through the following function:

$$p(y | x; \theta) = (h_{\theta}(x))^y (1 - h_{\theta}(x))^{1-y}$$

For all the observations in the dataset, the likelihood function is the product of each of the individual likelihood functions:

$$L(\theta) = \prod_{i=1}^m (h_{\theta}(x^{(i)}))^{y^{(i)}} (1 - h_{\theta}(x^{(i)}))^{1-y^{(i)}}$$

Where m denotes the training examples.

In a predictive model fit to estimate the variance in a target variable y as tested in this study, the main purpose is not necessarily to test the relationship between variables as grounded in a specific theoretical logic but rather to maximize the predictability of the target. The theory may provide a wide or limited pool of possible predictors for the target variable of interest, but it is only through statistical analysis of the data that such theoretical assumptions become confirmed or invalidated empirically. With the goal to accurately predict whether an individual may suffer from health problems or negative behaviour, every feature in the dataset is included in the regression model and filtered post-hoc based on specific mathematical criteria.

Therefore, the objective is to find all predictors or subset of the input variables that would increase the precision of the predicted values and at the same time be parsimonious enough for usability, simplicity and interpretability. The variable selection procedure chosen for this particular binary classification problem was forward stepwise selection based on the probability of a likelihood-ratio statistic. This method starts off with a null model where no predictor is

accounted for, except for the intercept. Variables that have the highest R-squared are included in the model in a recursive fashion. At each step, all candidate variables are tested based on the significance of the score statistic. The step is repeated for all features in the model. Features with no significant change in target predictability, are removed.

Decision Trees

Decision trees represent a simple but powerful analytic strategy used in a multitude of domains as a classification system based on several covariates or as a prediction algorithm for a target or latent variable. Decision trees or decision tree learning is a predictive modelling method common in data mining and machine learning. It has a flowchart-like structure that maps if-then-else decision rules inferred from the data features. It is a recursive partitioning method that has shown to be very robust and popular in many scientific fields, such as genetics, clinical medicine, and bioinformatics (Strobl, Malley & Tutz, 2009).

The principle underlying decision tree methodology is the decomposition of data into a union of simple decisions that can lead to the desired outcome, namely the target or dependent variable (Safavian & Landgrebe, 1991). The partition of the feature or predictor space into disjoint sets is achieved through successive splits based on these features. The objective of this method is to identify the mutually exclusive and exhaustive groups of a population that share common attributes that determine the variable of interest (Lemon et al, 2003).

As decision trees represent a simple and easy to understand way of depicting rules underlying data with hierarchical structures, they are generally used for describing the data through a sequential summarization. Another use is to classify data by identifying the characteristics that best discriminate groups or classes of objects with respect to an outcome variable. Finally, decision trees have very good generalization properties, as they automatically

map a set of independent variable to a dependent variable, so that we can predict the latter (Murthy, 1998).

Although the automatic construction of decision rules is not new, with the first algorithms for sequential modelling of the data for binary / multiclass classification and regression being proposed as early as in 1972 (Messenger & Mandell, 1972), interest in decision trees have been revived by the advent of research in machine learning and artificial intelligence. This has led to a growing popularity of decision trees and their application to a variety of real-world situations. For instance, Barriga et al. (1996) used decision trees as a method of screening for impaired glucose tolerance and undiagnosed NIDDM (non-insulin-dependent diabetes mellitus). Other applications of the methodology in health and clinical research include oncology (Curran et al., 1993), prediction of ulcer diseases (El-Serag et al., 2002), stroke (Falconer et al., 1994), intensive care needs for patients in hospital emergency departments (Goldman et al., 1996) and so on. The use of decision trees has not solely been restricted to the prediction of a disease or ailment, but also to the development of treatment strategies (Smith & Roberts, 2002; LaValley et al., 2001).

A decision tree is essentially a graph that consists of a finite set of nodes and edges that connect the nodes in it. It consists of only one root node where no directed edges enter and where all the class labels are. Every other node has only one entering edge. There is a unique path from the root to each node. A node with no exiting edge is called a leaf. The nodes other than root nodes and leaves are called internal nodes. The depth of a node is given by the length of the path from the root to the node (Safavin & Landgrebe, 1991).

Several decision tree methodologies exist, including THAID (Fielding, 1977; Messenger & Mandell, 1972), C4.5 (Quinlan, 1993), CART (Breiman et al, 1984), ID3 or Iterative

Dichotomiser (Quinlan, 1986), predecessor to C4.5, and CHAID - Chi-squared Automatic Interaction Detector (Kass, 1980). Other variations of this recursive methodologies have been proposed (see Safavian & Landgrebe 1991, Song & Lu, 2015, Loh, 2014 for reviews). Due to its popularity in usage and implementation in various languages (Python, R) and statistics programs (SPSS, SAS), but also to its proven effectiveness and stability across various application domains (Lemon et al, 2003), I will only focus on CART procedure. The rationale for using CART is that it is nonparametric and is not dependent on specific data distributions. Additionally, CART is not significantly impacted by the presence of outliers in the predicted variables and can use the same variables more than once in the tree, which allows the uncovering of complex interdependencies between variables (Nisbet, Miner & Elder, 2009). I next briefly discuss the process of tree construction and contrast the various methods with CART.

Tree construction

For building the mapping between the features and an outcome variable, there is a specific predefined path, which applies to all types of decision trees. The construction is a top-down, recursive process that starts with the original input space. This feature space is split into two child regions by thresholding on a single feature. Each of these child regions is recursively partitioned via new thresholds. In the process, a leaf node, a feature and a threshold is selected to form a new split. The process is continued until we meet a stop criterion and no improvement in the classification task is achieved. The selection of the attributes or features to split on is based on specific criteria such as node impurity (Gini criterion), or information gain (entropy).

CART method is one type of decision tree, introduced by Breiman and colleagues (1984) that follow the steps above. Compared to other equally popular methods, such as the C4.5, CART only does binary, Boolean type splits. The splitting criteria employed by CART is the Gini index:

$$g(t) = \sum_{j \neq i} p(j|t)p(i|t)$$

Or:

$$g(t) = 1 - \sum_{j=1} p^2(j|t)$$

Where $g(t)$ is denoted as the Gini index at node t , and j, i are categories of the target variable. If the node contains samples belonging to only one categorical variable, the Gini impurity index is 0. The maximum value Gini index at a node can take is $1-(1/k)$ where k is the number of categories in the target variable. The parameters of the decision tree (the features in the input data, and threshold) are selected with the objective to minimize the impurity. The recursive binary splitting under CART model is an iterative process whereby all features in the input space and different split points are tested in a greedy manner until a best split with the lowest cost is selected (i.e. lowest Gini index) in the nodes. In the first step, the feature with the lowest weighted average Gini index in the splitting child nodes is selected from all features as root node. The process is applied repeatedly until no gain in the impurity index can be achieved. The importance of features used by the model in the classification is given by the normalized total reduction of the Gini brought by that feature.

In order to address model generalizability during tree construction, the structure is grown and trained on a subset of the total sample, also referred to as *training set*. The model is subsequently tested on a smaller portion, called *test set*. The accuracy metrics are reported on the set of observations unseen by the model during the tree construction.

Application of decision tree algorithm

In many real-world situations, the relationships between variables or characteristics are not linear. Particularly in cases where individual psychology is concerned, the relationship between individual cognition, environment and affect cannot always be reduced to the form:

$$h(x) = \theta^T x$$

but require methods that can produce non-linear hypothesis functions. The application of other methods that better capture the discriminative potential of the features or predictor variables is all the more important when the variable of interest is some mental health marker. Decision trees can directly produce such non-linear functions in cases where no linear boundary would correctly split the dataset into classes, such as low-risk, medium and high. Tree method may correctly isolate the feature space by finding the axis-parallel decision boundaries that best discriminate the sample analysed into such predefined classes.

As pointed out, the objective of the decision tree algorithm is to correctly classify as many observations as possible, generalize to samples unseen before with similar accuracy metrics and be simple enough to not overfit the data and be easy to follow (Safavin & Landgrebe, 1991). The generation of easy-to-understand rules and semantics of the algorithm explain its popularity in health and clinical research, which can help confirm or invalidate the existing theoretical formulations. Decision trees do not necessarily require prior theorizing in order to code for meaning, but induced from the characteristics of the sample or population considered. In this context, the purpose of the tree methodology is to find out whether the collected data that make up the feature space contain well-separated classes that enable a meaningful interpretation within a substantive theoretical framework. Furthermore, by not feeding any a priori notion of what predictors to choose from but let the algorithm greedily search within the covariance space instead, allows the exploration of any potential nonlinearities

or non-additive relationships between the constructs in contrast with regression analyses and hypothetico deductive methods.

The popularity of CART decision tree methodology, though not new, has caught on mostly from 2001 onwards as the method was embraced by disciplines other than computer science. In social sciences and behavioural research, the application of CART decision trees slowly picked up, as in 2009 American Psychological Association sponsored its first CART conference (McArdle, 2012). The method has been applied in neuroscience (Temkin et al., 1995), for the identification of different pathways for childhood depression (Seroczynski, Cole & Maxwell, 1997), mental health and violence (Monahan et al., 2001) and affect research (Gruenewald, Mroczek, Ryff & Singer, 2008).

However popular the generation of topographic trees may be, the model reliability and stability in prediction accuracy is highly dependent on the size of the sample. Namely, the more observations are fed into the model, the higher the generalizability power. If the sample size is too low, then the model is prone to overfit. This means that the model takes into consideration any outliers and noisy data which in turn lead to inferences of more structures than may be justified by the training set (Sebban et al., 2000). The sample size used in decision tree research ranges from 57 (Frey & Fisher, 199) to more than 100,000 (Provost, Jensen & Oates, 1999). The average sample size in experiments using decision trees is approximately 500 observations (Floares et al., 2017). However, although high sample size is preferred to increase model generalizability and prevent overfitting, Floares et al. (2017) found in their analysis on a subset of the Cancer Genome Atlas dataset (TCGA) that accuracy level for both C5 and CART decision trees algorithms were at around 95% for 100 observations and generalized well to new cases. Salford Systems, a Minitab statistical software company, also recommends in their

documentation pages, that for CART decision trees, a minimum of 100 observations must be used.

Nevertheless, if the sample size is minimum to allow generalizability (Yan & Ying, 2015; Kim, 2008), there is the risk that there may be a substantial random variation in the data, which would prevent generalization to new observations as the algorithm would simply learn the data “by heart” – or overfit (Subramanian & Simon, 2013; Cowley & Talbot, 2007; Brodley, Utgoff & Kibler, 1995). There are several methods to avoid overfitting in case of a small sample size (Sebban et al., 2000), such as controlling the maximum depth of the tree, fixing a higher than null value as splitting criterion and splitting the data into k consecutive folds (or cross-validation). Cross-validation (Raudys & Jain, 1991; Fushiki, 2009; Burman, 1989) technique involves shuffling the dataset and splitting it into k subgroups. $K-1$ subsets are used to train the model on and the remaining set is used to test the classifier in a repeated process, such that each subset will at some point be allocated to the test set and train set. The error is then averaged over all trials to get an overall accuracy for the model (Shao, 1993). Final accuracy of the model is computed by averaging across all validation steps in the loop. This technique is used to prevent high variance in the data even when the number of observations is significantly higher than the number of predictor variables (Subramanian & Simon, 2013).

5.2. Aims and hypotheses

In this chapter, I aim to address the limitations identified in the literature that I discussed in Chapter 2 regarding the lack of theoretical integration, methodological shortcomings arising

from the lack of generalizability and the relevance of studying the link between employee health, emotions, behaviours and cognitive processes (eg. social identity, trust) and context and how these are interconnected. Additionally, the results of my meta-analysis (Chapter 3) together with the limitations of it reviewed above emphasize the need for more quantitative studies on the role of social identity processes and their link with employee health, emotions and behaviours.

Furthermore, I aim to address the need for the study of additional employee outcomes in mergers and acquisitions which emerged as relevant both in my systematic literature review (Chapter 2) and organizational case study (Chapter 4), namely cynicism and hypervigilance. Here, I aim to respond to these needs by answering the last two research questions of this thesis, namely: *Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?* (RQ4) Figure 1 presents the hypothesized model and I reiterate below all individual hypotheses:

H1: Strength of identification with the post-merger / acquisition organization is positively associated with employee affective commitment.

H2: Identification with the pre-merger or acquisition organization is positively associated with ingroup bias. Conversely, employee identification with the post-merger organization is negatively associated with ingroup bias.

H3: A high identification with the pre-merger/acquisition organization is positively associated with withdrawal behaviours (cynicism and intentions to quit) and retaliatory behaviour. A high identification with the post-merger/acquisition organization is negatively associated with withdrawal (cynicism, intentions to quit) and retaliatory behaviour.

H4: Pre-merger/acquisition organizational identification is positively associated with high levels of perceived cultural differences

H5: The greater the identification with the pre-merger/acquisition organization the higher the hypervigilance.

H6: The lower the identification with the post-merger/acquisition organization, the lower the trust measures (perceptions of organizational justice and perceptions of trustworthiness).

H7: There is a significant difference in terms of justice evaluations among employees by the role of their pre-merger / acquisition organization in the transaction, such that the acquired employees perceive the new organization as less just compared to acquirer or merged employees.

H8: Psychological contract breach is not significantly associated with negative behaviours (intentions to quit and minor theft and abuse)

H9: Level of integration mediates the relation between strength of pre-merger/acquisition organizational identification and employee affective commitment.

H10: Degree of integration is positively associated with employee intentions to quit.

H11: Degree of integration is positively associated with employee health problems (anxiety, somatic health problems and social dysfunctions)

H12: Uncertainty is associated with employee health problems (anxiety, somatic health problems and social dysfunctions)

H13: Perceptions of uncertainty is associated with withdrawal (psychological distancing and turnover intentions) and retaliatory behaviour.

H14: Uncertainty is positively associated with employees' propensity to be hypervigilant.

H15: The higher the perceived uncertainty, the lower the trustworthiness and organizational justice evaluations

H16: The greater the hypervigilance the more severe the general health problems (anxiety, somatic health and social dysfunction problems).

H17: Employees in hostile acquisition display lower tendencies to engage in withdrawal and retaliatory behaviour compared to employees in friendly acquisitions.

H18: Employees in hostile acquisition show a better adjustment to the merger/acquisitions compared to employees in friendly acquisitions in terms of general health (anxiety, somatic health and social dysfunctions).

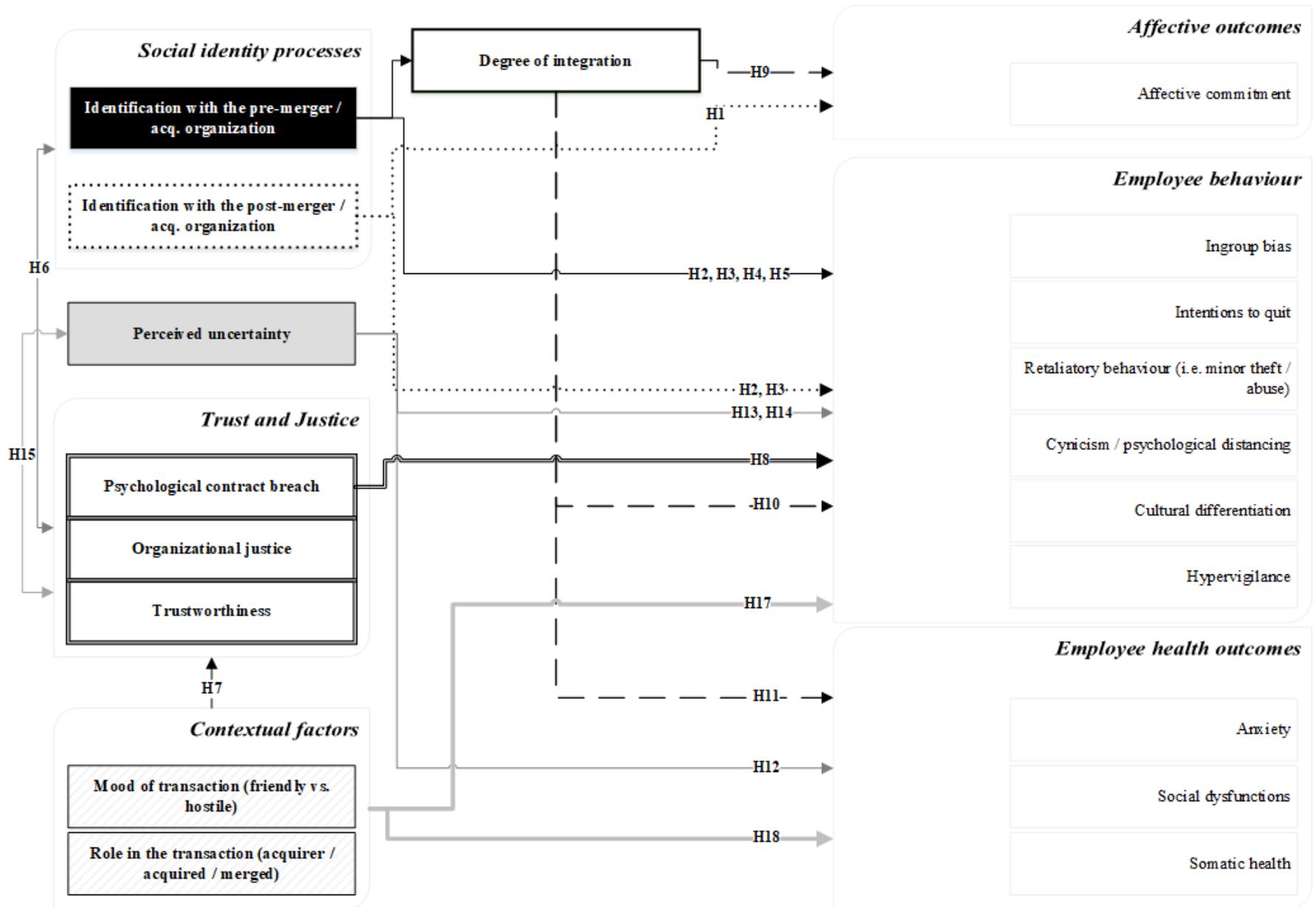


Figure 1. Hypothesized structural model. H = hypothesis

In this cross-sectional study I also aim to address the last research question of this thesis: *What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?* (RQ5). I will take a data-driven statistical approach to explore whether employee health (anxiety, somatic health problems and social dysfunction), withdrawal behaviour (i.e. intentions to quit, cynicism) and retaliatory behaviour (i.e. abuse and theft) in mergers and acquisitions can be predicted using inductive statistical methods, namely decision trees and logistic regression. I will aim to answer the question:

In order to test the hypotheses in this cross-sectional study, I will be using structural equation modelling (SEM). Regarding the research question of this study, in order to address the need for a more integrative approach to the study of employee psychology of mergers and acquisitions, I use a refined decision tree modelling which I contrast with the results of a logistic regression with stepwise feature selection based on the probability of a likelihood-ratio statistic based on the maximum partial likelihood estimates.

5.3. Method

5.3.1. Participants

For this study, I randomly recruited 126 employees who have been involved in a merger or an acquisition within maximum 1 year since the completion of the questionnaire. Throughout the data collection process, I first attempted to attract respondents by contacting organizational gatekeepers (human resources professionals) and obtain permission to conduct the study in these organizations. About 25 invitations were sent to multiple organizations that were involved in a merger or an acquisition (acquiring organizations). However, due to ethical considerations about

the need for anonymity I cannot name the organizations I have approached. Unfortunately, the key persons that I contacted from these organizations were unable to give permission citing that the merger or the acquisition was already consuming employees' time and that they were trying to minimize additional workload that could distract them from those responsibilities. While in certain cases there was an initial interest in taking part, unfortunately my subsequent emails to proceed with the study were unanswered. I have also tried to attract participants from the company I was working with at that time. After obtaining permission and distributing the questionnaire to employees, the permission was, unfortunately, withdrawn during the completion process, the CEO of the acquiring organization citing compliance issues.

I have also tried to attract participants via social media through invitations posted on social media channels (Facebook, Twitter, LinkedIn). In order to maximize reach to relevant groups of employees, I have posted the invitation on dedicated groups available on these channels. The selection of the groups where the invitation was posted was based on several criteria. Firstly, the social media groups with professionals working in industry sectors that recorded the highest M&A deal intensity over the past year were selected and approached via group administrators for seeking permission to post the invitation to the study. Secondly, I targeted the social media groups of employees and alumni of organizations that were involved in a merger or an acquisition. Thirdly, the professionals groups with the highest number of members had priority. Unfortunately, I was unable to obtain a sufficient number of participants through this channel, the total number of participants being around 20. Considering the very small sample size, I have contacted the survey participant provider, Qualtrics, which offers questionnaire hosting services to Birkbeck, University of London with the aim of increasing the sample size, and the cost of this service being covered by me. The aim was to maximize the

sample that I obtained via social media and direct mailing. The quality of the data was guaranteed by Qualtrics in contract and was further ensured through a soft launch of the survey. The soft launch allowed me to refine the questionnaire in order to make sure the sample met the study criteria (e.g. adding a screen-out question regarding employee tenure in the organization before the survey). The respondents recruited by Qualtrics were incentivized with either e-gift cards or cash honorarium.

Out of the 126 participants recruited, 108 responses were included in the analysis on account of complete survey data. I have decided to drop incomplete responses because on the one hand, it would significantly corrupt the clean and complete data, and on the other hand, because the incomplete responses had far fewer complete variables to allow an empirical likelihood method for estimating the incomplete variables (Leung & Qin, 2006). 59% of the respondents were female and 41% male. 45% of the respondents were from United Kingdom, 35% from United States of America, 21% from Romania, and 1% each from Albania, Poland and Switzerland. In terms of age distribution, 36% of the respondents were between 30 and 39 years old, 17% in 50-59 years old, 16% between 40 and 49, 13% were below 30 years old, and 9% each from the 20-29 interval and over 60. In terms of educational level, 38% had Bachelor degree, 25% Masters degree, 31% had secondary or vocational training, and 6% PhD.

Regarding the industry of the organizations before the merger or the acquisition, 14% participants came from human health and social work industry, 12% from electricity and utilities, 7% from wholesale and retail trade, 7% from education, 7% from financial and insurance, 6% from manufacturing, 6% from scientific and technical activities, 6% from construction, 5% from information and communication and other (e.g. arts and entertainment, real estate, administrative services, agriculture and mining, etc.). Regarding the industry of the merger or the acquisition

partner, 15% came from human health and social work, 12% from electricity, gas and air conditioning, 9% from manufacturing, 8% from wholesale and retail trade, 7% from construction and other industries (e.g. arts and entertainment, information and communication, education, real estate, administrative services, agriculture and mining, etc.). In terms of organizational size before the transaction, 37% of the participants came from organizations with over 1000 employees, 18% from organizations with a headcount between 100 and 249, 16% from organizations with 20-49 employees, 13% from organizations with a headcount between 50 and 99, 11% from organizations with 500-999 employees, 9% from organizations with 250-499 employees and finally, 6% from organizations with 1-19 employees.

In terms of mergers and acquisitions demographics, 44% of the participants were from the acquired organization, 31% were from the acquiring organization and 24% were from merged organizations. In terms of transaction mood, 76% were from friendly transactions and 24% were from hostile transactions. As for type of transaction, 67% were from horizontal transactions, 30% were from vertical transactions and 3% from conglomerate mergers or acquisitions. Regarding the motive for the merger or the acquisition, 6% did not know the motive for the transaction, 25% were from transactions driven by geographic expansion, 16% came from transactions driven by diversification motive, 24% from transactions driven by rapid growth, 19% by economy of scale, and 10% from transactions driven by acquisition of knowledge and expertise.

5.3.2. Design

In this study, I tested the hypotheses via structural equation modelling. In the structural equation modelling, I have only included the variables measured as indicated in hypotheses and not the demographic variables. While in this study, I do collect information about the characteristics of the sample, because of the limitations discussed above regarding the lack of a

theoretical basis for certain hypotheses, I have only included them in the data-driven methods (logistic regression and decision tree modelling). Furthermore, in light of the limitations identified in the literature in terms of disclosing demographic information, another purpose of the demographic information in this study is to describe the sample, and ensure replicability of the findings. I have also used between-subject design to test the hypotheses on employee differences across groups with role in the merger/ acquisition (i.e. merged, acquired, acquirer) and mood of the transaction (i.e. friendly / hostile) as between-subject variables and organizational justice measures, behavioural outcomes and employee health as dependent variables.

In order to determine the needed sample size to test the hypotheses of this study, I conducted an a priori power analysis with the software package Gpower. For a between-subject analysis of variance with 3 groups, with an alpha = .05 and power = .80, the projected sample size needed for a small effect size of .01 was 969. For a medium effect size of .25, the total sample size needed was 159, while for a large effect size of .40, the power analyses yielded a total sample size of 66. For a between-subject analysis of variance with 2 groups, with an alpha of .05 and power = .80, the projected sample size needed for a small effect size of .01 was 788. For a medium effect size (i.e. $f = .25$; Cohen, 1988), the total sample size needed was 128, while for a large effect size ($f = .40$), the total sample size needed was 52. Considering these results, the sample used in this study of 108 is sufficient to detect significant differences between groups.

For the research question of this study, I used an inductive design, where I used logistic regression with feature stepwise selection and CART decision trees to predict employee risk of engaging negative behaviours (retaliation, turnover and cynicism) and general health problems (anxiety, social dysfunction and somatic health). For the logistic regression with stepwise feature selection, I have carried power analyses using a random probability distribution with 50% chance

for the participant to be in either low or high condition of the the outcome variable (i.e. cynicism, general health problems, retaliation and turnover intentions). With an alpha of .05, power = .95 and a normal distribution in the predictor variables, the total sample size needed was 106. Therefore, as the power analysis suggests, the sample size in this study of 108 is sufficient to identify significant changes in R^2 and reductions in log likelihood.

5.3.3. Measures

All the scales used in the survey were developed and validated in previous empirical studies, and which have shown consistent validity and reliability parameters. Apart from the scales detailed below, I have also added calculated variables as input for the exploratory data mining algorithms. That is because in order to augment the predictive potential of the inductive algorithmic models, one method is to use existing observed variables and transform them in a meaningful way that the model can capture the underlying information in the raw data not easily apparent and represents an important step in algorithmic data modelling (Heaton, 2017). Therefore, the calculated variables are *same industry*, *same country*, *acquirer to acquiree size*, and *history of employment*, which I will describe below.

The survey began with a set of demographic items and questions related to the merger or acquisition participants to the study experienced (see Appendix E). Demographic information collected included age, gender, education, marital status, children, history of employment (continuous variable which is the difference between the year 2018 - the year of participating in the survey - and the year of employment in the merging organization), and involvement in the merger or the acquisition process (e.g. supplying financial reports for the bidding organizations, preparing presentations or any involvement in submitting data for the acquisition data room).

The merger/acquisition demographic information collected from the participants included: location of the employer and of the deal partner (i.e. country), industries both companies were operating in at the time of the merger (e.g. construction, real estate, manufacturing, financial, education, etc – 17 categories), size of the organizations, mood of the transaction (friendly or hostile), type of merger (horizontal, vertical and conglomerate) and motive of the merger/acquisition. For the merger/acquisition motive, respondents were required to choose from geographic expansion, diversification of product mix, rapid growth, economics of scale, acquisition of knowledge and expertise and the last being “*I don't know*” (Roller, Stennek & Verboven, 2006) which could include other motives unfamiliar to the employees, such as avoidance of taxes (Hebous, Ruf & Weichenrieder, 2011; Trautwein, 1990) or reputation enhancement (Dranove & Shanley, 1995).

Considering the high number of options available for participants to select for industry and country survey items, the small number of respondents would not have enabled a reliable inference on the impact of a specific country or industry on the outcome variables of interest. Therefore, in order to use the location and industry information in the analyses, I have created the variables *same industry* and *same country*. *Same industry* is a binary variable, which takes the value of 1 if both merger / acquisition partners operated in the same industry before the acquisition and 0 otherwise. *Same country* is a binary variable, 1 representing the merger or acquisition cases where both organizations involved were based in the same country, and 0 otherwise. *Acquirer to acquiree size* is a binary feature that takes the value of 1 if the size of the firm before the merger / acquisition is bigger than the size of the merger / acquisition partner if the role of employing organization is that of acquirer, and reversely if the role of the employing organization is that of acquired or merged. This feature was created following Hambrick and

Cannella's (1993) study which showed that the smaller an acquired firm relative to an acquiring firm, the greater the turnover intentions.

Integration depth. In order to capture the extent of change in the structural relationships between the merging companies, I asked the participants to indicate on a 7-point Likert scale the degree of integration of the following five areas as a result of the merger or the acquisition, (Vaara et al., 2014): management and control, sales and marketing, production and R&D to which I added personnel management practices. I have added the personnel management practices following the study by Cording, Christmann and King (2008)'s regarding the depth of integration and the importance of HR integration on the level of uncertainty. Cronbach's alpha for this study was .88 (see Table 2 for alpha values of all measures obtained in this study).

Perceived cultural differences. The extent to which individuals consider the cultures of the two groups as similar was assessed using Vaara et al. (2014) measure. Authors used a 5-item 7-point scale measure whereby participants were asked to rate perceived differences in the following areas: management and control, sales and marketing, production, research and development and in companies values in general. Cronbach's alpha reported by the authors was .86. In this study, the reliability coefficient (Cronbach's α) was .84.

Pre- and post-merger organizational identification. Employees' identification with the organization was assessed using the 3-item scale developed by van Knippenberg, van Knippenberg, Monden & de Lima (2002). Participants indicated on a 5-point scale the extent to which they identified with the organization. Sample items were: "*When someone criticizes [organization], it feels like a personal insult*"; "*I identify strongly with the organization*". Same measure was used for both group identities, namely pre-merger and post-merger. The group for which the respondent was asked to rate their identification was clearly stated in the question

instruction. The reliability coefficient (Cronbach's α) obtained by van Knippenberg and colleagues (2002) was .84 for pre-merger organizational identification and between .86 and .92 for post-merger identification. In this study, Cronbach's α was .73 for pre-merger/acquisition identification and .86 for post-merger/acquisition identification.

Perceived uncertainty. Perceived uncertainty was assessed using Mottola, Bachman, Gaertner & Dovidio (1997) 7-item measure of employee threat. Participants indicated on a scale of 1 to 5 their level of agreement to various statements related to their future in the organization. Sample items are: “*I feel that the future of my career is uncertain*”; “*I am concerned that I will lose important medical and financial benefits*”. Reliability coefficient (Cronbach's α) in the original study was .80 (Mottola et al., 1997). For this study, the reliability coefficient was .92.

Withdrawal. Following the findings of my case study and of the literature review for consistency purposes, I have included psychological distancing, turnover intentions and affective commitment to the organization within the spectrum of withdrawal behaviours. Distancing was evaluated using the 5-item Cynicism Scale from Maslach Burnout Inventory (Schaufeli, Leiter, Maslach & Jackson, 1996). Participants indicated on a frequency scale from 1 (never) to 6 (every day) how often they experienced various psychological withdrawal states. Sample items were “*I have become less enthusiastic about my work*” and “*I have become less interested in my work since I started this job*”. Recent studies report Cronbach's alpha value for this scale at .85 (Choi et al., 2019). In this study, the reliability coefficient was .92. Intentions to quit were evaluated using Taris, Schreurs and van Silfhout, (2001)'s 4-item scale. The items focus on the extent to which employees consider taking up or searching for another job within a year. Cronbach's α reported by authors was .88. In this study, the reliability coefficient was .80. Affective commitment was evaluated using Allen & Mayer (1990)'s 8-item ACS scale. Sample items

include “*I do not feel personally attached to this organization*”, and “*This organization has a great deal of personal meaning to me*”. The reliability coefficient for this measure reported by authors (Allen & Mayer, 1990) was .87. In this study, the reliability coefficient for affective commitment was .79

Retaliation. Retaliatory behaviour was assessed using an adapted version of Blader, Chang and Tyler’s (2001) measure of rule-breaking comprised of 2 items. In this study, respondents were asked to rate their agreement on a 5-point scale with statements referring to their behaviour at work. Items included are “*I often use sick leave when not sick*”, and “*I often take inexpensive items such as office supplies for personal use*”. The original measure was a frequency scale and the items were originally worded: “*How often do you use sick leave when not sick?*”. Also, from the original measure, I removed the item “*How often do you conduct personal business on company time?*”, as this is may not always imply a form of retaliation against the organization, but may refer to periods of work downtime outside of the employee control. Reported reliability coefficients (Chronbach’s α) are at .81 (Hui, Law & Chen, 1999; Blader et al, 2001). In this study, the measure of retaliatory behaviour had a reliability coefficient of .85.

Psychological contract. Violation of the psychological contract by the new organization was assessed using Robinson’s (1996) 7-item 5-point scale measure of obligations and fulfilment by the organizations. Participants were asked to rate the perceived obligation of the employer, such as promotion and advancement, high pay, job security, career development, and power and responsibility. In the second part, participants rated the extent to which they believe these obligations were fulfilled. The final psychological contract breach score was a subtraction of the

obligation and fulfilment scores. Coefficient alpha in the original study was .78 (Robinson, 1996). In this study, the reliability coefficient was .93.

Organizational justice. Organizational justice construct is a multifaceted construct composed of procedural justice, informational justice, distributive and interpersonal justice (Colquitt & Rodell, 2011). Participants' perception of justice across the four components was assessed using Colquitt and Rodell (2011)'s 5-item measure. Participants were asked to rate on a 5-point scale their agreement to statements regarding procedures used in the new organization for pay, rewards, evaluations and so on (procedural justice), regarding the perceived fairness of the outcomes participants received from their jobs (distributive justice), regarding the treatment from the organizational members and management (interpersonal justice), and regarding supervisor communication for decision making (informational justice). Reliability coefficients for procedural justice ranged from .86 to .90 (Colquitt, 2001), for distributive justice between .97 and .98 (Colquitt, 2001), interpersonal justice between .93 and .94, and for informational justice between .90 and .93 (Colquitt, 2001). In this study, the reliability coefficients were as follows: procedural justice, .92, distributive justice, .90, interpersonal justice, .91, and informational justice, .91.

Ingroup bias. Ingroup bias was assessed using Amiot et al. (2007) 8-item measure. Participants were asked to indicate on a 5-point scale the extent to which they agreed the two pre-merger organizations as having eight different characteristics, such as technical expertise, or professional attitudes. The ingroup bias score was obtained by subtracting the outgroup ratings from the ingroup ratings. Reported reliability coefficient for this measure was .80 (Amiot, Terry & Callan, 2007). In this study, the reliability coefficient was .90.

Trustworthiness. In order to assess trustworthiness of the other organizational members, I used an adapted version of Mayer and Davis's (1999) measure comprising of 17 items with a 5-point Likert scale. As the authors focused on trustworthiness of acting management team in this study, this scale was altered slightly in order to focus on the new organizational team members. The authors identified 3 core components that constitute the construct of trustworthiness, namely ability, benevolence and integrity. The 17-items measure included items such as "*They are very capable at performing their jobs*" and "*They will go out of their way to help me*". Cronbach's α for this scale reported by authors was .82. In this study, the coefficient was .94.

Hypervigilance. In order to assess hypervigilant cognitions, I used Fenigstein and Venable (1992)'s measure comprising of 20 items with 5-point response scale ranging from "Not at all applicable" to "Extremely applicable". Authors used a questionnaire version derived from the Minnesota Multiphasic Personality Inventory (MMPI) as a method to assess paranoid cognition among normal college population. The questionnaire used in the referenced study has been designed specifically for non-clinical population, and assesses aspects of paranoia such as the belief that people or external forces are trying to influence one's behaviour, persecutory thoughts, suspicion or unwarranted mistrust in others and feelings of ill will or resentment. In this study I have slightly altered the items in order to reflect the focus on organizational members and organizational climate. Sample items included "*I have often felt that people in the organization (original: strangers) were looking at me critically*" and "*my superiors (original: parents and family) find it more fault with me than they should*". The original study reported reliability coefficients (Cronbach's α) in the range of .81 and .87. In this study, the reliability coefficient for this measure was .97.

General health. I used a 21-item adapted version of the General Health Questionnaire (Goldberg & Hillier, 1979) to evaluate the prevalence of several symptoms of psychiatric morbidity. The factors included in this shortened GHQ were somatic symptoms, anxiety and social dysfunction. Each of the three dimensions consisted of 7 items. For somatic health, sample items included: “*Been getting any pains in your head?*” and “*Been feeling perfectly well and in good health ?*”. For anxiety, sample items included: “*Lost much sleep over worry?*” and “*Been getting scared or panicky for no good reason?*”. Lastly, for social dysfunctions, sample items included: “*Been managing to keep yourself busy and occupied?*” and “*Been able to enjoy your normal day-to-day activities?*” These symptoms were rated by participants on a 4-point response scale according to whether they have been experienced “not at all” (1) or “much worse than usual” (4). From the original version, I have excluded the Severe Depression scale, which measures individuals’ suicidal ideation, among other. As this study involves employees in a non-clinical setting, I have excluded the last component of the GHQ because it deals with severe forms of depression which may require hospitalization. Therefore, as in the case study (Chapter 4), I restricted this empirical investigation to the assessment of milder health symptoms, namely the components referring to somatic health, social dysfunctions, and anxiety. In this study, I used the three-factor structure of the GHQ as in the original study (Goldberg & Hillier, 1979) following the results of the confirmatory factor analysis (see Chapter 5.4.3. at the end of the results section for the validation of the shortened GHQ), which showed a better fit versus the 1-factor structure (Choda et al., 2020; Lum et al., 2019; Halonen et al., 2020; Banks et al., 1980). The reported Cronbach alpha coefficient for the GHQ was within the range of .82 to .86 (Goldberg & Hillier, 1979). In this study, the reliability coefficient (Chronbach’s α) for the

somatic health scale was 88. For anxiety scale, the reliability coefficient was .92. For social dysfunction scale, the reliability coefficient was .83.

5.3.4. Procedure

Participants recruited received the invitation through either direct messaging, email or via their news feed on social media. After accessing the invitation link, participants were displayed the consent and information sheet (Appendix F). In this information sheet, participants were informed about the voluntary nature of their participation in the study, duration of their participation and that their data would be anonymised. The survey was conducted in accordance with the ethics form, as approved by Birkbeck Ethics Committee (Appendix G). After the information sheet, participants were asked to give their consent to participate in the study (Appendix E). If the answer was no to either of the consent items, participants were not included of the survey. A set of questions following the consent form were inserted in order to not include employees who were not employed at the time of the survey, who have not been through a merger or an acquisition within one year since participating in the survey, who were not in the company at the time of the merger or the acquisition, and finally, participants whose age was below 18 (see Appendix E). All other participants who met the above criteria were directed to the survey. After the survey, all participants were debriefed on the aims of the study in accordance with the approved ethics form (Appendix G).

5.4. Results

Of the 126 questionnaires filled, 18 responses were deleted listwise on account of missing data across multiple dimensions and which could not be imputed using techniques based on existing data. Therefore, the final sample size in this study was 108. In terms of questionnaire

scoring, the majority of items in the overall survey were scored normally following the Likert scale. Nevertheless, there were also certain items in the questionnaire that were negatively worded, and which were reverse coded. Examples of items that were reverse-coded were items measuring affective commitment such as “*I think that I could easily become as attached to another organization as I am to this one*” , “*I do not feel like part of the family at my organization*”, “*I do not feel emotionally attached to this organization*” and “*I do not feel a strong sense of belonging to my organization*”. There was also one item measuring turnover intentions which was reverse-coded, namely “*I will presumably still have my present job next year*”. Lastly, the measure of trustworthiness contained one item that was reverse-coded: “*Their actions and behaviours are not very consistent*”.

Table 1 shows the distribution of the sample across the categorical data collected. It includes the distribution for both demographic data and for the binarized variables that are used exclusively in the later analysis with decision trees and logistic regression (see Chapter 5.4.2.2. for data treatment for logistic regression with forward feature stepwise selection and decision trees methods and split method used). In the structural equation model, I used the continuous variables.

Table 1

Descriptive statistics of categorical data

Variable	Category	Frequency	Percent
Same country	No	19	17.6
	Yes	88	81.5
Same industry	No	27	25
	Yes	81	75
Acquirer to acquiree size	No	83	76.9
	Yes	25	23.1

Employee perception of the mood of the transaction	Friendly	83	76.9
	Hostile	25	23.1
Employee perception of the type of merger / acquisition	Horizontal	73	67.6
	Vertical	32	29.6
	Conglomerate	3	2.8
Employee perception of the motive for the merger	I don't know	7	6.5
	Geographic expansion	27	25
	Diversification of product mix	17	15.7
	Rapid growth	26	24.1
	Economies of scale	20	18.5
	Acquisition of knowledge	11	10.2
Organization's role in the merger/acquisition process	Acquired	48	44.4
	Acquirer	34	31.5
	Merged	26	24.1
Employee involvement in the merger/acquisition process	No	51	47.2
	Yes	57	52.8
Age	18 - 29	24	22.2
	30 - 39	38	35.2
	40 - 49	17	15.7
	50 - 59	19	17.6
	Over 60	10	9.3
Gender	Female	64	59.3
	Male	44	40.7
Education level	Secondary education	17	15.7
	Vocational training	16	14.8
	Bachelor	41	38
	Masters	27	25
	PhD	7	6.5
Cynicism (high vs. low)	Low	54	50.0
	High	54	50.0
Turnover intentions (high vs low)	Low	49	45.4
	High	59	54.6
Retaliation (high vs low)	Low	51	47.2
	High	57	52.8
Somatic health problems - GHQ (high vs low)	Low	54	50
	High	54	50
Anxiety - GHQ (high vs. low)	Low	46	42.6
	High	62	57.4
Social dysfunctions – GHQ (high vs. low)	Low	53	49.1
	High	55	50.9

Note: The variables cynicism, turnover intentions, retaliation, somatic health, anxiety and social dysfunctions were dichotomized (see Chapter 5.4.2.2) using the median of the measurement scale to create cynicism (high vs low), turnover (high vs low), retaliation (high vs low) and health problems (high vs low). I use these dichotomous variables for fitting logistic regression with stepwise feature selection and decision tree models.

Table 2 shows the means, standard deviations and reliability statistics for the variables in this study. Internal reliability coefficients (i.e. Cronbach's alphas) were above 0.7, and acceptable for all measures. Equally, the symmetry and kurtosis statistics were within the -3 - +3 (George & Mallery, 2010; Gravetter and Wallnow, 2012), with a slightly skewed distribution for the ingroup bias variable.

Table 2

Means, standard deviations and reliability coefficients

Variable	N	Mean	SD	Skewness	Kurtosis	Cronbach's α	Theoretical range
Psychological contract breach	108	2.24	7.00	0.67	1.45	0.93	-28-28
Pre-merger identification	108	10.87	2.55	-0.29	-0.37	0.73	3-15
Post-merger identification	108	10.13	3.28	-0.42	-0.42	0.86	3-15
Degree of integration	108	24.54	7.70	-0.52	-0.67	0.88	5-35
Perceived differences	108	23.50	7.19	-0.34	-0.43	0.84	5-35
Uncertainty	108	19.65	7.44	0.10	-0.89	0.92	7-35
Cynicism	108	16.98	8.09	-0.07	-1.41	0.93	5-35
Affective commitment	108	31.96	9.59	-0.55	0.29	0.80	8-56
Turnover intentions	108	12.56	4.04	-0.14	-0.21	0.81	4-20
Retaliation	108	4.66	2.62	0.60	-0.96	0.85	2-10
Procedural justice	108	21.36	7.28	-0.31	-0.56	0.92	7-35
Distributive justice	108	12.24	4.10	-0.28	-0.47	0.90	4-20
Interpersonal justice	108	14.65	4.30	-0.85	0.41	0.91	4-20
Informational justice	108	15.94	5.31	-0.36	-0.49	0.91	5-25
Trustworthiness	108	57.32	13.72	-0.61	0.51	0.94	17-85

Hypervigilance	108	47.36	21.28	0.16	-1.19	0.98	18-90
Ingroup bias	108	2.73	7.02	1.40	3.34	0.90	-32-32
Somatic health	108	16.07	5.25	0.29	-0.40	0.88	7-28
Anxiety	108	16.44	5.95	0.09	-0.76	0.92	7-28
Social dysfunction	108	15.59	3.83	0.98	1.53	0.83	7-28
History of employment	108	12.34	17.61	3.64	15.98	-	-

Note. M=Mean; SD=standard deviation

5.4.1. Hypothesis testing

I used Amos 24 to test the hypotheses via structural equation modelling. The model included 11 exogenous observed variables and 9 observed endogenous variables. For parameter estimation, I used maximum likelihood method (Maydeu-Olivares, 2017). According to Kline (2015), for each endogenous variable, I set the disturbance term to 1, in order to understand the predictive ability of the conceptual model. Model fit was first assessed by comparing the conceptual model excluding covariates to the conceptual model including covariates. The adequacy of the models was evaluated with the following statistics: (a) chi-square goodness-of-fit statistic, (b) TLI (Tucker & Lewis, 1973), (c) RMSEA (Steiger, 1990), (d) SRMR (Bentler, 1995), and (e) CFI. The lower bound of good fit for the TLI and the CFI is considered to be .90, and the upper bounds for good fit for the RMSEA and the SRMR are considered to be .08 and .10, respectively (Vandenberg & Lance, 2000).

Table 3 shows the zero-order correlations between the variables measured. Figure 2 shows the structural equation model. While the variables cynicism, turnover, retaliation, somatic health, social dysfunctions and anxiety were binarized for the logistic regression with forward stepwise feature selection and decision trees analyses, this correlation table as well as the following analyses involving structural equation modelling results, takes into account the original continuous data exclusively.

Table 3*Zero-order correlations*

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Psychological contract																				
2 Pre-merger identification	-.039																			
3 Post-merger identification	-.410	.297																		
4 Degree of integration	-.140	.219	.545																	
5 Perceived differences	.128	.249	.107	.311																
6 Uncertainty	.144	.141	-.057	.211	.304															
7 Cynicism	.279	-.035	-.269	.011	.150	.695														
8 Affective commitment	-.402	.114	.590	.223	-.005	-.341	-.513													
9 Turnover intentions	.371	.035	-.417	-.126	.183	.536	.585	-.690												
10 Retaliation	-.184	-.013	.329	.233	.123	.577	.485	.017	.215											
11 Procedural justice	-.421	.358	.620	.401	.290	.042	-.184	.558	-.392	.335										
12 Distributive justice	-.418	.244	.572	.274	.245	.012	-.205	.539	-.391	.282	.859									
13 Interpersonal justice	-.362	.089	.511	.338	.091	-.276	-.337	.591	-.528	-.012	.547	.586								
14 Informational justice	-.416	.308	.559	.370	.237	-.063	-.223	.520	-.398	.173	.733	.724	.655							
15 Trustworthiness	-.473	.180	.711	.386	.074	-.104	-.260	.586	-.402	.268	.676	.633	.562	.665						
16 Hypervigilance	.204	.182	-.011	.151	.392	.611	.630	-.259	.442	.540	.128	.043	-.232	.002	-.161					
17 Ingroup bias	.370	.297	-.501	-.208	.120	.265	.302	-.504	.459	-.133	-.369	-.377	-.385	-.352	-.638	.278				
18 Somatic health	.100	.219	.001	.215	.399	.610	.609	-.246	.428	.462	.080	.049	-.152	.004	-.084	.685	.143			
19 Anxiety	.200	.151	-.057	.211	.360	.577	.633	-.236	.454	.456	-.000	-.037	-.123	-.090	-.123	.689	.121	.886		
20 Social dysfunctions	.053	-.065	-.110	.005	0.03	.341	.466	-.232	.322	.380	-.063	-.099	-.225	-.078	-.130	.440	.092	.516	.491	

Note. Correlation significant at 0.05 level if absolute r higher than .198. Correlation significant at 0.01 level if absolute r higher than .247. Correlation significant at 0.001

level if absolute r higher than .312

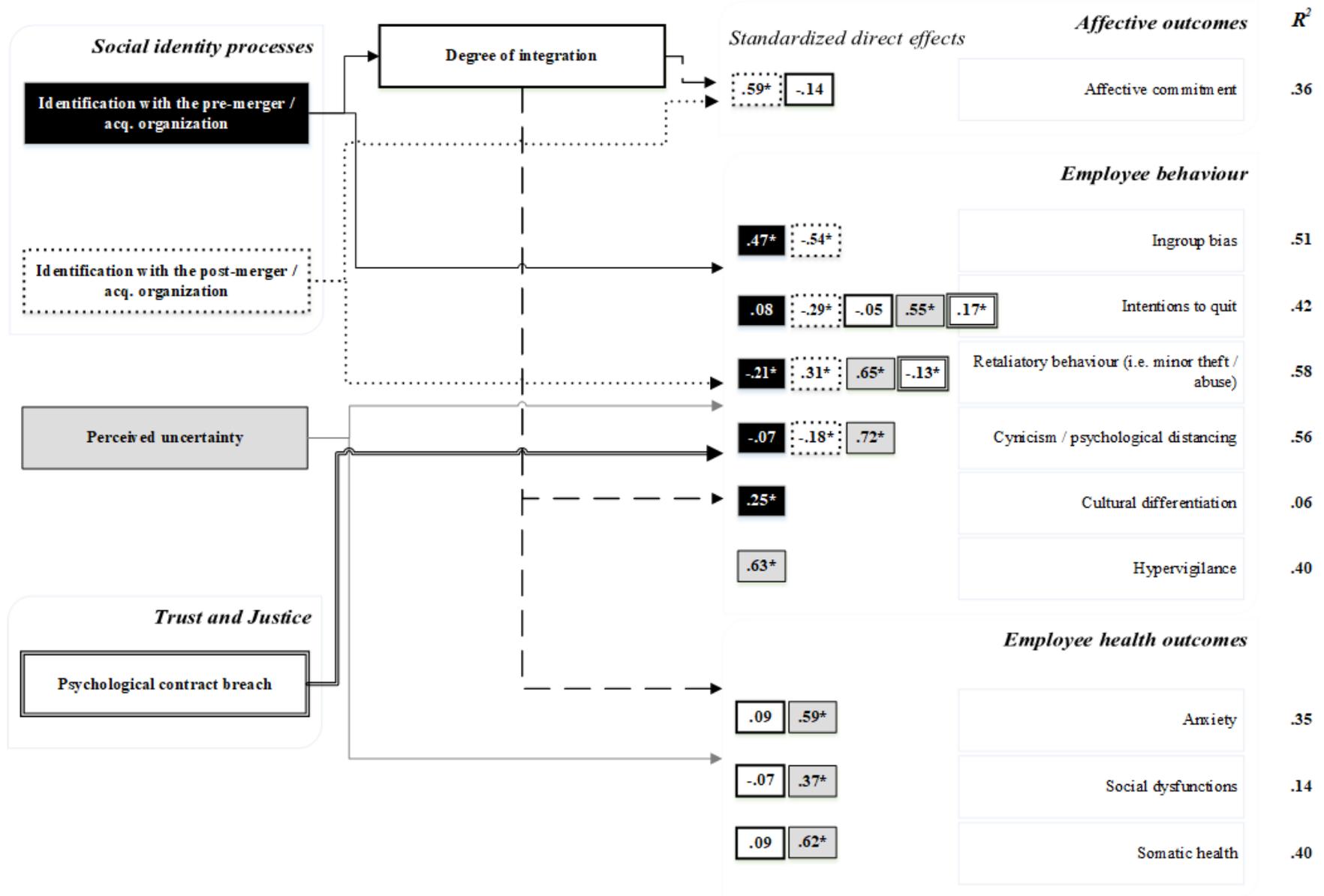


Figure 2. Structural equation model of employee emotional, behavioural and health outcomes in mergers and acquisitions. Style of the boxes with endogenous variables correspond with the style of the standardized regression weight boxes and paths. *path significant for all $p < .05$

The conceptual model was tested both with covariates and no covariates. The covariates model included covariance paths between uncertainty and trustworthiness and justice measures, and another covariance path between employee identification with the post-merger/acquisition organization and trustworthiness and organizational justice measures. Table 4 shows the fit index values for the two models. The fit indexes for the two models were below indicated thresholds. That is likely because of the small sample size relative to the number of feature variables (Deng, Yang & Marcoulides, 2018; Natchigall et al., 2003; Bentler & Chou, 1987), which in case of this study was 3:1 (Bentler & Chou, 1987). However, the fit indexes for the conceptual model with no covariates were closer to the good fit bounds, $\chi^2(80, N = 108) = 468.620, p < .001$ (RMSEA = .198; TLI = .42; SRMR = .19; CFI = .56).

Table 4

Comparison of Model Fit Indexes

Model	χ^2	df	TLI	RMSEA	SRMR	CFI
Conceptual (no covariates)	468.62	80	0.42	0.19	0.19	0.55
Conceptual (with covariates)	1012.29	155	0.27	0.23	0.27	0.40

Note. N = 108. Conceptual model with covariates included a covariance path added between employee identification with the post-merger / acquisition organization and organizational justice and trustworthiness measures and another covariance path between perceptions of uncertainty and organizational justice and trust measures. TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; CFI = Comparative Fit Index.

In H1, H2, H3, I predicted there would be significant associations between employees' identification with the pre- and post-merger/acquisition organization and affective and behavioural outcome. The hypothesized paths from employee identification with the post-merger / acquisition organization to affective commitment (H1), ingroup bias (H2), intentions to quit and

cynicism (H3) were supported, $\beta = .59, p < .001$; $\beta = -.54, p < .001$; $\beta = -.29, p < .001$, $\beta = -.21, p < .01$. As hypothesized in H2, employees' identification with the pre-merger organization was also associated with ingroup bias, $\beta = .47, p < .001$. However, the positive correlation between identification with the pre-merger organization and identification with the post-merger organization may be indicative of multicollinearity. The collinearity statistics showed a variance inflation factor (VIF) of 1.096 and a collinearity tolerance of .912. Therefore, as the VIF statistics is below 10 and not lower than 1 (Hair et al., 1995; Ringle et al., 2015), multicollinearity does not seem to be an issue. Hypothesis 1 and 2 are thus, supported.

There was no significant link between employee identification with the pre-merger / acquisition organization and cynicism, $\beta = -.07, p < .27$. Regarding the link between employee identification with the pre- and post-merger/acquisition organization, an interesting finding emerged. The hypothesized association between employee identification with the post-merger organization and retaliation was significant but in the opposite direction, $\beta = .31, p < .001$. Also, opposite to hypothesis 3, employee identification with the pre-merger/acquisition organization was negatively associated with employee retaliatory behaviour, $\beta = -.21, p < .001$. It appears that employees who identify strongly with the post-merger / acquisition organization are more predisposed to engage in minor theft and abuse, while a high identification with the pre-merger/acquisition organization indicates the opposite. Hypothesis 3 is thus partially supported.

These results seem to suggest that employees who strongly identify with the new firm are also those who engage in more deviant behaviours. In order to further test these relations, I conducted a one-way ANOVA to understand whether there is any difference in employee retaliatory behaviour as a function of status, inferred from role in the transaction (i.e. acquirer – participant employed with the organization acquiring another organization, acquired – participant

employed with the organization that was acquired, merged – participant employed in an organization that merged with another one). Namely, we should expect a significant difference between employees in acquirer, acquired and merged conditions. Table 5 and 6 present the results of the analysis of variance.

Table 5

Retaliatory behaviour by role in the transaction

Role in the transaction	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Acquired	48	3.88	2.45	0.35	3.16	4.59	2	10
Acquirer	34	5.35	2.68	0.46	4.42	6.29	2	10
Merged	26	5.19	2.55	0.50	4.16	6.22	2	10
Total	108	4.66	2.62	0.25	4.16	5.16	2	10

Table 6

Post-hoc test for differences of retaliatory behaviour across acquirer, acquired and merged transaction roles

(I) Role in the transaction		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Acquired	Acquirer	-1.48*	0.57	0.03	-2.84	-0.12
	Merged	-1.32	0.62	0.09	-2.79	0.16
Acquirer	Acquired	1.48*	0.57	0.03	0.12	2.84
	Merged	0.16	0.66	0.97	-1.42	1.74
Merged	Acquired	1.32	0.62	0.09	-0.16	2.79
	Acquirer	-0.16	0.66	0.97	-1.74	1.42

Note. *. The mean difference is significant at the 0.05 level.

The results confirm that employees from the acquirer organization are more predisposed to engage in retaliatory behaviour compared to employees in acquired organization, and employees in merged organizations, $F(2, 105) = 4.106$, $MS = 26.635$, $p = .019$. Post-hoc

comparisons (Table 5) using Tukey HSD test indicate that the mean score for retaliatory behaviour for the employees in the acquirer organization ($M = 5.35$, $SD = 2.68$) was significantly different than employees in acquired and merged organizations. It appears that status, conceptualized in terms of role in the transaction, has an influence on employees' predisposition to engage in abuse and theft at the workplace, with employees in a higher hierarchical position having a higher tendency towards norm violation.

The hypothesized path between employee identification with the pre-merger / acquisition organization and perceived differences was also supported, $\beta = .25$, $p = .008$ (H4). Contrary to H5, I found no link between employee identification with the pre-merger organization and hypervigilance. Regarding the hypothesized link between employee identification with the post-merger / acquisition organization and trust and justice measures (H6), I found post-merger/acquisition identification correlated positively with organizational justice measures, $r = .620$, $p < .01$ (procedural justice); $r = .572$, $p < 0.01$ (distributive justice); $r = .511$, $p < .01$ (interpersonal justice) and $r = .559$, $p < .01$ (informational justice). Procedural and distributive justice seems to have the strongest association with post-merger/acquisition organization identification and least with interpersonal justice. This suggests that the more employees develop a psychological bond with the new organization, they are also the more likely to perceive resource allocation processes and procedures in the new organization as just. Hypothesis 6 is therefore confirmed.

In Hypothesis 7, I predicted that justice evaluations are significantly different for employees in one or the other role in the merger process (i.e. acquired, acquirer, or merged). In order to test this hypothesis, I conducted an analysis of variance with role in the transaction as independent variable and organizational justice dimensions as dependent variables. Figure 3

illustrates the differences in mean organizational justice scores across the acquired, acquirer and merged conditions.

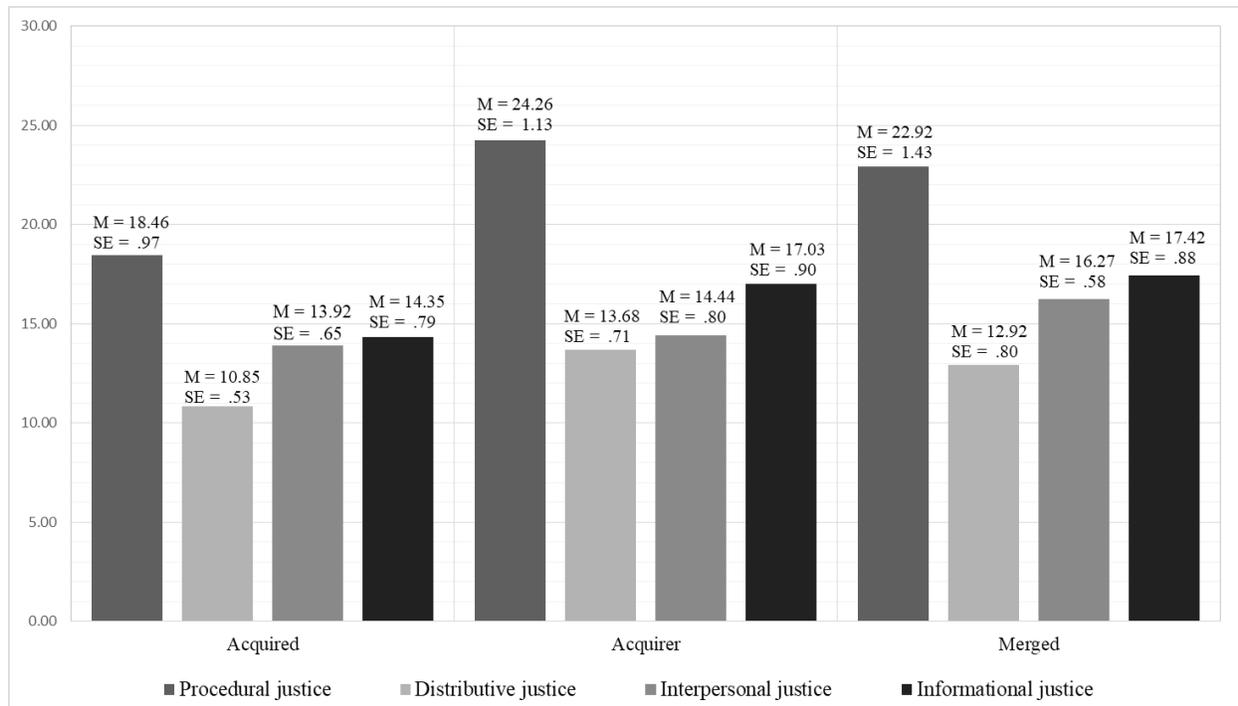


Figure 3. Organizational justice score means across role in the transaction

As expected, the justice evaluations differ across conditions for procedural justice $F(2, 107) = 8.054, p < .01$, distributive justice, $F(2, 107) = 5.643, p < .01$ and informational justice $F(2, 107) = 4.095, p < .05$. Employees in acquired organizations perceive the post-merger organization as less fair than the other employees in terms of outcomes they receive, decision-making procedures, and justification offered for organizational decisions. However no significant relation was found for interpersonal justice, namely the treatment they receive from supervisors, $F(2, 107) = 2.667, p = .074$. Tukey HSD post-hoc test (Table 7) shows the differences between each condition, confirming that employees from the acquired organization generally perceive the new organization as less just in terms of procedures, distribution of outcomes and informational

justice, in comparison with employees from the merged or acquirer organizations. Therefore, Hypothesis 7 is partly supported.

Table 7

Post-hoc test for differences of justice across role in the transaction conditions

Dependent Variable			Mean	Std. Error	Sig.	95% Confidence Interval	
			Difference (I-J)			Lower Bound	Upper Bound
Procedural justice	Acquired	Acquirer	-5.81*	1.53	0.00	-9.45	-2.16
		Merged	-4.47*	1.67	0.02	-8.43	-0.50
	Acquirer	Acquired	5.81*	1.53	0.00	2.16	9.45
		Merged	1.34	1.78	0.73	-2.90	5.58
	Merged	Acquired	4.47*	1.67	0.02	0.50	8.43
		Acquirer	-1.34	1.78	0.73	-5.58	2.90
Distributive justice	Acquired	Acquirer	-2.83*	0.88	0.01	-4.92	-0.73
		Merged	-2.07	0.96	0.08	-4.35	0.21
	Acquirer	Acquired	2.82*	0.88	0.01	0.73	4.92
		Merged	0.75	1.02	0.74	-1.68	3.19
	Merged	Acquired	2.07	0.96	0.08	-0.21	4.35
		Acquirer	-0.75	1.02	0.74	-3.19	1.68
Interpersonal justice	Acquired	Acquirer	-0.52	0.95	0.85	-2.78	1.73
		Merged	-2.35	1.03	0.06	-4.80	0.10
	Acquirer	Acquired	0.52	0.95	0.85	-1.73	2.78
		Merged	-1.83	1.10	0.23	-4.45	0.79
	Merged	Acquired	2.35	1.03	0.06	-0.10	4.80
		Acquirer	1.83	1.10	0.23	-0.79	4.45
Informational justice	Acquired	Acquirer	-2.68	1.16	0.06	-5.43	0.08
		Merged	-3.07*	1.26	0.04	-6.06	-0.08
	Acquirer	Acquired	2.68	1.16	0.06	-0.08	5.43
		Merged	-0.39	1.34	0.95	-3.59	2.80
	Merged	Acquired	3.07*	1.26	0.04	0.08	6.06
		Acquirer	0.39	1.34	0.95	-2.80	3.59

Note. * The mean difference is significant at the 0.05 level.

Further on regarding the role of trust and justice measures, I found that a breach in psychological contract is positively linked with turnover intentions ($\beta = .17, p = .02$) and negatively with retaliation ($\beta = -.13, p < .05$). Hypothesis 8 is thus not supported.

In Hypothesis 9, I predicted that degree of integration mediates the relation between strength of pre-merger/acquisition organizational identification and affective commitment. Since

I found no significant relation between pre-merger organizational identification and affective commitment, $r = .115$, $p = .237$, hypothesis 9 is rejected.

Regarding the role of degree of integration on employee behaviour and health outcomes, I found no significant direct effect. Thus, H10 and H11 are not supported.

With regards to the role of uncertainty perceptions on employee behavioural and health outcomes, the hypothesized paths to employee anxiety (H12), social dysfunctions (H12), somatic health problems (H12), quitting intentions (H13), cynicism (H13), retaliation (H13), hypervigilance (H14), were all supported, $\beta = .56$, $p < .001$, $\beta = .35$, $p < .001$, $\beta = .60$, $p < .001$, $\beta = .52$, $p < .001$, $\beta = .70$, $p < .001$, $\beta = .62$, $p < .001$ and $\beta = .61$, $p < .001$. Contrary to what I predicted in H15, uncertainty does not seem to be linked with trustworthiness and organizational justice measures, except interpersonal justice, $r = -.276$, $p < .01$. As such, the more employees perceive the environment as uncertain, the less they will perceive that they are not being treated well by colleagues. Hypothesis 15 is thus partly supported.

However, unsurprisingly, the negative employee outcomes seem to co-occur, as the correlational analysis shows. As expected (H16), the more employees become hypervigilant, the more likely they are to experience somatic health problems ($r = .685$, $p < .001$), anxiety ($r = .689$, $p < .001$) and social dysfunctions ($r = .440$, $p < .001$). The strongest link was found between hypervigilance and anxiety, suggesting that employees' excessive worry may co-occur with an overattending on the part of employees to various cues that could provide information that would solve the uncertainty.

Overall, the conceptual model that includes social identity processes, uncertainty, justice and contextual actors explained 36% of the variance in employee affective commitment, 51% in employee' likelihood of engaging in ingroup bias, 42% in employees intentions to quit, 58% in

employees' propensity to retaliate through minor theft and abuse, 6% in intergroup differentiation, and 40% in employee hypervigilance. In terms of health outcomes, the model explained 35% of the variance in employee anxiety, 14% in employee social dysfunctions and 40% in employees' somatic health problems. Of all the exogenous variables, uncertainty perceptions emerged as having the highest predictive role in employee outcomes. This appears to be one of the most important factor in outcomes such as employee cynical and retaliatory behaviour, hypervigilance and employee somatic health problems. Having discussed the conceptual model, in order to test H17, and H18, I conducted comparative analyses. In Hypothesis 17, I predicted that employees in hostile acquisitions are less likely to engage in retaliation, turnover intentions and be cynical. In order to test this hypothesis, I conducted an analysis of variance, with mood of the transaction (i.e. friendly, hostile) as independent variable and retaliation, turnover and cynicism as dependent variables. Table 8 shows the results of the analysis of variance.

Table 8

Analysis of variance on cynicism, turnover intentions and intentions to quit perceptions across mood of transaction (i.e. friendly versus hostile)

		Sum of Squares	df	Mean Square	F	Sig.
Cynicism	Between Groups	474.32	1	474.32	7.693	0.007
	Within Groups	6535.64	106	61.66		
	Total	7009.96	107			
Turnover intentions	Between Groups	24.92	1	24.92	1.532	0.219
	Within Groups	1723.63	106	16.26		
	Total	1748.55	107			
Retaliation	Between Groups	94.30	1	94.30	15.618	0.000
	Within Groups	640.02	106	6.04		
	Total	734.32	107			

The analysis of variance revealed a significant effect in cynicism and retaliation across mood of transaction. Contrary to hypothesis, employees in hostile acquisitions tend to be more cynical than employees in friendly transactions $F(1, 107) = 7.693, p < .01$. The analysis also revealed a significant effect in terms of retaliatory behaviour, $F(1, 107) = 15.618, p < .001$. Employees in hostile acquisitions have a more pronounced tendency to engage in retaliatory behaviour compared to employees in friendly acquisitions. There was no significant difference in terms of employee turnover intentions, $F(1, 107) = 1.532, p = .219$. Therefore, Hypothesis 17 is rejected.

Lastly, in Hypothesis 18 I predicted that employees in friendly transactions would experience more health problems compared to employees in hostile transactions. In order to test this hypothesis, I conducted an analysis of variance, with mood of transaction as independent variable and health scales as dependent variable (anxiety, somatic health and social dysfunctions). Table 9 shows the results of the analysis of variance.

Table 9

Analysis of variance on employee general health (somatic health, social dysfunctions, anxiety) across friendly/hostile transaction conditions

		ANOVA				
		Sum of Squares	df	Mean Square	F	Sig.
Somatic health	Between Groups	125.72	1	125.73	4.716	0.032
	Within Groups	2825.68	106	26.66		
	Total	2951.41	107			
Anxiety	Between Groups	186.68	1	186.68	5.485	0.021
	Within Groups	3607.99	106	34.04		
	Total	3794.67	107			
Social dysfunctions	Between Groups	84.05	1	84.05	5.979	0.016
	Within Groups	1490.02	106	14.06		
	Total	1574.07	107			

The analysis of variance revealed a significant difference in employee health across friendly/hostile transaction conditions. There was a significant difference between hostile and friendly transactions in terms of employees' somatic health problems $F(1, 107) = 4,716, p = .032$, in terms of employee anxiety, $F(1, 107) = 5,485, p = .021$ and in terms of employee social dysfunctions $F(1, 107) = 5,979, p = .016$. The biggest difference between the employees experiencing a hostile transaction versus employees experiencing a friendly transaction was that employees in the former type of a merger or an acquisition are more likely to experience social dysfunction problems. Employees in hostile transactions seem to no longer be able to enjoy their day-to-day activities, to make decisions and they no longer feel useful in the company versus employees experiencing a friendly merger or acquisition. These results are opposite to what I predicted in Hypothesis 18.

5.4.2. Exploring the use of data-driven statistical methods for analyzing risk of employee outcomes in mergers and acquisitions

Having conducted the statistical calculations for the hypotheses of this thesis, I will next explore whether employee general health (anxiety, somatic health problems and social dysfunctions), withdrawal behaviour (i.e. intentions to quit, cynicism) and retaliatory behaviour (i.e. abuse and theft) in mergers and acquisitions can be predicted using inductive statistical methods, namely decision trees and logistic regression with stepwise feature selection. I will aim to answer the question:

What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?

In this step, I aim to inductively examine the variables that can correctly identify employees who experience health problems such as anxiety, somatic or social dysfunction problems, employees who plan to quit the organization, employees who are cynical and employees who retaliate against the organization by using a linear function (i.e. logistic regression with stepwise feature selection) and CART decision trees. The preceding chapter revealed several interesting relationships between concepts relevant for employee psychology in mergers and acquisitions, and which shed light on how employees adapt to such changes at the workplace. However, the tests carried above, were limiting in the sense that they were bounded by the limitations of the theories. This implies that we do not know if other variables in this study are important in understanding employees' tendency or predisposition to experience negative outcomes in mergers and acquisitions than the ones justified by the theory and analyzed in the preceding chapter. Therefore, in order to understand the complexity of employee psychology in mergers and acquisitions, namely the relation between demographic, cognitive, affective and contextual factors and employee outcomes in terms of health problems and negative behaviours, I use the inductive methods detailed in the Introduction to this chapter (Chapter 5.1.4.) namely logistic regression with forward feature stepwise selection and decision trees. In discussing the results of my inductive method, I will carry comparative analyses regarding the classification accuracy of each predictive model to understand when linear or nonlinear functions are better suited to identify the employees at risk, using evaluation metrics such precision, recall and accuracy (Powers, 2011; Goutte & Gaussier, 2005), following the conclusions of my case study. This comparative analysis between a linear and a non-linear model will be useful to understand which variables emerge as linear predictors and which may rather produce an axis-parallel decision boundary in the prediction of a specific outcome variable. I

then contrast the two methods, a common practice in machine learning literature (Palaniappan, Sundaraj & Sundaraj, 2014; Delen et al., 2013) based on the metrics discussed above.

5.4.2.1. Using logistic regression with forward stepwise feature selection and decision trees to examine employee health problems and negative behaviours in mergers and acquisitions

As described in the methodology section, decision trees are now becoming a popular exploratory mining technique in clinical and psychological research (McArdle, 2012). In this “inductive-deductive research spiral” (Cattell, 1966), the objective is not to find a model within the entire feature space for the data, but searching the right data that fit the model. To that purpose, I will discuss here the results of the two distinct algorithms, a linear (logistic regression) and a nonlinear model (decision tree), and compare their performance (Kurt, Ture & Kurum, 2008). The outcome variables for which I fitted logistic regression and decision tree are the binarized somatic health problems, social dysfunctions, anxiety, cynicism, retaliation and turnover intentions variables. I will then compare the performance of the two algorithms for each dependent variable for a more focused theoretical and methodological discussion of the results.

In the generation of the logistic regression models and CART decision trees for the binarized outcome variables, I have used SPSS and Python 3.7 programming language and Spyder development environment with scikit-learn machine learning library. For generating the decision tree, since a sample of 108 is below the average used in the literature, I have used 3-fold cross-validation in sample partitioning (Fushiki, 2009; Burman, 1989). In tree growing, the maximum percentage allowed in a parent node was set to 14% and maximum percentage of

observations allowed in child node was set to 5% of all observations. For logistic regression with stepwise feature selection, I used a stepwise probability of .05 for entry and .10 for removal, the classification cutoff was set at a probability of 0.5 and allowed a maximum number of iterations of 20. For both algorithms, all variables were entered in the model, and based on appropriate significance testing for each of the two algorithms (i.e. gini coefficient for decision trees and χ^2 statistic for the logistic model), the results shows which variables have the highest discriminatory power in the classification of employees into high and low conditions across the the outcome variables: somatic health, social dysfunctions, anxiety, cynicism, turnover intentions and retaliatory behaviour.

5.4.2.2. Data treatment

Both for logistic regression and decision tree methodologies, I have dichotomized the outcome variables using sample median values, following existing practices in psychological research (Farrington & Loeber, 2000). All outcome variables, namely: cynicism, turnover intentions, retaliation, and general health scales, namely somatic health, anxiety and social dysfunction where split on the median of the measurement scale to create *cynicism (high vs low)*, *turnover (high vs low)*, *retaliation (high vs low)* and *health problems (high vs low)*. The cynicism, turnover intentions, retaliation and general health problems (such as anxiety, somatic or social dysfunction problems) were recorded into these binary variables using the following split values as follows:

- Cynicism– 17
- Turnover intentions – 13
- Retaliation – 4
- Somatic health – 15.5

- Anxiety – 16
- Social dysfunctions - 15

This is a common practice, particularly in applied psychological research, because it simplifies the understanding and interpretation of the results (Farrington & Loeber, 2000) and it tends to give best results when the continuous variable is normally distributed (Cohen, 1983; see Table 2 for normality statistics of the variables in this study). While continuous values were used for hypothesis testing, in order to eliminate the risk of information loss inherent in the variable dichotomisation (deCoster, Gallucci & Iselin, 2011), for the inductive method, discretization of the response variable is the preferred alternative when the continuous variable is not easy to handle and is difficult to make frequency estimates (Kotsiantis & Kanellopoulos, 2006). Additionally, it has been found that condensing information into classes can result in better performance of machine learning algorithms (Elomaa & Rousu, 2004).

Nevertheless, I concur with deCoster et al (2011) regarding the use of diagnostic categories split along sample-specific cut-off points in clinical research. The dichotomization of the response variable in this research reflects the level of risk for the individuals, where specific continuous score ranges are clearly provided, rather than clinical diagnostic criteria. Therefore, splitting the outcome variables along the median value to create high/low conditions for inductive statistical analysis will, I believe, favor parsimony, maximize model interpretability and algorithm performance while considering the statistical prerequisite for such variable transformation. Next, I discuss the results of the inductive algorithms for somatic health.

Somatic health. For the classification of employees in mergers and acquisitions into high or low categories in terms of severity of somatic health problems, I fitted a logistic regression model with stepwise selection method with entry testing based on the significance of the score

statistics. All variables defined in the Methods section were entered as predictors (e.g. demographic variables – age, gender, tenure, etc.; merger/acquisition contextual information – size of the organizations involved in the merger/acquisition, industry, type of transaction, etc; psychological variables – identification with the pre and post-merger/acquisition organization; perceived uncertainty, psychological contract breach, etc.). Logistic regression with stepwise feature selection is an iterative algorithm, which starts with no candidate variables in the model. At each step, candidate variables that bring a significant improvement in the -2 log-likelihood statistics are selected. More specifically, the addition of variables is based on the significance of the score statistic, and removal testing based on the probability of a likelihood-ratio statistic based on the maximum partial likelihood estimates. At every iteration, speculative predictive models are generated by adding single variables to the null set. Therefore, addition of variables is made with the goal to minimize the -2 log likelihood and this is the variable inclusion criterion (see Chapter 5.1.4 for details). Table 10 shows the results of the logistic regression and significance tests of the selected predictive models, the variables that emerged as significant predictors at each step and classification accuracy data for each of the models generated by the logistic regression with stepwise feature selection algorithm.

Table 10

Predictive models generated by the logistic regression with stepwise feature selection and classification scores for the outcome variable somatic health problems (high / low)

Steps	Predictive models summary			Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection					
	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²	β	S.E.	Wald	df	Sig.	Exp(β)	High - predicted	Low - predicted	Percentage correct			
Step 1	114,631	0.27	0.36	Hypervigilance	0.062	0.013	24.653	1	0	1.064	Somatic health (high vs low) - observed	High	38	15	71.7
				Constant	-2.912	0.629	21.45	1	0	0.054	Overall percentage	Low	11	43	79.6
Step 2	105,625	0.329	0.439	Uncertainty	0.12	0.042	8.318	1	0.004	1.127	Somatic health (high vs low) - observed	High	40	13	75.5
				Hypervigilance	0.044	0.014	10.179	1	0.001	1.045	Overall percentage	Low	13	41	75.9
Step 3	101,036	0.357	0.476	Constant	-4.406	0.909	23.49	1	0	0.012	Overall percentage				75.7
				Perceived differences	0.079	0.038	4.346	1	0.037	1.082	Somatic health (high vs low) - observed	High	43	10	81.1
				Uncertainty	0.12	0.043	7.729	1	0.005	1.127	Overall percentage	Low	11	43	79.6
				Hypervigilance	0.04	0.015	7.508	1	0.006	1.041	Overall percentage				80.4
Step 4	96,950	0.381	0.508	Constant	-6.024	1.293	21.72	1	0	0.002	Overall percentage				80.4
				Psychological contract	-0.081	0.041	3.876	1	0.049	0.922	Somatic health (high vs low) - observed	High	42	11	79.2
				Perceived differences	0.087	0.04	4.788	1	0.029	1.09	Overall percentage	Low	11	43	79.6
				Uncertainty	0.134	0.046	8.357	1	0.004	1.143	Overall percentage				79.4
Step 5	90,448	0.418	0.557	Hypervigilance	0.046	0.016	8.649	1	0.003	1.047	Overall percentage				80.4
				Constant	-6.54	1.389	22.168	1	0	0.001	Overall percentage				80.4
				Psychological contract	-0.109	0.045	5.932	1	0.015	0.897	Somatic health (high vs low) - observed	High	44	9	83
				Perceived differences	0.118	0.045	6.808	1	0.009	1.125	Overall percentage	Low	10	44	81.5
				Uncertainty	0.074	0.053	1.949	1	0.163	1.077	Overall percentage				82.2
				Cynicism	0.116	0.048	5.927	1	0.015	1.123	Overall percentage				82.2
				Hypervigilance	0.033	0.017	3.88	1	0.049	1.033	Overall percentage				82.2
				Constant	-7.395	1.542	23.005	1	0	0.001	Overall percentage				82.2

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable somatic health – high/low) were fed to the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each step

The logistic regression generated six models that have produced a significant reduction in -2 Log likelihoods but only the first five do bring a significant improvement compared to previous steps. The chi-square statistic was statistically significant across all six models when compared to the null model, but only the first five steps were significant, namely $\chi^2 = 33.693$, $p = .000$ in the first step, $\chi^2 = 9.006$, $p < .001$ in the second step, $\chi^2 = 4.589$, $p < .032$ in the third step, $\chi^2 = 4.086$, $p = .043$ in the fourth step, $\chi^2 = 6.502$, $p = .011$ in the fifth step and $\chi^2 = -1.996$, $p = .158$ in the sixth step. Therefore, results show that the variables selected through likelihood ratio method in each of the five steps provide a better fit than the null model.

Using the logistic regression with feature selection, the models resulting from the analysis shows accuracy in classifying employees into high or low condition ranges from 75% to 82%. The fifth model correctly classified 83% of the employees who have a low risk of somatic health problems and 81.5% of the employees who have a high risk of experiencing somatic health problems. This means that the model can help us identify with an 82.2% confidence which employees are likely to experience somatic health problems in mergers and acquisitions and which are not.

The results show that the first model with the highest reduction in log likelihood included hypervigilance, $\beta = .062$, $p = .000$ while in the second one perceived uncertainty was selected, $\beta = .120$, $p = .000$. The two variables can correctly classify up to 75% of the employees into high or low conditions of somatic health. Perception of differences between the groups of employees involved in the merger or the acquisition also emerged as an important factor in employee somatic health ($\beta = .079$, $p = .037$), along with breach in psychological contract ($\beta = -.081$, $p = .041$) and cynicism ($\beta = .116$, $p = .015$). Table 11 shows the performance of the logistic regression model using the classification scores in the fifth step.

Table 11

Performance of logistic regression with employee somatic health problems (high/low) as outcome variable

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	Predicted High			
Low	44	9	83.0%	81%	83%
High	10	44	81.5%	83%	81%
Accuracy ^c			82.2%		

Note.

a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

Using a 0.5 probability cut-off point for the assignment of employees into one or the other category, namely high or low, the logistic regression model (Step 5) had an 81% precision in classifying employees into the low class and 83% precision for the high class. In contrast, the recall for the employees in the low condition the algorithm was 81% while for the high class, 83%. This means that psychological contract breach, perceived differences, uncertainty, cynicism and hypervigilance can help us identify with an 82% accuracy which employees may experience more severe somatic health problems in mergers and acquisitions.

In light of these findings, I now discuss the results of decision tree method for the classification of employee by severity of somatic health problems, to determine if a non-linear method better classifies employees into high or low somatic health problems categories and which variables emerge as important features. Figure 5 shows the decision tree and the variables' split point.

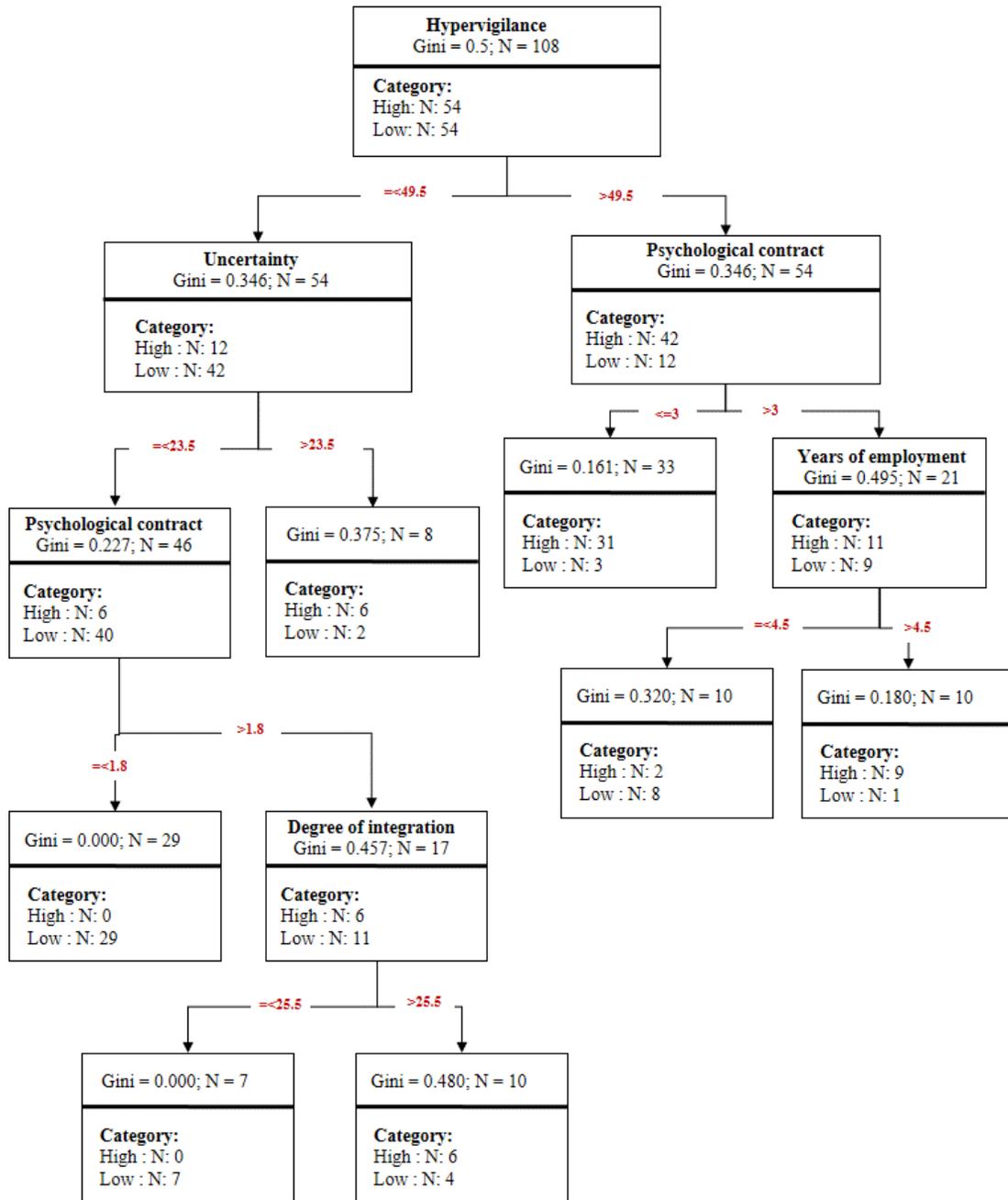


Figure 5. CART decision tree with employee somatic health (high/low) as outcome variable.

Note. Text in red represents the variables’ split points found through decision tree modelling.

The CART decision tree supports the results of the linear regression in terms of variables selected as important features for classifying employees by severity of somatic health problems,

namely hypervigilance, perceived uncertainty and psychological contract breach. If employees have a score higher than 49.5 on the hypervigilance scale, there is a 78% chance of experiencing more serious somatic health problems. The risk of experiencing somatic health problems increases with perceptions of psychological contract breach and tenure. In other words, the longer an individual has been employed with the organization that merged / was acquired / acquired another organization, the higher the likelihood that he or she will experience somatic health problems. The risk of experiencing health problems is also increased when the degree of integration score is higher than 25.5. On the right side of the decision tree, results show that elevated suspiciousness on the part of employees, associated with perceptions of breach in psychological contract, an employment history higher than 4.5 years is likely to reflect into a high probability for employees to experience ill-health (90% with an average confidence level of 89%). On the left side of the decision tree, results show that a low level of employee hypervigilance (≤ 49.5), but high perceived uncertainty (> 23.5) coupled with a high degree of integration (> 25.5) may provide some indication of serious somatic health problems (60% with an average confidence level of 89%).

As with the logistic regression model, the CART decision tree above confirms the importance of hypervigilance in classifying employees by somatic health problems severity, having the highest decrease in impurity, *Gini* = .154, followed by perceived uncertainty, *Gini* = .048. Table 12 shows the performance scores for decision tree.

Table 12

Performance of decision tree for the classification of employees into high/low by somatic health problems

		Classification				
Observed	Low	Predicted		Percent Correct	Precision ^a	Recall ^b
		Low	High			
Low		44	10	81.5%	96%	81%
High		2	52	96.3%	84%	96%
Accuracy ^c				88.9%		

Note. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

Using a 0.5 probability cut-off point for the assignment of employees into one or the other category, namely high or low, the decision tree model had a 96% precision in classifying employees into the low somatic health problems class versus 81% for the logistic regression model. The decision tree had an 84% precision for the employees in the high class, versus 83% recorded by the logistic model. In terms of recall, for the employees in the low condition the non-linear algorithm had a recall of 81% versus 83% recorded by the logistic model. As to correct identification of employees into the high class, the decision tree had a 96% recall while the logistic model had a recall of 81%. The overall accuracy levels were 90% for the decision trees and 82.2% for the logistic regression. In this classification task, while there are many false positives in the low category, 10 out of 54 compared to the logistic regression model, the decision tree managed to better detect employees at risk of experiencing severe somatic health problems, namely 52 out of 54.

Having discussed the classification models for employee somatic health, I will next discuss the performance of the logistic regression and decision tree models for the classification of employees into high and low class on the second general health scale, namely anxiety.

Anxiety. As with the classification of employees into high and low condition of somatic health problem severity, I fitted a logistic regression with stepwise feature selection, and decision tree. I next discuss the models produced by the logistic regression and follow with the results of the decision tree analysis. Table 13 shows the results of the logistic regression and significance tests of the selected predictive models, accuracy data for each of the steps and variables that were entered into each model.

Table 13

Models generated by the logistic regression with stepwise feature selection and classification scores for the outcome variable anxiety (high vs. low)

Predictive models summary				Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection				
Step	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²		β	S.E.	Wald	df	Sig.	Exp(β)		High - predicted	Low - predicted	Percentage correct
Step 1	101,199	0.34	0.457	Cynicism	0.198	0.036	29.834	1	0	1.219	Anxiety (high vs low) - Low observed	36	9	80
				Constant	-2.879	0.612	22.137	1	0	0.056	Overall percentage	10	52	83.9
Step 2	94,548	0.38	0.51	Cynicism	0.148	0.039	14.019	1	0	1.159	Anxiety (high vs low) - Low observed	36	9	80
				Hypervigilance	0.039	0.015	6.304	1	0.012	1.039	High	9	53	85.5
				Constant	-3.807	0.772	24.308	1	0	0.022	Overall percentage			83.2
Step 3	90,537	0.402	0.541	Uncertainty	0.1	0.051	3.937	1	0.047	1.106	Anxiety (high vs low) - Low observed	35	10	77.8
				Cynicism	0.109	0.043	6.311	1	0.012	1.115	High	9	53	85.5
				Hypervigilance	0.033	0.016	4.224	1	0.04	1.033				
				Constant	-4.785	0.993	23.206	1	0	0.008	Overall percentage			82.2

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable anxiety – high/low) were fed to the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each iteration

The logistic regression generated three models that have produced a significant reduction in -2 Log likelihoods, all three having a significant improvement compared to previous steps. The chi-square statistic was statistically significant across all three steps versus previous ones, namely $\chi^2 = 44.422, p = .000$ in the first step, $\chi^2 = 6.651, p = .01$ in the second step and $\chi^2 = 4.011, p < .05$ in the third step.

Using the logistic regression with stepwise feature selection, the models resulting from the analysis shows accuracy in classifying employees into high or low anxiety condition hovers around 82%. The second model correctly classified 80% of the employees in the low anxiety category and 85.5% of the employees on the high anxiety category. This means that the model can help us identify with an 83.2% accuracy which employees are likely to experience anxiety in mergers and acquisitions and which are not.

The variable with the highest reduction in log likelihood compared to the null model and which was selected in Step 1 was employee cynicism, $\beta = .198, p < .001$, suggesting that employees who experience anxiety are also likely to engage in cynical behaviour. The addition of hypervigilance ($\beta = .039, p = .012$) in step 2 and of perceived uncertainty in step 3, $\beta = .100, p = .047$ also emerged as significant predictors, the latter providing additional support to the results obtained through structural equation modelling (Chapter 5.4.1). Table 14 shows the performance of the logistic regression model for step 2.

Table 14

Performance of logistic regression in the classification of employees by level of anxiety (high/low)

		Classification				
		Predicted		Percent Correct	Precision ^a	Recall ^b
Observed	Low	High	Low			
Low	36	9		80.0%	80%	80%

High	9	52	85.2%	85%	85%
Accuracy ^c			83.0%		

Note. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

Using a 0.5 probability cut-off point for the assignment of employees into one or the other category, namely high or low, the logistic regression model had an 80% precision in classifying employees into the low class and 85% precision for the high class. In other words, when predicting if an employee experiences severe anxiety, it is correct 85% of the time. In contrast, the recall for the employees in the low condition the algorithm was 80% while for the high class, 85%. That is, the model identifies 85% of all employees with more serious forms of anxiety.

In light of these findings, I now discuss the results of decision tree method for the classification of employees by anxiety to determine if a non-linear method better classifies employees into high and low anxiety and which are the discriminatory variables. Figure 6 shows the decision tree and the variables' split points.

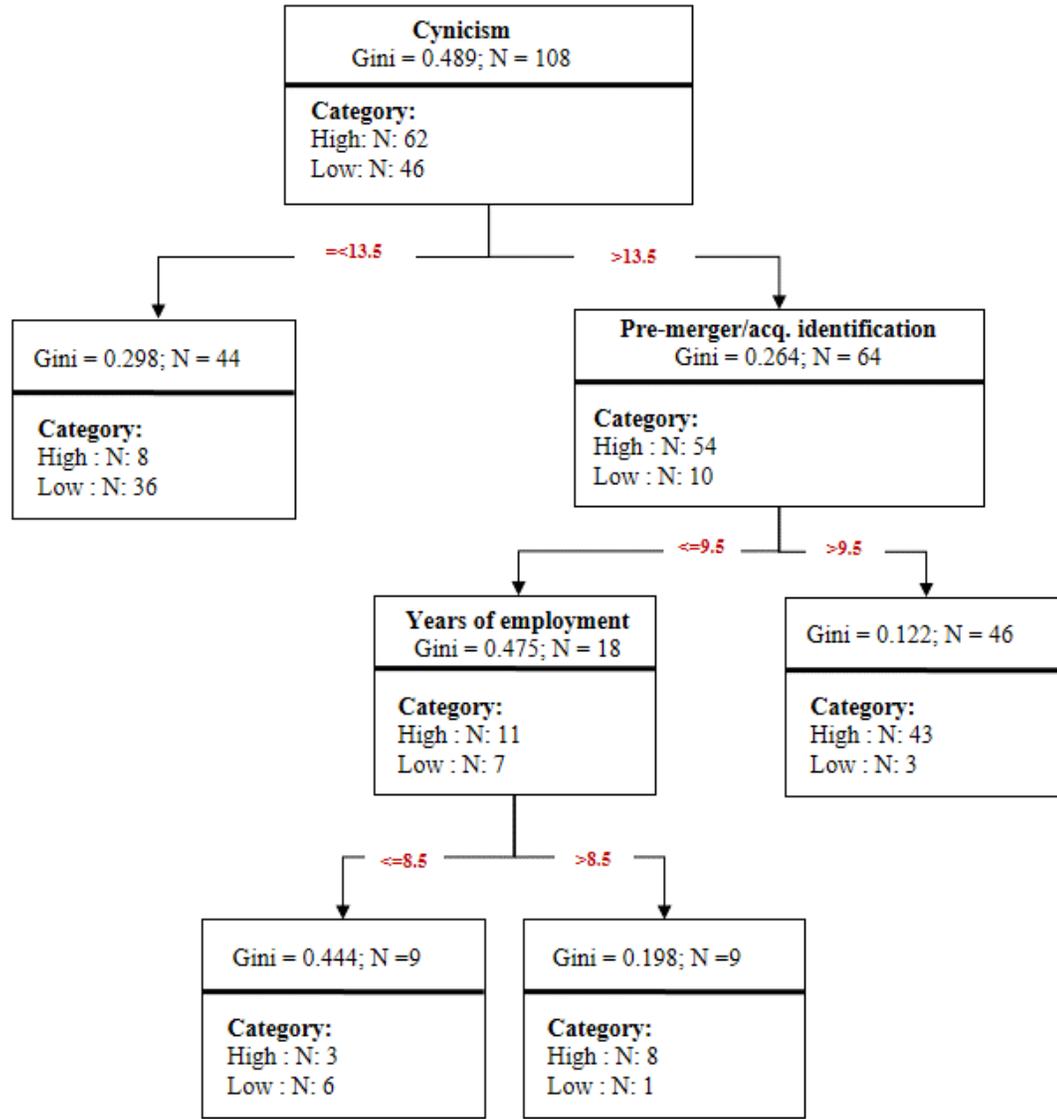


Figure 6. CART decision tree for the classification of employees by level of anxiety (high/low).

Note. Text in red represents the predictor variables' split points found through decision tree modelling.

The model produced by the decision tree confirms the discriminatory power of cynicism in predicting employee anxiety, which decreased node impurity (*Gini*) by 0.212 points. Another important feature that emerged versus those added through logistic regression with stepwise feature selection was employee identification with the pre-merger / acquisition organization. Decision tree results show that employees who identify strongly with the pre-merger /

acquisition organization have a higher risk of becoming anxious (decrease in node impurity by 0.025). Employees who have a score higher than 9.5 on the strength of identification scale (see Chapter 5.3.3 for the measures used in this study) and who are cynical, there is a 93% chance that they are experiencing serious forms of anxiety. Anxiety also seems to be more common among employees with a longer tenure in the organization (+8.5 years). Table 15 shows the performance of the logistic regression model.

Table 15

Performance of decision tree in the classification of employees by level of anxiety

(high/low)

		Classification				
Observed		Predicted		Percent Correct	Precision ^a	Recall ^b
	Low	Low	High			
Low		42	4	91.3%	79%	91%
High		11	51	82.3%	93%	82%
Accuracy ^c				86.1%		

Note. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

While the accuracy of the decision tree model is higher than that of the model produced by the logistic regression (83% compared to 86.1%), the decision tree model has a lower performance in accurately classifying employees into the high risk category (85.2% versus 82.3%). There are 11 observations out of 62 (17%) in the high anxiety class which have been erroneously categorized into low anxiety. Therefore, in terms of overall model accuracy, the decision tree outperformed logistic regression model, but in terms of high-risk recall, the logistic regression found better decision boundaries.

Next, I discuss the results of the logistic regression model and decision tree for the classification of employees into high or low categories of social dysfunctions.

Social dysfunctions.

As with the classification of employees into high and low condition of anxiety, I fitted a logistic regression with stepwise feature selection with social dysfunctions as outcome variable. I next discuss the models produced by the logistic regression and follow with the results of the decision tree analysis. Table 16 shows the results of the logistic regression and significance tests of the selected predictive models, models accuracy data, and the variables that were added to each model at every iteration.

The logistic regression generated six models that have produced a significant reduction in -2 Log likelihoods, all three having a significant improvement compared to previous steps and are significantly better than a null model. The chi-square statistic was statistically significant across all six steps versus previous ones, namely $\chi^2 = 26.421$, $p = .000$ in the first step, $\chi^2 = 8.164$, $p = .01$ in the second step, $\chi^2 = 6.947$, $p = .008$ in the third step, $\chi^2 = 7.217$, $p = .007$ in the fourth step, $\chi^2 = 4.165$, $p = .041$ in the fifth step and $\chi^2 = 4.303$, $p = .038$ in the sixth step.

Compared to the models produced for the previous general health scales, namely somatic health problems and anxiety, the performance of the models generated for social dysfunctions seems to be lower. The maximum accuracy increased iteratively until step 3, the model correctly classifying 82% employees into high or low categories of social dysfunctions. Since the models 4 to 6 did not have an increase in accuracy, Table 16 below shows the statistics only through model 3.

Table 16

Models generated by the logistic regression with stepwise feature selection and classification scores for the outcome variable social dysfunctions (high vs. low)

Step	Predictive models summary			Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection					
	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²	β	S.E.	Wald	df	Sig.	Exp(β)	High - predicted	Low - predicted	Percentage correct			
Step 1	121,903	0.219	0.292	Cynicism	0.137	0.03	21.319	1	0	1.147	Social dysfunctions (high vs low)	Low	40	13	75.5
				Constant	-2.33	0.557	17.52	1	0	0.097	Overall Percentage	High	13	41	75.9
Step 2	113,738	0.276	0.368	Motive for the M&A	0.459	0.169	7.353	1	0.007	1.583	Social dysfunctions (high vs low)	Low	37	16	69.8
				Cynicism	0.158	0.033	22.559	1	0	1.172	Overall Percentage	High	13	41	75.9
				Constant	-3.861	0.865	19.916	1	0	0.021	Overall Percentage				72.9
Step 3	106,791	0.322	0.429	Age	-0.513	0.202	6.459	1	0.011	0.598	Social dysfunctions (high vs low)	Low	43	10	81.1
				Motive for the M&A	0.504	0.178	8.054	1	0.005	1.656	Overall Percentage	High	9	45	83.3
				Cynicism	0.147	0.035	18.102	1	0	1.159					
				Constant	-2.488	0.986	6.37	1	0.012	0.083	Overall Percentage				82.2

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable social dysfunctions – high/low) were fed to the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each iteration

The models produced by logistic regression with stepwise feature selection shows cynicism is once again feature for the classification of employees into high/low social dysfunctions ($\beta = .137, p < .001$). The analysis also revealed that employees involved in a merger or an acquisition in certain age groups are more predisposed to experience social dysfunctions. Younger employees (≤ 39) seem to experience social dysfunctions much more often than older employees (40+). The analysis also revealed that the motive for the merger or the acquisition may pose additional strain on the employees. Geographic expansion and acquisition of knowledge do not seem to be as problematic for the employees as are the mergers or acquisition driven by economies of scale. Table 17 shows the performance of the logistic regression model (Step 3).

Table 17

Performance of logistic regression for the classification of employees by level of social dysfunctions (high/low)

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	43	10	81.1%	83%	81%
High	9	45	83.3%	82%	83%
Accuracy ^c			82.2%		

Note. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The logistic regression model correctly identified 83% of all the employees on the high class of social dysfunctions and 81% of employees on the low category of social dysfunctions. When predicting if an employee experiences serious social dysfunctions, the model is correct

82% of the time. Next I discuss the results of the decision tree classifier and contrast the performance of the two algorithms. Figure 7 shows the output of the decision tree modelling.

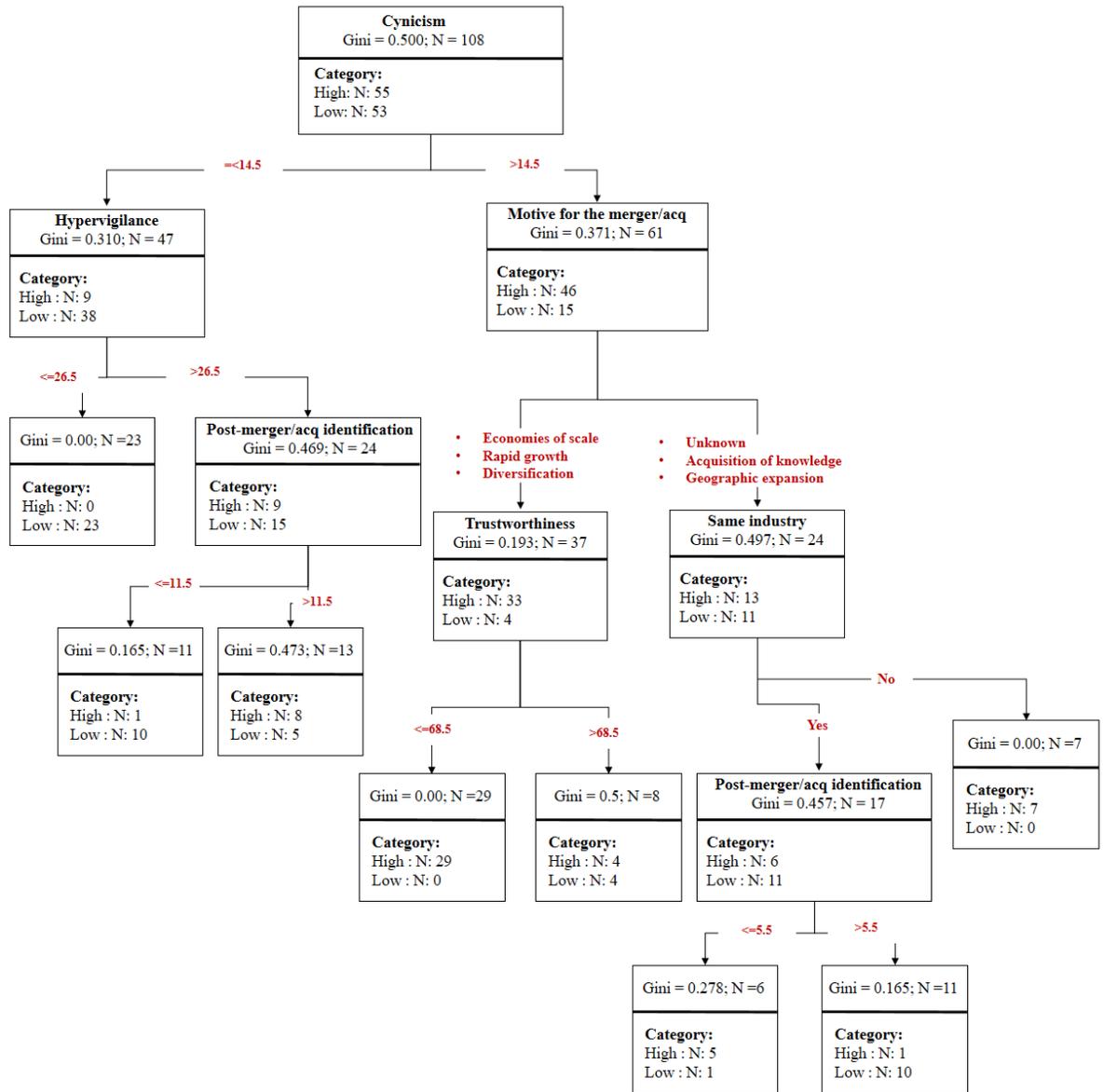


Figure 7. CART decision tree for the prediction of employee social dysfunction

Compared with the logistic regression model output, the decision tree classifier also identified cynicism and motive for the merger or the acquisition as relevant features. Results show that employees who are cynical and who experienced a merger or an acquisition driven by motives such as economies of scale, rapid growth and diversification are more susceptible to experience social dysfunctions. This effect is amplified when employees perceive the working environment and the other employees as dishonest, considering that the addition of trustworthiness produces a nearly pure node (trustworthiness contributed a decrease in impurity of .029). Results show that employees involved in a merger or an acquisition between two companies operating in different industries may also be more susceptible to experience social dysfunctions compared to employees in a merger or an acquisition that involve companies operating in similar industries. The effect of relatedness on employee social dysfunction seems to be accentuated by employees' identification with the new, post-merger/ acquisition organization. Decision tree modelling results show that identification with the new organization can mitigate the negative impact of merger or acquisition motive on the employees. Table 18 shows the performance of the decision tree classifier.

Table 18

Performance of decision tree classifier with employee social dysfunctions as outcome variable

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	43	10	81.1%	96%	81%
High	2	53	96.4%	84%	96%
Accuracy ^c			88.9%		

Notes. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and

misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The table above shows the decision tree classifier outperformed the models produced by the logistic regression. The total accuracy of the decision tree was 89% versus 82.2% produced by the logistic regression. Furthermore, the decision tree was significantly better at detecting employees in the high social dysfunctions class ($Acc. = 96.4\%$) compared to the logistic regression model ($Acc. = 83.3\%$). These results suggest that decision tree is correct 84% of the times when it predicts whether employees experience serious social dysfunctions or not, but correctly identifies 96% of all the employees experiencing serious social dysfunctions.

Having discussed the results of the inductive methods for the employee health scales, I will next analyze the results of the logistic regression with stepwise feature selection and decision tree for cynicism.

Cynicism. Here, I discuss the logistic regression with stepwise feature selection and decision tree methods in the prediction of cynical behaviour among employees experiencing a merger or an acquisition. I will start by discussing the results of the logistic regression and follow with CART decision tree. As for all previously discussed constructs, I dichotomized cynicism into high on cynicism (1) or low on cynicism (0). Five models were generated by the logistic regression algorithm with stepwise selection, with a significance value above 5 (Chi square statistic for step 5) and maximum probability value of 0.012. All other models have a probability value below 0.01. Table 19 below details the stepwise reduction in log-likelihoods of each model and their predictive power in classifying employees into high and low categories, variables selected at each iteration and model classification score.

Table 19

Models generated by the logistic regression with stepwise feature selection and classification scores for cynicism (high/low)

Step	Predictive models summary			Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection					
	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²	β	S.E.	Wald	df	Sig.	Exp(β)		High - predicted	Low - predicted	Percentage correct		
Step 1	97,884	0.376	0.501	Uncertainty	0.252	0.047	28.19	1	0.00	1.287	Cynicism (high vs. low)	Low	41	12	77.4
				Constant	-4.912	0.957	26.368	1	0.00	0.007		High	11	43	79.6
											Overall percentage			78.5	
Step 2	81,544	0.464	0.619	Uncertainty	0.255	0.054	22.486	1	0.00	1.291	Cynicism (high vs. low)	Low	45	8	84.9
				Affective commitment	-0.141	0.041	11.743	1	0.001	0.869		High	6	48	88.9
				Constant	-0.529	1.45	0.133	1	0.715	0.589		Overall percentage			86.9
Step 3	73,832	0.502	0.669	Uncertainty	0.201	0.057	12.302	1	0	1.222	Cynicism (high vs. low)	Low	42	11	79.2
				Affective commitment	-0.165	0.049	11.281	1	0.001	0.848		High	9	45	83.3
				Anxiety	0.166	0.064	6.719	1	0.01	1.181		Overall percentage			81.3
				Constant	-1.473	1.611	0.836	1	0.361	0.229					
Step 4	65,519	0.539	0.718	Pre-merger/ acq. Identification	-0.436	0.163	7.138	1	0.008	0.646	Cynicism (high vs. low)	High	43	10	81.1
				Uncertainty	0.258	0.066	15.246	1	0	1.294					
				Affective commitment	-0.166	0.052	10.335	1	0.001	0.847		Low	6	48	88.9
				Anxiety	0.205	0.073	7.863	1	0.005	1.227					
				Constant	1.259	1.908	0.436	1	0.509	3.522					
Step 5	59,168	0.565	0.754	Pre-merger/ acq. Identification	-0.463	0.186	6.188	1	0.013	0.629	Cynicism (high vs. low)	High	46	7	86.8
				Uncertainty	0.316	0.079	16.037	1	0	1.371					
				Affective commitment	-0.2	0.061	10.917	1	0.001	0.819		Low	5	49	90.7
				Same country	-2.186	0.95	5.298	1	0.021	0.112					
				Anxiety	0.22	0.078	7.834	1	0.005	1.246					
				Constant	2.93	2.2	1.775	1	0.183	18.737					

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable cynicism – high/low) were fed into the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each iteration

There is a significant reduction in -2-log likelihood as new features are added to the model, thus increasing the R^2 to .75 from the model 1 R^2 of .50. The chi-square statistic was statistically significant across all five models when compared to the null model, all five steps were significant compared to previous ones, namely $\chi^2 = 50.440$, $p < .001$ in the first step, $\chi^2 = 16.340$, $p < .001$ in the second step, $\chi^2 = 7.712$, $p < .005$ in the third step, $\chi^2 = 8.312$, $p = .004$ in the fourth step, and $\chi^2 = 6.351$, $p = .012$ in the fifth step. Therefore, results show that the variables selected through likelihood ratio method in each of the five steps provide a better fit than the null model, with all five bringing a significant improvement compared to previous steps. The maximum overall accuracy produced by the logistic regression and selected models was 88.8% with a 91% accuracy in classifying the highly cynical employees. Regarding the variables added to the models, results show that perceived uncertainty alone can correctly classify employees in the high cynicism and low cynicism with a 77.4% accuracy, and it is the most important feature for classifying employees into high/low cynicism. The results also show that a reduction in employees' level of affective commitment and strength of identification with the pre-merger/ acquisition organization is associated with cynicism. The logistic regression model shows that identification with the organization before the merger or the acquisition may have an influence on the extent to which employees disengage from their work, but the relation becomes significant only when perceived uncertainty and anxiety are included in the model. In other words, if there is a high uncertainty among employees about how the merger will affect their work lives, those who are not psychologically attached to the organization, experience anxiety and do not identify with their pre-merger/ acquisition group are also the most likely to distance themselves from the job or become cynical. Results also show that national culture is important

on the extent to which employees experiencing a merger or an acquisition become cynical, as shown by the addition of the “same country” variable in step 5.

Table 20

Performance of logistic regression classifier with employee cynicism (high/ low) as outcome variable

Classification						
Observed	Predicted		Percent Correct	Precision ^a	Recall ^b	
	Low	High				
Low	46	7	86.8%	90%	87%	
High	5	49	90.7%	88%	91%	
Accuracy ^c			88.8%			

Notes. a. Precision is calculated as the number of correctly classified observations over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

Regarding the classification performance of the logistic regression classifier (Table 20), using a 0.5 probability cut-off point for the allocation of employees into one or the other category, namely high or low, the logistic regression model had a 90% precision in classifying employees into the low class and 87% precision for the high class (Step 5). In contrast, the recall for the employees in the low condition was 87% while for the high class, 91%. In light of these findings, I now discuss the results of decision tree method for the prediction of employee cynicism (Figure 8).

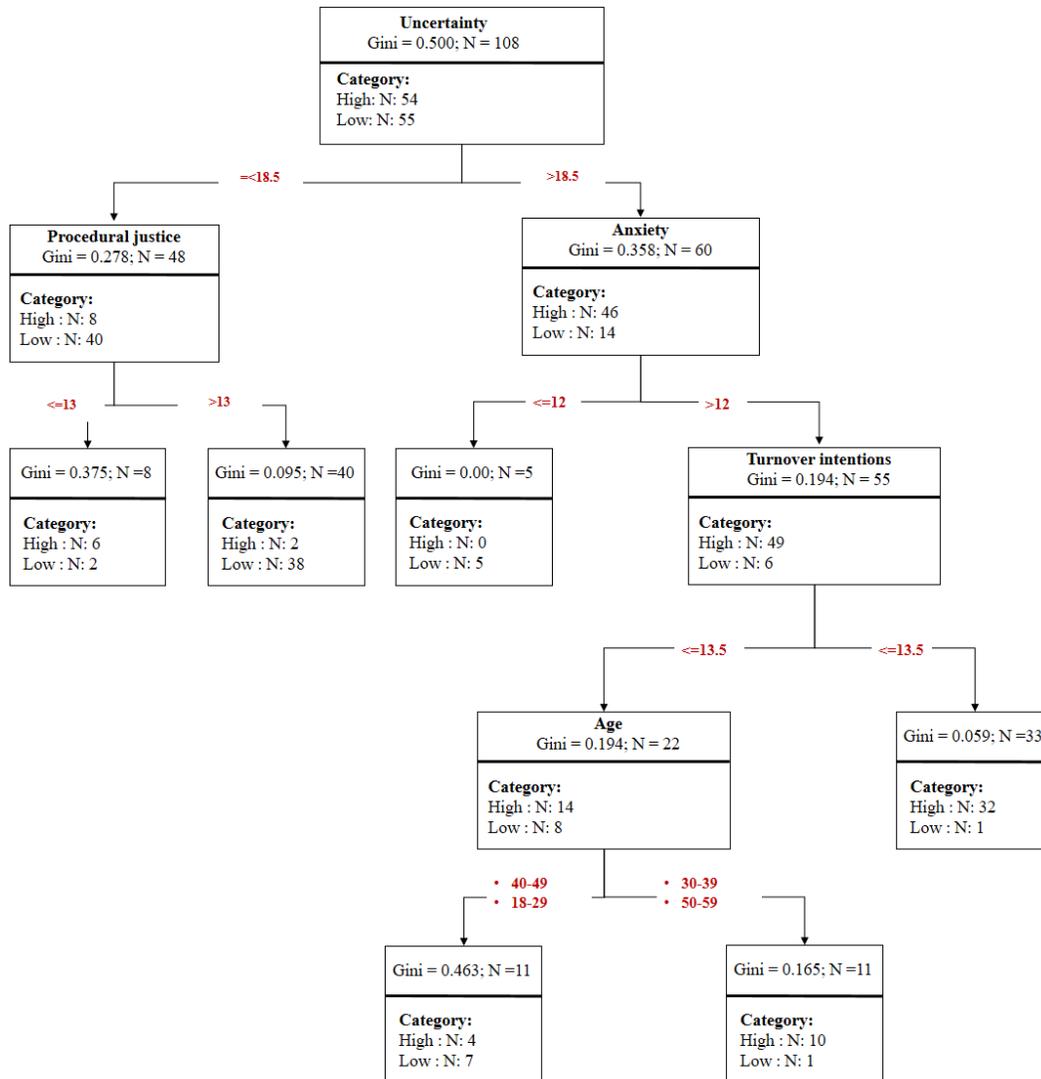


Figure 8. CART decision tree with cynicism as outcome variable

The model structure generated by the decision tree algorithm confirms some of the linear relations uncovered by the logistic regression model, namely between cynicism and anxiety and uncertainty. Nevertheless, while the logistic regression model captured interaction effects in the prediction, the decision tree made use of nonlinear separability for classifying employees into high and low levels of cynicism. Therefore, other features that better split the dataset into high and low outcome were chosen to the detriment of those that emerged in the logistic regression,

namely, turnover intentions, age and procedural justice. Additionally, the decision tree also shows that employees at the start and mid of their careers are less susceptible to engage in cynicism versus employees between 30 and 39 years of age and those closer to retirement. Table 21 shows the performance metrics for the decision tree.

Table 21

Decision tree classification report for the classification of employees by level of cynicism

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	50	4	92.6%	89%	93%
High	6	48	88.9%	92%	89%
Accuracy ^c			90.7%		

Note.

a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The model performs almost similarly to logistic regression in correctly classifying employees in the high and low cynicism condition. However, there is one notable difference. While the linear model managed to correctly identify more employees in the high cynicism category (91%), for the decision tree, the nonlinearity exposed more of the observations in the low condition (92.6%). Out of all 54 employees in high cynicism conditions, the decision tree correctly identified 48 (89%), while the logistic regression identified 49 (91%). In terms of overall model accuracy, the decision tree outperformed the logistic regression with 90.7% versus 88.8%.

Having discussed the inductive models for employee general health scales (somatic health, anxiety and social dysfunctions) and cynicism, I will now discuss employee retaliatory behaviour and compare the performance of logistic regression and decision tree methods.

Retaliation. Previously in the hypothesis testing section, I have discussed how employees in mergers and acquisitions engage in retaliatory behaviour and how this behaviour is associated with employees' identification with the post-merger/acquisition organization, justice measures and hypervigilance. Here, I use the same inductive methods as for previous employee outcomes, to identify employees who will engage in retaliatory behaviour and those who do not, and explore the variables that can discriminate between employees likely to adopt deviant behaviour and those who do not. I will first discuss the results of the logistic regression model, and then the result of the decision tree method. Overall, 6 models were produced via logistic regression with stepwise feature selection, with a significant Chi-square statistic compared to the baseline model that includes only the constant. All the five steps had a significant improvement compared to previous steps. Table 22 shows the recursive reduction in -2 log likelihoods across all steps, variables included in each iteration and the corresponding classification scores.

Table 22

Models generated by the logistic regression with stepwise feature selection and classification scores for retaliation (high/low)

Step	Predictive models summary			Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection						
	-2 Log likelihood	Cox & Snell R ²	Nagelker ke R ²	β	S.E.	Wald	df	Sig.	Exp(β)	Retaliation (high vs. low)	High - predicted	Low - predicted	Percentage correct			
Step 1	116,142	0.257	0.343	Uncertainty	0.176	0.037	22.52	1	0.000	1.192	Retaliation (high vs. low)	Low	36	14	72	
				Constant	-3.28	0.743	19.46	1	0.000	0.038	Overall percentage	High	11	46	80.7	
Step 2	99,094	0.366	0.489	Post-merger / acq. identification	0.346	0.096	12.96	1	0.000	1.413	Retaliation (high vs. low)	Low	39	11	78	
				Uncertainty	0.244	0.051	22.76	1	0.000	1.276	High	11	46	80.7		
				Constant	-7.96	1.713	21.60	1	0.000	0.000	Overall percentage				79.4	
Step 3	90,230	0.417	0.556	Motive for M&A	0.552	0.198	7.72	1	0.005	1.736	Retaliation (high vs. low)	Low	39	11	78	
				Post-merger / acq. Identification	0.342	0.102	11.32	1	0.001	1.408		High	14	43	75.4	
				Uncertainty	0.271	0.057	22.73	1	0.000	1.312	Overall percentage				76.6	
				Constant	-9.8	2.033	23.21	1	0.000	0.000						
Step 4	81,077	0.464	0.62	Motive for M&A	0.703	0.224	9.89	1	0.002	2.020	Retaliation (high vs. low)	Low	42	8	84	
				Pre-merger / acq. Identification	-0.37	0.134	7.39	1	0.007	0.694		High	10	47	82.5	
				Post-merger / acq. Identification	0.4	0.11	13.20	1	0.000	1.491	Overall percentage				83.2	
				Uncertainty	0.29	0.058	24.80	1	0.000	1.337						
				Constant	-7.13	2.035	12.26	1	0.000	0.001						
Step 5	70,862	0.513	0.685	Motive for M&A	0.722	0.235	9.42	1	0.002	2.058	Retaliation (high vs. low)	Low	41	9	82	
				Pre-merger / acq. Identification	-0.5	0.159	9.87	1	0.002	0.607		High	6	51	89.5	
				Post-merger / acq. Identification	0.533	0.137	15.16	1	0.000	1.703	Retaliation (high vs. low)				86	
				Uncertainty	0.244	0.061	16.18	1	0.000	1.277						
				Hypervigilance	0.059	0.021	8.38	1	0.004	1.061						
				Constant	-8.81	2.358	13.95	1	0.000	0.000						
Step 6	65,608	0.536	0.716	Motive for M&A	0.678	0.241	7.89	1	0.005	1.970	Retaliation (high vs. low)	Low	43	7	86	
				Pre-merger / acq. Identification	-0.45	0.154	8.48	1	0.004	0.640		High	5	52	91.2	
				Post-merger / acq. Identification	0.614	0.158	15.14	1	0.000	1.848	Overall percentage				88.8	
				Uncertainty	0.263	0.068	14.83	1	0.000	1.300						
				Hypervigilance	0.068	0.023	8.42	1	0.004	1.070						
				Same industry	-1.87	0.866	4.67	1	0.031	0.154						
				Constant	-9.32	2.777	11.26	1	0.001	0.000						

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable retaliation – high/low) were fed into the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each iteration

Models iteratively improved R^2 to a maximum of 72% and maximum reduction in -2-log likelihood achieved was 65.608. The chi-square statistic was statistically significant across all six models when compared to the null model. Also, all six steps were significant compared to previous ones, namely $\chi^2 = 31.733, p < .001$ in the first step, $\chi^2 = 17.049, p < .001$ in the second step, $\chi^2 = 8.864, p = .003$ in the third step, $\chi^2 = 9.152, p = .002$ in the fourth step, $\chi^2 = 10.216, p = .001$ in the fifth step, and finally, $\chi^2 = 5.254, p = .022$ in the sixth step. Therefore, results show that the variables selected through likelihood ratio method in each of the six steps provide a better fit than the null model, with all six bringing a significant improvement compared to previous steps. Regarding the predictive performance of the models generated through logistic regression with stepwise feature selection, the maximum overall accuracy produced by the logistic regression was 88.8% with a 91% accuracy in classifying the employees on the high class.

Regarding the variables added to the model iteratively, for the classification of employees into high vs low retaliation (i.e abuse and theft), uncertainty perceptions produced the highest reduction in log likelihood, with the first model correctly identifying up to 81% of the employees on the high class of retaliation. Furthermore, in line with the results of the structural equation modelling (Chapter 5.4.1), a strong identification with the post-merger / acquisition organization is positively linked with retaliatory behaviours, such as minor abuses at the workplace. In contrast, a low identification with the pre-merger / acquisition organization, a feature added in step 4, increases the overall model accuracy to 83.2%, and leads to a better identification of employees in the high and low category of retaliation. These results also show that employees experiencing certain types of mergers and acquisitions are more predisposed to engage in retaliation, given the entry of motive and industry relatedness in step 3 and 6

respectively. Certain motives for the merger or acquisition seem to be associated with more pronounced resistance among employees as compared to others. For instance, the results show motive of scale economies may trigger stronger resistive responses as compared to others, like geographic expansion or rapid growth. Table 23 shows the performance of the logistic regression model.

Table 23

Classification report for the logistic regression model for the classification of employees by retaliatory behaviour (high/low)

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	43	7	86.0%	90%	86%
High	5	52	91.2%	88%	91%
Accuracy ^c			88.8%		

Notes. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The logistic regression model had a 90% precision in classifying employees into the low retaliation category and 88% precision for the high retaliation category. In contrast, the recall for the employees in the low condition was 86% while for the high class, 91%. In light of these findings, I now discuss the results of decision tree method with employee retaliation (high/low) as outcome variable (Figure 9).

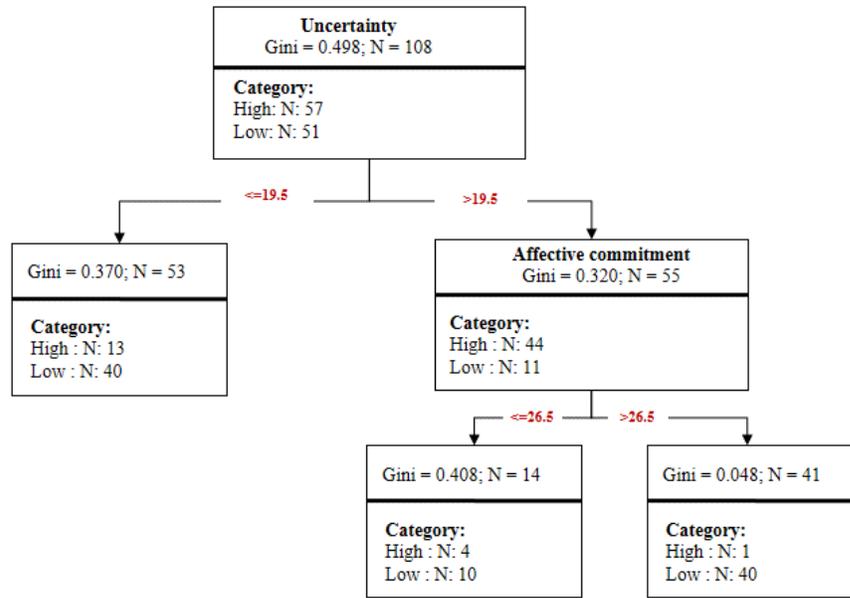


Figure 9. CART decision tree for the classification of employees by retaliatory behaviour (high/low)

In contrast to the logistic regression model, the decision tree found uncertainty to be an important discriminatory feature for this classification task. There is a 80% probability that for a score higher than 19.5 on the uncertainty scale used in this study (see Chapter 5.3.3 for the measure) employees will engage in retaliatory behaviour. The decision tree also revealed affective commitment to be an important feature that discriminates the high-risk employees from the low risk with the second highest decrease in node impurity, *Gini*, 0.092. For example, a score on affective commitment higher than 26.5 on the scale used in this study can produce an almost pure node with observations low on retaliatory behaviour (97%). In contrast, in the logistic regression, the beta coefficient of affective commitment was not statistically significant ($p > 0.05$) and was excluded from the model. However, the nonlinear model uncovered the role of affective commitment and revealed the specific cut-off points in the construct that best discriminate between high and low categories in terms retaliatory behaviour. Table 24 below shows the

performance of the decision tree in correctly classifying employees into high and low categories of retaliatory behaviour.

Table 24

Classification report for the decision tree for the classification of employees by retaliatory behaviour (high/low)

Observed	Classification		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	50	1	98.0%	75%	98%
High	17	40	70.2%	98%	70%
Accuracy ^c			83.3%		

Note. a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

For the classification of employees by retaliatory behaviour (high/low), logistic regression performed substantially better in detecting employees engaging in retaliatory behaviour compared to the decision tree. The recall of the logistic regression for the high category was 91% versus 70% produced by the decision tree. In terms of overall accuracy, the logistic regression also performed better, namely 89% compared to 83% obtained through decision tree learning. Even though the decision tree was more accurate in identifying employees on the low retaliation category (98% versus 86% obtained through logistic regression), from a practical standpoint, algorithms that can better identify employees at risk of engaging in negative behaviours are more useful as it allows targeted intervention plans.

After discussing the application of the inductive method for somatic health, anxiety, social dysfunctions, cynicism and retaliation among employees in mergers and acquisition, I will next turn to the classification of employees by turnover intentions (high/low), where I will, as for

the previous outcome variables, contrast logistic regression with likelihood ratio selection and decision trees.

Turnover intentions. The systematic literature review showed that employees' intentions to quit is a function of a multitude of factors, such as the type of the merger (Quah & Young, 2005) level of integration post-merger (Salter & Weinhold, 1979; Shrivastava, 1986, Lubatkin, Schweiger & Weber, 1999; van Oudenhoven & de Boer, 1995) or the hostility of the acquirer (Cartwright & Cooper, 1993), Here, I discuss the results of the logistic regression and decision tree, in order to understand what are the factors associated with employees' departure intentions in mergers and acquisitions and discuss which model better classifies employees into high and low-turnover intention categories. Overall, six separate models have been found to be statistically significant using the logistic regression model with feature stepwise selection. Table 25 shows the -2-log likelihood reduction for all the six models, the variables added to the null model iteratively and the classification scores across all steps.

Models iteratively improved R^2 to a maximum of 66% and maximum reduction in -2-log likelihood achieved was 74.732. The chi-square statistic was statistically significant across all six models when compared to the null model. Also, all six steps were significant compared to previous ones, namely $\chi^2 = 32.148$, $p < .001$ in the first step, $\chi^2 = 15.059$, $p < .001$ in the second step, $\chi^2 = 6.080$, $p = .014$ in the third step, $\chi^2 = 10.595$, $p = .001$ in the fourth step, $\chi^2 = 5.135$, $p = .023$ in the fifth step, and finally, $\chi^2 = 3.826$, $p = .05$ in the sixth step. Therefore, results show that the variables selected through likelihood ratio method in each of the six steps provide a better fit than the null model, with all six bringing a significant improvement compared to previous steps.

Table 25

Models generated by the logistic regression with stepwise feature selection and classification scores for turnover intentions (high/low)

Step	Predictive models summary			Variables that emerged as significant predictors at each iteration						Classification scores across the output models of the logistic regression with stepwise feature selection						
	-2 Log likelihood	Cox & Snell R ²	Nagelkerke R ²	β	S.E.	Wald	df	Sig.	Exp(β)		High - predicted	Low - predicted	Percentage correct			
Step 1	115,427	0.26	0.347	Affective commitment	-0.16	0.04	19.13	1	0.000	0.86	Turnover (high / low)	Low	32	17	65.3	
				Constant	5.29	1.21	19.02	1	0.000	197.94		High	14	44	75.9	
													Overall percentage	71		
Step 2	100,368	0.357	0.477	Uncertainty	0.14	0.04	12.51	1	0.000	1.15	Turnover (high / low)	Low	34	15	69.4	
				Affective commitment	-0.14	0.04	13.70	1	0.000	0.87		High	14	44	75.9	
				Constant	1.95	1.42	1.88	1	0.170	7.04		Overall percentage	72.9			
Step 3	94,288	0.392	0.524	Uncertainty	0.19	0.05	15.04	1	0.000	1.21	Turnover (high / low)	Low	35	14	71.4	
				Affective commitment	-0.11	0.04	6.41	1	0.011	0.90		High	14	44	75.9	
				Procedural justice	-0.12	0.05	5.46	1	0.020	0.89		Overall percentage	73.8			
				Constant	2.40	1.53	2.45	1	0.118	10.99						
Step 4	83,694	0.45	0.601	Uncertainty	0.22	0.06	15.43	1	0.000	1.24	Turnover (high / low)	Low	38	11	77.6	
				Affective commitment	-0.15	0.05	9.84	1	0.002	0.86		High	9	49	84.5	
				Procedural justice	-0.27	0.08	10.74	1	0.001	0.77		Overall percentage	81.3			
				Trustworthiness	0.12	0.04	8.71	1	0.003	1.13						
				Constant	-0.62	1.81	0.12	1	0.733	0.54						
Step 5	78,558	0.475	0.635	Uncertainty	0.24	0.06	15.72	1	0.000	1.27	Turnover (high / low)	Low	37	12	75.5	
				Affective commitment	-0.17	0.05	11.70	1	0.001	0.84		High	11	47	81	
				Procedural justice	-0.31	0.09	11.27	1	0.001	0.74		Overall percentage	78.5			
				Trustworthiness	0.15	0.05	9.88	1	0.002	1.16						
				Acquirer to acquiree size	-1.69	0.78	4.68	1	0.030	0.18						
				Constant	-0.39	1.81	0.05	1	0.829	0.68						
Step 6	74,732	0.494	0.66	Uncertainty	0.18	0.06	7.74	1	0.005	1.20	Turnover (high / low)	Low	39	10	79.6	
				Affective commitment	-0.19	0.06	11.48	1	0.001	0.83		High	9	49	84.5	
				Procedural justice	-0.36	0.10	13.01	1	0.000	0.70		Overall percentage	82.2			
				Trustworthiness	0.16	0.05	10.94	1	0.001	1.18						
				Hypervigilance	0.04	0.02	3.62	1	0.057	1.04						
				Acquirer to acquiree size	-1.85	0.81	5.18	1	0.023	0.16						
				Constant	-0.53	1.94	0.08	1	0.783	0.59						

Note. All variables (sample demographics, merger / acquisition contextual data and psychological variables except the outcome variable turnover intentions – high/low) were fed into the algorithm. The variables listed for each steps are those that produced a significant reduction in -2 log likelihood at each iteration

The maximum overall accuracy produced by the logistic regression was 82.2% with a 84% accuracy in classifying the employees on the high class (Step 6).

The results show the importance of affective commitment in employees' intentions to quit. The variable had the highest reduction in log likelihood and was added in Step 1.

Uncertainty appears to be associated with several negative employee outcomes, including intentions to quit ($\beta = 0.138, p < .001$). The more employees perceive the working environment as uncertain, they also consider quitting the organization. Results showed no significant direct association between trustworthiness and intentions to quit, but a strong interaction effect of trustworthiness and commitment on turnover intentions. Other relevant variables that were added to the models were organizational justice (Step 3), trustworthiness (Step 4), relative organizational size (Step 5) and hypervigilance (Step 6). Table 26 shows the classification metrics of logistic regression with turnover intentions (high/low) as outcome variable (Step 6).

Table 26

Performance metrics of the logistic regression classifier with turnover intentions

(high/low) as outcome variable

		Classification					
Observed	Predicted	Low	High	Percent Correct	Precision ^a	Recall ^b	
Low	39	10	79.6%	81%	80%		
High	9	49	84.5%	83%	84%		
Accuracy ^c			82.2%				

Notes:

a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The logistic regression model had a 81% precision in classifying employees into the low class and 83% precision for the high class. In contrast, the recall for the employees in the low

condition was 80% while for the high class, 84%. In light of these findings, I now discuss the results of decision tree method (Figure 10).

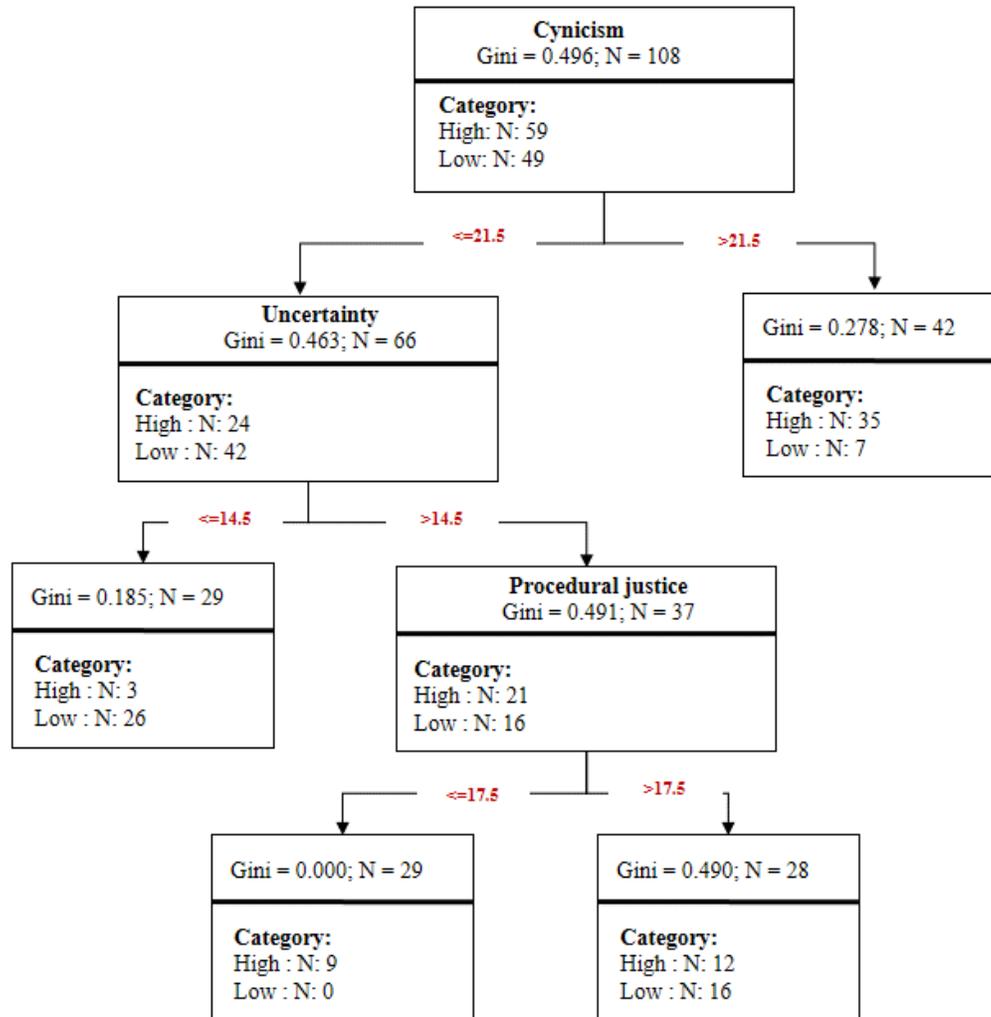


Figure 10. CART decision tree for the classification of employees by turnover intentions (high/low)

The CART decision tree split on cynicism, perceived uncertainty and procedural justice. Employees who score more than 21.5 on the cynicism scale used in this study (see Chapter 5.3.3) have 83% probability of intending to quit the organization. Employees with a score lower than 21.5 on the cynicism scale, coupled with a score higher than 14.5 on the uncertainty scale and a

score lower than 17.5 in procedural justice have the highest probability of quitting giving the pure node obtained through decision tree modelling. Table 27 shows the overall performance of the CART decision tree.

Table 27

Classification report for the decision tree for the outcome variable turnover intentions

Classification					
Observed	Predicted		Percent Correct	Precision ^a	Recall ^b
	Low	High			
Low	42	7	85.7%	74%	86%
High	15	44	74.6%	86%	75%
Accuracy ^c			79.6%		

Notes:

a. Precision is calculated as the number of correctly classified observation over all observations in the dataset with the corresponding label; b. Recall is calculated as the number of correctly classified observations over the sum of correctly classified observations and misclassified observations by the model; c. Accuracy is calculated as the sum of all correctly classified observations over all observations in the dataset

The CART decision tree had a substantially lower performance in classifying employees into high or low intentions to quit compared to the logistic regression. The overall accuracy of decision tree was 80% versus 82.2% obtained through logistic regression. In terms of high-class recall, the decision tree was able to identify only 44 out of 59 employees at risk of quitting the organization (75%). In contrast, the logistic regression found 49 (84%) of the employees in the high intentions to quit category. In case of low intentions to quit category, the decision tree performed better, as it correctly classified 85.7% versus 80% obtained through logistic regression.

Having discussed the results of my cross-sectional study within the context of the hypotheses and research questions of this thesis, I next examine the factor structure of the General Health Questionnaire, using confirmatory factor analysis.

5.4.3. Validation of the shortened GHQ questionnaire

In order to examine the stability and the factor structure of the shortened General Health Questionnaire (Goldberg, 1972) used in my cross-sectional study, I conducted confirmatory factor analysis. Originally, the GHQ was found to consist of four factors, namely, Anxiety, Social Dysfunctions, Depression and Somatic problems (Goldberg, 1979). In the shortened version of the questionnaire that I used in this study, I assessed Somatic symptoms, Anxiety and Social dysfunction. The underlying objective was to unpack the GHQ into its original dimensions, namely Somatic health, Anxiety and Social dysfunctions for a more in-depth analysis of the employee outcomes in mergers and acquisitions. The questionnaire has received strong support in previous studies (Henderson et al. 1979; Banks et al, 1980), so here I tested this shortened 21-item 3-factor measure as a hypothesized model. To that effect, I used several model fit indices and their criteria to examine the goodness-of-fit of the 3-factor model: the chi-square value, comparative fit index (CFI), Tucker–Lewis index (TLI), and root-mean-square error of approximation (RMSEA). For ordinal variables, CFI and TLI values above 0.95 indicate a good fit, whereas RMSEA values below 0.06 indicate a good fit and values from 0.07 to 0.08 indicate a reasonable fit (Yu, 2002). In Table 28 below, I present the goodness of fit statistics for the 3-factor structure of GHQ.

Table 28

Goodness-of-Fit Statistics for the 3-factor and 1-factor Confirmatory Factor Analysis Model of the General Health Questionnaire (GHQ, Goldberg, 1979)

Factor model	χ^2	df	RMSEA	CFI	TLI
3-factor structure of GHQ	396,966	186	.103	.856	.821
1-factor structure of GHQ	542,159	189	.132	.759	.706

Note. Df = degrees of freedom; RMSEA = Root Mean Squared Error of Approximation; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index

The results of the confirmatory factor analysis showed a poorer fit of the one-factor structure of the GHQ versus the 3-factor structure. While for both the one-factor and three-factor structure of the questionnaire, the RMSEA indicator was above 0.08, while CFA and TLI values were below .95, the 3-factor structure showed a better fit. As such, for this study, the results of the confirmatory factor analysis of the measure suggests the GHQ would be better used as in the original study (Goldberg & Hillier, 1979), with 3 subscales, namely anxiety, somatic health problems and social dysfunctions rather than as a global measure of baseline mental health (Choda et al., 2020; Lum et al., 2019; Halonen et al., 2020; Banks et al., 1980).

5.5. Discussion

Despite the breadth of research on employee psychology in mergers and acquisitions reviewed in Chapter 2, little is known about how the various perspectives can be reconciled in a way that can shed more light on employee outcomes. Furthermore, the theoretical and methodological shortcomings noted in my systematic literature raise important generalizability issues and theoretical inconsistencies. Yet, a better understanding of the many factors that contribute to negative employee outcomes in mergers and acquisitions is important both from an employee perspective to ensure a healthy work environment as well as from an organizational perspective, to ensure the success of the merger or the acquisition. The disintegrated view on employee psychology in mergers and acquisitions that emerged in my systematic literature review ignores the possibility that many various factors may interact and reinforce each other,

and that employee outcomes may be a product of this juxtaposition. The main contribution of this study was in testing and discovering an integrative approach to the study of employee psychology in mergers and acquisitions where employee emotions, behaviour, health, cognitive and contextual elements are interconnected. By taking into account some of the most relevant contextual and demographic variables and within the sample size limitations, the integrative models proposed in this chapter can be applied to different types of mergers and acquisitions (e.g. horizontal, vertical), moods of transaction (e.g. friendly, hostile), motives for the merger or the acquisition or degrees of integration.

Using structural equation modelling and comparative analyses, the study revealed the very important role of uncertainty in employee outcomes in mergers and acquisitions. Uncertainty emerged as the most important variable for several employee outcomes, including employee quitting intentions, retaliatory behaviour in the form of minor theft and abuse, development of cynical attitudes and of hypervigilant behaviour as well as for health problems (anxiety, somatic health and social dysfunctions). These results are consistent with the findings of extant literature on the link between uncertainty and cynicism (Abraham, 2000; Fullan, 2010; Oreg, 2003), health outcomes (Elovainio et al., 2005) as well as of prior mergers and acquisitions research (Eriksson & Sundgren, 2005; Marmenout, 2010; Giessner, 2011). Marmenout (2010) suggested heightened perceptions of uncertainty may be conducive to dysfunctional employee reactions, such as anticipated conflict, lower willingness to collaborate greater intention to leave and lower satisfaction. While Marmenout's (2010) study included one case of an acquisition, this study, which was carried among employees from various cases of either mergers or acquisitions, provides additional support to the idea that perceived uncertainty is an important factor for employee wellbeing, stress and employee behaviour at work. This is all the more important

considering that perceived uncertainty and ambiguity at the workplace is one of the most frequently cited characteristics of major organizational change (Matteson & Ivancevich, 1990; Milliken, 1987; Schweiger & Denisi, 1991). Employees experiencing major changes at the workplace such as a merger or an acquisition appear to be confronted with a great deal of ambiguity regarding prospective roles and activities within the company, and whether they would have jobs at all following the transition (Nelson & Cooper, 1995). And this seems to have wider health and behavioural implications compared to other factors, such as a failure to develop a psychological bond with the new organization or a breach in psychological contract.

Employees' heightened perceptions of uncertainty does not seem to only put additional strain on employees and trigger withdrawal reactions. In a first study to examine employee hypervigilance in mergers and acquisitions, I found that perceived uncertainty was also linked with to hypervigilant thoughts and behaviours. These results suggest that for employees, the uncertainty about whether an aversive change in how they used to work will occur or not may steer their attentional resources towards any environmental cues that may provide some indication about the occurrence of the event, in a way that their perceptions of possible negative consequences are heightened. I found that the more the employees are suspicious of each other, the more likely it is that they also experience somatic health problems, anxiety and social dysfunctions. I also found a strong link between hypervigilance and behavioural measures, as employees who are more suspicious of other colleagues also appear to display more pronounced intentions to quit, cynicism and retaliatory behaviour. These findings are consistent with the theoretical propositions that in an uncertain situation individuals may become alert to any clue that might solve the uncertainty (Beck & Emery, 1985) which may have health consequences (Martinelli, Cavanagh & Dudley, 2013). Given the limitations of this study arising from the

cross-sectional design and the small sample size, as well as the lack of quantitative evidence on employee hypervigilance in mergers and acquisitions research, it would be useful that future research investigates more closely this construct, how it changes from the pre-merger to the post-merger period, and how it relates to employees' group identity, and negative behaviours such as ingroup bias or derogation of the employees of the other organization.

This study also found support for the social identity perspective. I found that employees' identification with the post-merger / acquisition organization to be associated with employees' affective commitment to the organization, ingroup bias, quitting intentions, retaliation and cynicism. Results of the structural equation modelling showed that the more employees remain identified with the old organization, the less committed they are to the new organization and the more they engage in ingroup bias. These findings are consistent with prior studies in mergers and acquisitions literature (Terry, Callan & Sartori, 2001; Amiot, Terry & Callan, 2007; Lipponen, Olkkonen & Moilanen, 2004; Terry & Callan, 1998). I also found that identification with the organization before the merger or the acquisition is associated with ingroup bias, retaliation and perceived differences. Therefore, this survey provides evidence to the idea that as long as employees maintain a strong psychological bond with the organization before the merger or the acquisition, the more likely they are to engage in tendencies to favor the members of the group they identify with, more so than employees who identify with the post-merger/acquisition organization (Terry & O'Brien, 2001), as predicated by the social identity theory (van Leeuwen, van Knippenberg & Ellemers, 2003; Tajfel, 1972; Tajfel & Turner, 1979; Hogg & Abrams, 1988; Mullen, Brown & Smith, 1992). Additionally, this study confirms the emergence of "us" versus "them" dynamics in mergers and acquisitions (Boen et al., 2007) as well as the tendencies of employees who strongly identify with the pre-merger/acquisition organization to maximize the

differences between the groups (Vaara, 2000; van Knippenberg et al., 2004; Langley et al., 2012), as suggested by social identity theory (Jetten, Spears, & Manstead, 1996; Turner, Brown & Tajfel, 1979).

Regarding the link between employees' organizational identification and retaliation, the results obtained in this study may be considered surprising. While mergers and acquisitions research provides evidence of resistive behaviour (Empson, 2001; Weber & Camerer, 2003; Jetten & Hutchinson, 2011; Vaara et al., 2012), particularly among employees in the acquired organization who are not psychologically attached to the new organization (Empson, 2001; Quah & Young, 2005; Apfelthaler et al., 2002; Colman & Lunnan, 2011), this study found support to the opposite hypothesis. I found a significant link between employees' strength of pre- and post-merger/acquisition identification and employees' tendencies to engage in minor abuses and thefts (i.e. retaliation). In other words, employees who identify strongly with the pre-merger / acquisition organization are less likely to engage in retaliatory behaviour. Conversely, those who identify strongly with the post-merger / acquisition organization tend to engage more often in minor theft and abuses at the workplace. Furthermore, employee retaliation does not seem to be only a function of the strength of identification with the pre- or post-merger / acquisition organization but also of status, as may be inferred from the role in the transaction (i.e. acquirer, acquired, merged). Namely, high-status employees seem to be more likely to engage in minor abuse and theft compared to employees in the low-status group. This contradicts the theoretical proposition found in mergers and acquisitions research that acquired organization employees (or those lower in status) engage in more resistive behaviour or seek some form of retribution (Apfelthaler et al., 2002; Colman & Lunnan, 2011). One explanation for the findings in this study may be that high identification with the post-merger acquisition organization may be

associated with a higher status in the new organization (van Vuuren, Beelen & de Jong, 2010; van Knippenberg et al., 2002). The social psychological literature on power and status (Riley Bowles & Gelfand, 2010; Kohn, 1977) suggests those in privileged positions tend to engage in status affirmation behaviour, and are more predisposed towards norm violation rather than observance. Individuals in lower-status positions have a higher propensity towards rule abidance and they tend to be more strictly oriented towards discipline and attend more to social norms (Kohn, 1977). As such, the high-status group may engage in retaliatory behaviour in order to affirm their superiority to the outgroup. In this sense, retaliatory behaviour against the organization may not be fundamentally oriented towards the employer, but in fact, as a means to affirm their privileged position in relation with the outgroup. This suggests that employees' retaliatory behaviour may be fundamentally oriented towards the low-status outgroup rather than the organization. The need for status affirmation and preservation of intergroup hierarchy may energize deviant behaviours, which are not essentially meant to harm the organization, but maintain a power narrative which sustains their privileged position (Riley Bowles & Gelfand, 2010). This study supports the idea that while high pre-merger identifiers choose to engage in ingroup bias, high post-merger/acquisition identifiers may choose to engage in deviant behaviours. As such, it may be that the objective of the two groups for these behaviours is functionally similar, namely a positive self-esteem as deriving from their social identities. These findings obtained through structural equation modelling were supported by the models produced by the logistic regression with stepwise feature selection for the classification of employees who engage in retaliation (high) or not (low). This study provides a first indication that these processes between groups of employees may exist in a merger or an acquisition context. However, as this study was cross-sectional, I could not establish the temporal link between

intergroup hierarchy emergence and behavioral outcomes. It would be useful that future studies with a larger sample focus more on the motivational aspects of employee retaliatory behaviour versus ingroup bias in mergers and acquisitions.

Regarding the trust and justice perspective, this study found that a high identification with the post-merger/acquisition organization was associated with elevated levels of perceived organizational justice. Additionally, justice perceptions seem to differ by role in the transaction as this study found, in the sense that acquired employees perceive the organization as less fair compared to employees in the acquired and merged conditions. Taken together, an explanation to these findings may be that perceptions of organizational justice might have strengthened one's identification with the group (Lipponen, Wisse & Perälä, 2011). The treatment employees receive from the organization may trigger disidentification with the group. Not being treated fairly or in an honest and respectful manner, or perceiving that the procedures for being rewarded for their work are not fair may lead employees to project these frustrations onto the organization, and hence prompt a break in the psychological bond between the employees and the organization. Another explanation may be that group identification is in fact a precursor of justice perceptions, in accordance with Blader (2007), thus suggesting there is a bidirectional relationship between justice perceptions and identification. Employees' psychological bond with the organization may cause their justice perceptions to be fundamentally biased in favour of the organization. In other words, the strength of employees' psychological bond with the organization may cause employees to systematically misjudge the fairness of how the organization rewards employees for their work, in how procedures are created and in the way employees are being treated. In this sense, employees' identification with the post-merger/acquisition organization may both shape or be shaped by employees' justice evaluations

along with group status. These suggestions may warrant this topic a closer inspection in longitudinal studies that could assess the role of identification, status and justice perceptions and that could overcome the limitations of this study arising from the cross-sectional design and small sample size.

Regarding the breach in psychological contract, this study found a strong link with employees' turnover intentions and retaliation. However, in terms of retaliation, this study found a negative link. In other words, the more the employees perceive a psychological contract breach in the new organizational context, the less likely they are to retaliate. These findings contradict those of studies carried among organizations under normal operating conditions, which suggest a breach in psychological contract is associated with deviant employee behaviour (Cavanaugh & Noe, 1999; Hussain, 2014; Bordia, Restubog & Tang, 2008; Restubog, Bordia & Tang, 2006). However, these results may provide an initial indication of the co-existence of two trust processes in mergers and acquisitions, which emerged from my systematic literature review. Thus, it may be that in mergers and acquisitions, there is a trust-building process among employees oriented towards the new post-merger/acquisition organization (Beccera, Lunnan & Huemer, 2008; Nikandrou & Papalexandris, 2007) and another trust-destruction process oriented towards the pre-merger/acquisition organization (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008), as the systematic literature review noted. The expectations of psychological contract fulfillments and obligations emerge from a history of interactions, which are not yet crystallized in the relation between the employees and the new, post-merger/ acquisition organization. In this sense, employees may not seek retributive or restorative justice from the new post-merger / acquisition organization by engaging in retaliatory behaviour, because the breach in psychological contract may, in fact, refer to feelings of betrayal by the organization

before rather than after the merger or the acquisition. Therefore, employees may not manifest instances of retaliation against an organization with which the psychological contract has not (yet) been negotiated, but may manifest against the pre-merger/acquisition organization as a result of employees' construal of the merger or acquisition itself as a trust-destroying event (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008). Given the limitations of this study (i.e. cross-sectional and small sample size), more longitudinal evidence on employee trust processes, target of employee behaviour and evolution of psychological contract are needed to confirm the coexistence of these processes and how these trust dynamics find expression in more or less negative behaviours among employees.

Regarding the role of context in employee affect, behaviour and health in mergers and acquisitions, this study found some support to the idea that contextual factors are linked to the way in which employees construe the merger or the acquisition and the new working environment (van Oudenhoven & de Boer, 1995; Giessner et al., 2006; McEntire & Bentley, 1996; Collins & Wickham, 2002; Carter & Pavur, 2003; Meyer, 2001; Larsson & Lubatkin, 2001; Wickramasinghe & Karunaratne, 2009). For instance, I found that degree of integration correlates with the level of perceived uncertainty and retaliatory behaviour. The more disruptive the merger or the acquisition for the employees, the more likely they will perceive greater uncertainty and the more likely they will engage in retaliatory behaviour. Role in the transaction was another important contextual factor in terms of employee trust and justice evaluations. Employees working in the organization that was acquired perceive the new working environment as less fair, in terms of procedural justice, distributive justice, interpersonal justice and informational justice.

Another important contextual variable was mood of the transaction, namely whether a transaction is friendly or hostile. In the context of conflicting evidence in the literature on the impact of mood of transaction on employee affect and behaviour (Guerrero, 2008; Fried et al., 1996, Hambrick & Cannella, 1993; Walsh & Kosnik, 1993), this study found that employees in hostile acquisitions seem to behave differently than those in friendly acquisitions and experience more psychological distress. It appears that employees in hostile acquisitions are more cynical towards the organization and have a pronounced tendency to engage in retaliatory behaviour, as compared to employees in friendly transactions. Additionally, they reported more symptoms of health problems such as anxiety and experience more mental and emotional difficulties than employees going through friendly transactions. Therefore, this study confirms Fried and colleagues' (1996) findings that employees in hostile acquisitions are more emotionally affected by the change. However, I did not find a link between transaction mood and employee turnover intentions, which seems to be in line with the results obtained by Walsh and Kosnik (1993). However, in contrast with the study by Walsh and Kosnik (1993), I measured intentions to leave rather than forced departures. Additionally, the sample in this study included employees at all levels, rather than executives alone. Therefore, this study suggests that employees in hostile acquisitions do not harbor departure cognitions as a function of mood alone, but they may experience more psychological distress and adopt other types of negative behaviours, which may harm the organization. However, this study suffers from limitations of a cross-sectional design and small sample size. More evidence is needed to uncover the specific aspects of hostile transactions that may cause significant distress to employees.

Lastly, in my inductive analysis of employee outcomes in mergers and acquisitions, I discussed the application of two algorithms, namely logistic regression with stepwise feature

selection based on likelihood ratio and CART decision trees, in order to address the need for more integrative data-driven methodologies in mergers and acquisitions research. I analyzed the two algorithms by comparing the performance metrics for each of the outcome variables: somatic health, anxiety and social dysfunctions, cynicism, turnover intentions and retaliatory behaviour.

In case of somatic health problems, the decision tree model had a 96% precision in classifying employees into the low somatic health problems class versus 81% for the logistic regression model. The decision tree had an 84% precision for the employees in the high class, versus 83% recorded by the logistic model. In case of the high-risk employees, when the logistic regression estimates if a person experiences serious somatic health problems, it is correct only 83% of the time, while the decision tree 84% of the time. In contrast when classifying employees on the low and the high class, the decision tree correctly identifies 96% of all employees in the high class and 81% of all employees in the low class. The overall accuracy levels were 90% for the decision trees and 82.2% for the logistic regression. In determining if an employee experiences mild or more severe somatic health problems, while there are many false positives in the low category, 10 out of 54 compared to the logistic regression model, the decision tree managed to better detect employees at risk of experiencing severe somatic health problems, namely 52 out of 54. The logistic regression showed the most important features for employees experiencing somatic health problems were hypervigilance, perceived uncertainty, breach in psychological contract, perceived differences and cynicism. The emergence of hypervigilance as an important predictor shows that employee distrust and suspicion may have wider health implications for employees involved in mergers and acquisitions. This study is the first quantitative study to address hypervigilance in mergers and acquisition research and is

consistent with extant literature regarding the relation between paranoid cognition or excessive suspiciousness and individual physical health and wellbeing in psychological research (Freeman et al., 2011; Barefoot et al., 1987). Additionally, the emergence of perceived uncertainty as an important discriminatory feature for employee health corresponds to the mergers and acquisitions evidence on the role of uncertainty in employee reactions (Marmenout, 2010; Giessner, 2011) as well as the results of the structural equation modelling (Chapter 5.4.1.). These analyses show that perceived uncertainty may be a far more powerful and highly relevant stressor for employees in mergers and acquisitions, in line with extant psychological research on stress and health (Monat, Averill, & Lazarus, 1972; Zakowski, 1995). Considering that this study had a minimum acceptable sample size for fitting a decision tree, more studies with larger sample sizes are needed to confirm the role of uncertainty for employees. Perception of differences between the groups of employees involved in the merger or the acquisition also emerged as an important factor in employee somatic health along with breach in psychological contract and cynicism. This is in line with previous studies in the extant cynicism literature, which discusses the link between cynicism and emotional exhaustion (Johnson & O'Leary-Kelly, 2003) as well as other negative consequences, such as job satisfaction (Wanous, Reichers, & Austin, 1994), commitment (Tesluk, Vance, & Mathieu, 1999) and turnover intentions (Chiaburu et al., 2013; Wanous, Reichers & Austin, 2000). By contrast, the variables selected through decision tree modelling were hypervigilance, uncertainty perceptions, psychological contract, degree of integration and tenure. All in all, these results emphasize the important health implications of suspiciousness between co-workers (Freeman et al., 2011; Barefoot et al., 1987), the extent to which employees' future is predictable or not (Monat, Averill, & Lazarus, 1972; Zakowski, 1995), but also to the

importance of contextual factors, such as the degree of integration (van Oudenhoven & de Boer, 1995).

In case of employee anxiety, the logistic regression found better decision boundary to identify employees in high anxiety class (85.2% recall for logistic regression versus 82.3%). In terms of overall accuracy, logistic regression underperformed the decision tree with 83% versus 86.1%. Despite the higher overall model accuracy, from a practical and cost perspective, the model that can best identify employees having a high risk of serious health problems would be preferred. The features that emerged as having the highest discriminatory power of employee anxiety that emerged through logistic regression were cynicism, hypervigilance and uncertainty. The decision tree found cynicism, identification with the pre-merger organization and tenure as the most important predictors. This is in line with prior mergers and acquisitions literature on the health effects of identification on the employees (Terry, Callan & Sartori, 2001; van Dick, Wagner & Lemmer, 2004). Additionally, these results show that anxiety seems to co-occur with employees psychologically distancing themselves from the job (i.e. being cynical) and the organization which is consistent with extant literature on cynicism (Cartwright & Holmes, 2006), and an overattending to cues that could provide employees with information about their jobs and future in the new organization, as a response to high perceived uncertainty (Stephan, Stephan & Gudykunst, 1999). The results also show that certain categories of employees are more predisposed to become anxious at the workplace, namely those who remain identified with the pre-merger/ acquisition organization and those employees who have been working in the organization for longer periods.

In case of employee social dysfunctions, the decision tree again outperformed logistic regression with an overall model accuracy of 89% versus 82.2%. The decision tree correctly

identifies 96% of all employees experiencing serious social dysfunctions compared to 83.3% by the logistic regression model. In case of low social dysfunction category, logistic regression and decision trees had similar accuracy levels, namely 81.1%. The features identified as the most important predictors in the logistic regression models were cynicism, motive for the merger or the acquisition, and age. The decision tree classifier revealed the importance of several other factors, such as identification with the pre- and post-merger / acquisition organization, motive for the merger or the acquisition and industry relatedness. Results show that employees in transactions involving organizations operating in similar industries do not seem to experience health problems as much as those involving unrelated organizations. The emergence of industry relatedness as an important predictor to social dysfunctions is consistent with prior research regarding the impact of business relatedness (Homburg, Rost & Osterloh, 2009; Stahl & Voigt, 2008), suggesting that a certain degree of similarity in terms of business, technology or culture may be beneficial for the newly-created organization. Furthermore, these results suggest employees in transactions driven by scale economies, rapid growth, and diversification are more problematic for employee health versus those transactions driven acquisition of knowledge and geographic expansion.

In case of cynicism, there was a 2-percentage point difference in accuracy rates between the logistic and decision tree model (89% and 91% respectively). In terms of class accuracies, the logistic regression correctly classified up to 91% of the observations in the high cynicism category while the decision tree, 89%. For the low class, the performance is reversed, namely 85% accuracy for the logistic regression and 93% for the decision tree. While the overall accuracy rates indicate a better performance of the decision tree, the logistic regression model was in fact better at identifying employees with cynical attitudes (i.e. class 1 – high cynicism).

The most important features that emerged through logistic regression were uncertainty perceptions, affective commitment, anxiety, identification with the pre-merger/acquisition organization and whether the organizations are from the same country. It seems that the more people perceive the working environment as uncertain, the more likely they will psychologically distance themselves from the job and organization. In the context of high uncertainty, employees seem to sustain their adaptability by psychologically withdrawing from their work. Mergers and acquisitions appear to trigger such states of uncertainty and insecurities among employees which may result in cynicism as a defence mechanism (Andersson, 1996). Results also showed that a low identification with the pre-merger/ acquisition organization may result in a higher tendency to psychologically withdraw from work. These results may be due to the fact that social identification may provide employees with social support and a sense of belonging (Haslam et al., 2005), which has been found to reduce the effect of work stress (Aspinwall & Taylor, 1997; Berkman, 1985). The emotional support and social companionship employees may receive via group affiliation and identification may mitigate the effect of uncertainty on employees psychologically withdrawing from work (Aspinwall & Taylor, 1997; Underwood, 2000). For employees, a domestic merger or an acquisition does not seem to be as problematic as cross-border mergers or acquisitions, given the negative significant linear relationship between same country and cynicism that emerged through logistic regression. In contrast, the features with the highest decrease in node impurity found through decision tree modelling were uncertainty perceptions, procedural justice, anxiety, turnover intentions and age. These results indicate the cynicism and quitting intentions may coexist as coping mechanisms to the uncertainty caused by the merger or the acquisition. Results also suggest that demographic variables, such as age, may be important as well in how employees cope with the insecurity and uncertainty at the workplace

in a merger or an acquisition. It seems that employees at the start of their careers and between 40 and 49 years of age are less likely to be cynical compared to employees between 30 and 39 years of age and those closer to retirement. This is consistent with the extant cynicism literature (Cartwright & Holmes, 2006) which shows that young people between the ages of 25 and 35 are more predisposed to become disillusioned with their jobs and leave them more easily for more successful and fulfilling careers (Robbins & Wilner, 2001). However, given the fact that this study was cross-sectional and that the sample size was small, more longitudinal studies with a larger sample size would further clarify the causes, consequences and correlates of cynicism in a merger/ acquisition context.

In case of retaliation, the logistic regression outperformed the decision tree, with an overall accuracy of 89% and class 1 (high retaliation) recall of 91%. The decision tree only managed to label correctly 83% of the observations, and only 70% of the employees in the high class condition. The most important variables that emerged through logistic regression were uncertainty perceptions, identification with the post-merger / acquisition organization, identification with the pre-merger / acquisition organization, motive for the merger or the acquisition and hypervigilance. Results suggest that the more employees identify with the post-merger / acquisition organization and the less they identify with the pre-merger/ acquisition organization, the more likely they are to engage in retaliatory behaviour. It may not be the employees who are not psychologically attached to the new organization that seek retribution but those who are. These results mirror those obtained through structural equation modelling and contradict the idea that employees in the acquired organization who are not psychologically attached to the new organization are more likely to engage in resistive behaviour or some form of retribution (Empson, 2001; Weber & Camerer, 2003; Jetten & Hutchinson, 2011; Vaara et al.,

2012; Quah & Young, 2005; Apfelthaler et al., 2002; Colman & Lunnan, 2011). Furthermore, the logistic regression results also show that employees experiencing a merger or an acquisition between unrelated organizations are more likely to engage in retaliatory behaviour compared to employees in mergers or acquisitions involving related organizations. Additionally, employees experiencing mergers or acquisitions driven by motives such as economies of scale or acquisition of knowledge are more likely to engage in retaliatory behaviours compared to employees experiencing mergers or acquisitions driven by geographic expansion or rapid growth rationales.

In case of turnover intentions, the linear model accuracy came in higher than that of the decision tree (82% versus 80%). Recall performance across classes was also higher for the logistic regression compared to the decision tree. Out of all employees with a high intention to quit, the decision tree correctly classified 75% of the observations, while the logistic regression 84%. For classifying employees by turnover intentions (high/low), the linear method was found to be more suitable. The most important features of employee turnover were affective commitment, uncertainty perceptions, procedural justice, trustworthiness, acquirer to acquiree size and hypervigilance. It seems that employees who do not feel committed to the organization, have a 76% chance of planning to quit the organization. This is in line with prior extant literature discussing the effects of affective commitment on several negative outcomes, including turnover, absenteeism, and job withdrawal (Somers, 1995; Thanacoody, Newman & Fuchs, 2013; Mensah & Kosi, 2016; Vandenberghe & Tremblay, 2008). Also, the presence of acquirer to acquiree size as a significant predictor of employee turnover intentions supports the study by Hambrick and Canella (1993) which showed that the smaller an acquired firm relative to an acquiring firm, the greater the turnover intentions. It seems that employees who worked for the acquirer organization whose pre-merger/acquisition size was higher than that of the acquired organization,

have a lower tendency to quit the post-merger/acquisition organization versus employees from the acquired organization. The results also show that elevated levels of perceived uncertainty may be associated with a higher risk of departure. The relation between perceived uncertainty, health and turnover intentions has been investigated in extant literature (O'Driscoll & Beehr, 1994), suggesting that the more ambiguous the working environment, the more likely employees consider leaving the company. Quitting intentions seem to co-exist with hypervigilance, suggesting that employees being suspicious of each other may not be a sustainable working relationship that employees are willing to be engaged in for long periods of time, thus planning to quit. Additionally, it seems that employees who worked for the acquirer organization whose pre-merger/acquisition size was higher than that of the acquired organization, have a lower tendency to quit the post-merger/acquisition organization versus employees from the acquired organization. Perceptions of unfairness in terms of how organizational procedures are made seems to have a strong role in employees' intentions to quit. The role of procedural justice in employees quitting intentions has been supported both through logistic regression and decision tree modelling. These results confirm existing evidence that a perceptions of fairness in organizational processes is one of the strongest predictors of turnover intentions (Daileyl & Kirk, 1992).

The results of the inductive methods used in this study emphasized the need for an integrative approach to the methods used to study employee psychology of mergers and acquisitions and the intricacies of this phenomenon. Furthermore, the nonlinear decision tree methodology also highlighted the inherent limitations of linear methods in finding variables that seem to be important factors in various employee outcomes and not identified through linear methods. For example, in classifying employees by retaliatory behavior (high/low), the features

with the highest discriminatory power were uncertainty, identification with the post-merger / acquisition organization, identification with the pre-merger / acquisition organization, motive for the merger or the acquisition and hypervigilance. In classifying employee by intentions to quit (high/low), the features with the highest discriminatory power were affective commitment, uncertainty perceptions, procedural justice, trustworthiness, acquirer to acquiree size and hypervigilance. Similarly, in classifying employees by cynicism (high/low), the most important features were uncertainty perceptions, affective commitment, anxiety, identification with the pre-merger/acquisition organization and whether the organizations involved in the merger or the acquisition are from the same country. Therefore, the inductive models suggests there are several factors associated with the way employees react to the merger or the acquisition and which have not been included in prior research or have not been sufficiently discussed in extant literature to justify hypothesizing for in empirical investigations (e.g. organizational size before the merger / acquisition, motive for the merger / acquisition, age).

Furthermore, the use of inductive methods such as those proposed in this study provides new feature importance indicators other than β coefficients used in standard regression analyses or R^2 to assess the importance of variables in prediction or classification models (e.g. impurity measures such as the Gini coefficient). As this study shows, the use of alternate measures to assess the importance of features in classification models helps reveal new variables that seem to be important for the outcome variable of interest but which remain undetected through regression models. Therefore, this study provides evidence of the fact that both context, demographics, cognition, emotion, behaviour and employee health matter and these can be uncovered by taking an integrative approach to the study of employee psychology of mergers and acquisitions.

5.6. Limitations and future research directions

There are certain limitations to this study. From a theoretical standpoint, in this study it was not possible to evaluate perceived status as a measure of dominance. Existing instruments measure status in terms of some organization-specific dimensions (Terry, Callan & Sartori, 2001). Furthermore, a group's dominant status is measured relative to another relevant group. Therefore, this requires us to define a set of relevant dimensions for each organization sampled and recruitment of a statistically relevant sample from all groups in a merged organization. As the objective of this study was to minimize the bias identified in my systematic literature arising from the recruitment of participants from a single case of a merger or an acquisition, the group status (in the sense of power or dominance) was not measured. Instead, a relative position in the post-merger/acquisition hierarchy was inferred and discussed in the context of the role in the transaction (i.e. being with the acquired organization, acquirer or merged organizations). However, this does not necessarily imply a position of power or privilege as van Knippenberg and colleagues (2002) argue. Therefore, it would be useful that future studies include a measure of power or dominance that directly measures employee perceptions.

Another important limitation in terms of measures used is that in this study I measured employees' perceptions of psychological contract breach regarding their relation with the post-merger/acquisition organization. This is inherently a subjective evaluation of contractual obligations and their fulfilment by the employee in the relation with the new post-merger organization. On the one hand, since the contractual relation after an M&A is replaced by a new one, through breach or completion (Rousseau, 1995), employees' evaluation might have been compromised by employees' inherent resistance to the M&A (Iverson & Pullman, 2000) or a

relatively short tenure in the post-merger/acquisition organization (Bal, Cooman & Mol, 2013; Robinson & Morrison, 2000). On the other hand, the subjectivity embedded in the psychological contract breach judgments makes these results prone to error. An alternative methodology would have been to test employees' perceptions of what was promised by the new organization close to the transaction and perceptions of what they received 1-2 years after the transaction. In this scenario, the contract breach perceptions would have been operationalized as the difference between the promises and their fulfilment collected at two different points in time. However, it is important to note that perceptions of psychological contracts change with time. An important aspect about psychological contract construct is that perceptions of breach refer to the time the employee assesses contract fulfilment, which may differ from the perceptions at earlier points in time (Morrison & Robinson, 1997). Considering the fact that this study was cross-sectional and because of the difficulties I have encountered in conducting a longitudinal study, it was not possible to assess how these psychological contract changed over the course of the post-merger/acquisition integration period (i.e. before the transaction, closer to the transaction moment and 1 year into the merger/acquisition). Furthermore, considering several problems were identified with the use of other measures of psychological contract (Cronbach & Furby, 1970; Edwards, 1991), I had conceptual and methodological grounds for using Robinson's (1996) measure of psychological contract breach. Although this study design and organizational context may have introduced some perceptual distortion, I believe that it provides the most accurate assessment of psychological contract breach.

Other measures, such as the cynicism scale used here (Schaufeli, Leiter, Maslach & Jackson, 1996) and the general health scale (Goldberg & Hillier, 1979) are self-report measures. Given the strong relation between the various outcomes and the results of the structural equation

modelling, the results may be biased by common-method variance. It may be useful that future studies also examine these outcomes by using objective measures (Podsakoff, MacKenzie, Lee & Podsakoff, 2003), such as medical history.

Another theoretical limitation is that in the structural equation modelling, I have not included participant demographic data, but M&A demographic data. That is because previous studies using linear methods found biographical variables are not as relevant to the explanation of various outcomes such as burnout (Chirkowska-Smolak & Kleka, 2011) or perceptions of psychological contract breach (Coyle-Shapiro & Kessler, 2002; Smithson & Lewis, 2000), suggesting organizational variables may be more important (Chirkowska-Smolak & Kleka, 2011).

From a methodological standpoint, another limitation is that this study is a cross-sectional survey. This means that it did not analyze emotions, behaviors and employee health over a period of time that would allow us to make causal inferences. Therefore, it is not certain that certain associations between variables depict actual cause and effect relationships. It would be useful that future studies test the relations uncovered in this study in longitudinal investigations of employee psychology of mergers and acquisitions. Another methodological limitation lies with the data treatment for the logistic regression with stepwise feature selection and decision trees. The discretization of the continuous outcome variable does automatically imply a loss of information, as argued repeatedly in clinical research (MacCallum et al., 2002; deCoster et al., 2011). The high and low classes split by sample-derived values do not necessarily represent true dichotomies that can be extrapolated to population. An individual with a score marginally above the median, is obviously not on the same par with individuals with higher scores, and who may not necessarily need intervention. While this is a common practice in medical research

(Farrington & Loeber, 2000) it would be useful that future studies that would use larger sample sizes address this shortcoming by using regression decision trees that take in continuous variables as response.

From a statistical standpoint, a limitation to this study is the relatively small sample size for fitting the structural equation models, decision trees and logistic regression with stepwise feature selection (i.e. 108 respondents). The use of a small sample size may undermine the internal and external validity of the study (Button et al., 2013), which may have reflected in the structural equation model fit indexes. Structural equation modelling or path analyses are sensitive to small sample sizes (Deng, Yang & Marcoulides, 2018; Natchigall et al., 2003). The stability of the SEM model may be further undermined when there is an increasing number of feature variables (Deng, Yang & Marcoulides, 2018). Bentler and Chou (1987) suggested that a ratio of a sample size relative to the number of feature variables must be around 5:1 for normally distributed data. However, in my case, this ratio was 3:1 which may have produced insignificant fit indexes.

Nevertheless, while SEM literature and prior decision tree research showed that a sample above 100 respondents may be sufficient for both hypothesis testing and for achieving predictive stability in inductive methods such as decision trees (Floares et al., 2017), further empirical work would only strengthen the validity of these methods. Algorithms that base inferences on small sets of data are usually susceptible to bias, and do not have the same predictive stability (Jacobucci, 2018). Therefore, further studies with larger sample sizes (+500) are needed to uncover the relationships between the features and outcome variable.

5.7. Conclusions

To conclude, this study revealed the importance of several factors, apart from those investigated in existing mergers and acquisitions literature for how employees navigate a merger or an acquisition at the workplace in terms of emotions, behaviors and impact on their health and well-being. The hypotheses tested in this cross-sectional study suggest employees' group identities, the nature of their relation with their colleagues and contextual factors impact their level of commitment, their propensity to engage in more passive behaviors such as psychological withdrawal or quitting, or other, more deviant behaviors, such as, abuse and theft. As a function of these factors, employees may experience states of anxiety, somatic health problems and social dysfunctions. Furthermore, the inductive methods used in this study provide evidence of the importance of not only cognition in employee outcomes but also of contextual and demographic factors that can shape their attitudes, behaviours and make them vulnerable to health problems. As this cross-sectional study does not necessarily imply a cause and effect path in the models generated through inductive methods, it would be useful that future studies aim at testing the relationship found inductively here using deductive methods in other empirical settings as a means toward improving generalizability and strengthening the credibility of such inductive methods in future organizational psychological research.

Chapter 6: Towards an integrative approach to the study of employee psychology in mergers and acquisitions

Having discussed my four studies in the preceding chapters, in this final chapter, I bring together the findings and conclusions and relate them back to the original aims and research questions of this thesis. Therefore, here, I aim to: (I) reiterate thesis aims, (II) provide a brief overview of the systematic literature review (Chapter 2); (III) discuss the relevance of social identity perspective in mergers and acquisitions research and the integration with other relevant perspectives (Chapter 3 and Chapter 4); (IV) examine the possibility of an integrative theoretical and methodological model of employee psychology in mergers and acquisitions (Chapter 5); (V) consider the implications for research and practice, and lastly, (VI) reflect on the key limitations and possible future research directions.

In this thesis, I aimed to answer 5 research questions. Firstly, I aimed to examine existing evidence about emotions of employees experiencing a merger or an acquisition (RQ1), about their behaviour at the workplace following a merger or an acquisition (RQ2) and evidence about their health and well-being following a merger or an acquisition (RQ3). Secondly, I aimed to explore whether new evidence support the relation between contextual variables, employee affect, behaviour, health and cognition in mergers and acquisitions (RQ4). Lastly, I aimed to examine what variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation? (RQ5).

6.1. The systematic literature review and research questions

In order to address the first three research questions of this thesis, the systematic literature review in Chapter 2 examined existing evidence on the emotions of employees experiencing a merger or an acquisition. In this review, I have also explored existent literature on how employees respond behaviourally to a merger or an acquisition as well as the extent to which this type of organizational change creates the prerequisites for a range of negative employee health and well-being outcomes.

From the 288 studies reviewed, I found that employees appear to experience negative affect such as decrease in job satisfaction (Brown & Humphreys, 2003; van Dick, Wagner & Lemmer, 2004), fear and anxiety (Searle & Ball, 2004; Astrachan 2004; Kavanagh & Ashkanasy, 2006), frustration or feelings of being devalued (Ray & McGee, 2006). These emotions also seem to reflect in employees' behaviour, as literature provides evidence of high employee turnover rates after a merger or an acquisition (Fried et al., 1996; Lubatkin, Schweiger & Weber, 1999), resistance (van Oudenhoven & de Boer, 1995; McEntire & Bentley, 1996; Empson, 2001) or negative behaviour towards the employees of the other organization involved in the merger or the acquisition (McEntire & Bentley, 1997; Empson, 2001; Vaara, 2000; Quah & Young, 2005). Existing evidence on employee health and well-being in mergers and acquisitions seem to resonate with the affective and behavioural outcomes, as research suggests employees are likely to experience exhaustion (Väänänen et al., 2004), functional incapacity (Väänänen et al., 2004), psychological distress (Joslin, Waters & Dudgeon, 2010), or depression (Väänänen et al., 2011). An examination of these outcomes showed these outcomes are linked to a set of factors, which I classified into contextual, cognitive and resource-related antecedents which correspond to

different theoretical perspectives. Some of these perspectives are social identity theory (Tajfel & Turner, 1979; Abrams & Hogg, 1990; Turner, 1987; Turner et al., 1987), culture perspectives (Davis, 1985; Young, 1989), trust and justice (Greenberg, 1987; Adams, 1965). From the 288 studies reviewed, it was evident that it was not clear how these perspectives and antecedents relate to one another, as these evolved in a fragmentary manner. This highlighted four key limitations.

First, none of the studies reviewed provide an integration of these perspectives and discuss how the corresponding antecedents (contextual, cognitive and resource-related) interact to explain negative employee outcomes in terms of affect, behaviour and health. While some studies do take into account certain contextual aspects, such as degree or speed of integration, when discussing the impact of organizational culture fit (Bauer & Matzler, 2014) between the organizations involved in the merger or the acquisition, the theoretical scope remains insufficient and cannot be considered integrative. A better understanding of the factors that contribute to negative affect or behaviour and employee health outcomes are useful both from a theoretical and a practical standpoint. On the one hand, an integrative approach provides us with a more comprehensive view of how employee cognition, behaviour, affect and context are interconnected. On the other hand it helps inform and structure more effective interventions and post-merger employee integration plans by identifying vulnerable categories of employees from a psychological health perspective or those cases of merger / acquisition that are likely to be problematic for the employees.

Second, the theoretical scope of employee outcomes is narrow. Despite indications in the qualitative literature of certain cognitions such as suspicion, distrust and perceived uncertainty (Harwood & Ashleigh, 2005; Maguire & Philips, 2008; Guerrero, 2008; Edwards & Edwards,

2014), the quantitative health research is limited to only few psychopathological domains, such as anxiety (Cartwright & Cooper, 1993) or depression. However, the studies reviewed in Chapter 2 and extant literature point to a solid theoretical justification for the exploration of symptoms within the spectrum of other mental pathologies such as paranoia or hypervigilance and associated behaviour, such as cynicism. Extant stress research has shown these outcomes are linked with workplace problem of burnout (Maslach & Leiter, 1997; Maslach & Schaufeli, 1993), reduction in organizational citizenship behaviour (Andersson & Bateman, 1997) and unethical behaviour (Cartwright & Holmes, 2006). Therefore, for both theoretical and practical reasons, it is important to understand these outcomes, their antecedents and correlates.

Third, there are generalizability issues arising from several methodological shortcomings. The majority of the studies reviewed are conducted in a single case of a merger or an acquisition (van Dick, Wagner & Lemmer, 2004; Lipponen, Olkkonen & Moilanen, 2004; Carter & Pavor, 2003; Monin, Vaara & Kroon, 2013; Bartels et al., 2006; Amiot, Terry & Callan, 2007; Boen et al., 2007). While the number of participants to the study is large in some cases (e.g. 6511, Väänänen et al., 2011), the results cannot be generalized to other cases of mergers or acquisitions. There are various forces at work in a particular business setting which may have an impact on how employees construe the merger or the acquisition, such as the motive for the transaction, HR policies, post-merger/acquisition integration roadmap, etc. It was evident from the existing employee psychology research that the specific local context of a merger or an acquisition is overlooked, possibly due to limited access to a diversified sample. Nevertheless, the few studies conducted in more than one case of a merger or an acquisition (Cording et al., 2014; Bauer & Matzler, 2014; Cowen, 2012; Hambrick & Cannella, 1993; Junni, 2012;

Kiessling, Harvey & Moeller 2012; Kurg & Nigh, 2001; Lee et al., 2014) show that the local story is very important.

Fourth, it was clear from the existing research that one perspective has been more predominant in understanding employee cognition and behaviour in mergers and acquisitions. This perspective is based on the social identity theory, which I have discussed at length in Chapter 2 (van Knippenberg et al., 2002; Carter & Pavur, 2003; van Dick, Wagner & Lemmer, 2004; van Dijk & van Dick, 2009; Gleibs, Mummendey & Noack, 2008). It was also evident that any integrative approach to the study of employee psychology in mergers and acquisitions needs to account for the various relevant social identity related factors that emerged as important in the systematic review. However, a closer examination of the studies reviewed revealed several inconsistent results in terms of the role of employees' identification with the organization before and after the merger or the acquisition on employee outcomes. These inconsistent results were also found when discussing the role of employees belonging to one or the other organization. Some studies (Linde & Schalk, 2008; Lupina-Wegener et al., 2014; McEntire & Bentley, 1996) suggested that employees construe the merger / acquisition, evaluate the work situation and engage in behaviours differently as a matter of the organizations involved in the transaction they belong to, and the status of this organization (or group of employees). Other studies did not find employees identification with the organization before or after the merger/acquisition or status to matter as much, for example when it comes to job satisfaction (Panchal & Cartwright, 2001; Joslin, Waters & Dudgeon, 2010). However, considering the support the social identity perspective has received in empirical research and its authoritative position in mergers and acquisitions theorizing (van Dijk & van Dick, 2009; van Knippenberg et al., 2002; van Vuuren, Beelen & de Jong, 2010), for an integrative view of employee psychology in mergers and

acquisitions, it is important that we have a clear understanding of the role of employees' organizational identity and status, and the affective, behavioural and health implications.

Recognizing the issues identified in the systematic review, Chapter 3 discussed the social identity perspective and explored the role of group status in employee affective outcomes (e.g. job satisfaction, affective commitment, threat perceptions), as well as the correlates of employees' organizational identification in a merger / acquisition context in a meta-analytic study. The aim of this study was to clarify if there is a significant effect of group (or pre-merger / acquisition organization employees) status across studies and whether the link between employees' identification with the post-merger / acquisition organization and employee outcomes is consistent in existing research. Within a sample of 16 studies, in this meta-analysis I aimed to answer three research questions:

1. Are employees in the low status group more predisposed to be more dissatisfied with their job, less committed to the post-merger/acquisition organization, feel more threatened by the merger, or identify less with the post-merger/acquisition organization versus employees in high-status groups?
2. Secondly, what is the strength of association between employees' identification with the new organization after the merger or the acquisition and their satisfaction at the workplace?
3. Is there a difference in effect size between studies that use subjective measures of status and studies that use objective measures?

6.2. Social identity perspective in mergers and acquisitions

Despite the popularity of the social identity perspective in the psychology of mergers and acquisitions research, there has been no attempt to my knowledge to examine the strength of evidence on the role of employee status in a merger or an acquisition context and employee outcomes as well as the relationship between employees' identification with the post-merger / acquisition organization and employee outcomes. In order to supplement the evidence discussed in my systematic literature review, and to answer the research questions above, in Chapter 3 I discussed the results of my meta-analysis within a sample of 16 quantitative studies.

It emerged that belonging to one or the other organizations in the merger or the acquisition does matter when it comes to the extent to which employees identify with the new organization, but not necessarily when it comes to job satisfaction, affective commitment to the organization and perceptions of threat. The meta-analysis also revealed that the way status is operationalized (objective measurement versus employee perceptions of status) in research seems to have an influence on the relation between status and job satisfaction. In turn, the meta-analysis revealed that the more employees experiencing a merger or an acquisition identify with the new organization, the more positively they evaluate the work situation.

Nevertheless, the meta-analysis revealed additional limitations in the literature. First, despite the popularity of social identity perspective, there are surprisingly few studies that investigate social identity processes in relation to common employee outcomes that can be meta-analysed. For example, some studies examine status in relation to behavioural outcomes such as turnover (Hambrick & Cannella, 1993; van Dick, Wagner & Lemmer, 2004). But while some studies discuss turnover among top management (Hambrick & Cannella, 1993) others discuss turnover intentions (van Dick, Wagner & Lemmer, 2004) or voluntary departures (Walsh and Kosnik, 1993; Papadakis, 2005). These are qualitatively distinct constructs for which we cannot

calculate a pooled estimate. Similarly, for affective outcomes, some authors discuss attitudes such as empathy (Chun & Davies, 2010), negative emotions (van Dick, Wagner & Lemmer, 2004), information satisfaction (Bartels et al., 2006) or confusion (Maguire & Philips, 2008). There is a variety of outcomes investigated in the literature but very few that focus on a common set of constructs that can be meta-analyzed.

Second, the studies do not report sufficient data to allow more in-depth moderating analyses. The systematic literature review discussed the strand focusing on the relevance of contextual factors, such as type of transaction (e.g. horizontal, vertical, etc. – Wickramasinghe & Karunaratne, 2009), scope of the merger / acquisition (domestic / cross-border – Larsson & Lubatkin, 2001), degree of integration (Meyer, 2006) or mood of the transaction (e.g. friendly / hostile – Citera & Stuhlmacher, 2001). Considering the importance of these factors as shown in the studies reviewed in Chapter 2, it is important that empirical research in mergers and acquisitions acknowledge these by reporting them and controlling for them in the statistical analyses.

Acknowledging these further limitations identified in the literature, as well as the findings of my systematic literature review and meta-analysis, the following two chapters introduced the idea that employee cognition, affect, behaviour, health and work context are interconnected and provided evidence of that. The overarching aim of the two chapters (Chapter 4 and 5) was to understand the factors that contribute to negative employee health and behavioural outcomes. These studies were designed and conducted with the view to address the limitations briefly summarized above and detailed in the systematic literature review and meta-analysis. Within a sample of 108 employees who have experienced a merger or an acquisition, in my cross-sectional study I aimed to answer the following research questions:

1. Does new evidence support the relation between contextual variables, employee affect, behaviour, psychosomatic health and cognition in mergers and acquisitions?
2. What variables accurately predict the risk of employee somatic health problems, social dysfunctions, anxiety, cynical behaviour, turnover intentions and retaliation?

6.3. Integrative theoretical and methodological model of employee psychology in mergers and acquisitions

Previously, I have emphasized as a limitation to existing research that literature in the field of employee psychology of mergers and acquisitions has evolved in a fragmentary manner. Having explored existing perspectives and the psychology of mergers and acquisitions research and discussed the social identity process in a meta-analysis, this raises the question: how can these perspectives (i.e. social identity, culture, contextual and trust perspectives) be reconciled? Within a sample of 108 employees working in various organizations, and who have experienced a merger or an acquisition within maximum 1 year, I aimed to understand how these perspectives are interconnected. In order to propose an integrative model that takes into account the findings and limitations of existing literature, and extract it from the data, I used two methods. For the testing an integrative model as derived from the theory and existing literature, I used standard statistical techniques, namely structural equation modelling and comparative analyses. For the generation of a theory-agnostic integrative model, I used data-driven methodologies inspired from machine learning research, namely decision trees and logistic regression with stepwise feature selection. In this chapter, I discuss the findings of these two methods in conjunction and

relate them to the findings of my previous studies (systematic literature review and meta-analysis).

Figure 1 illustrates the hypothesized model used in the first part of my study (i.e. hypothesis testing, Chapter 5.4.1.). Figure 2 illustrates the results obtained through structural equation modelling and comparative analyses. Both figures allow for the comparison of the hypothesized and final relationships.

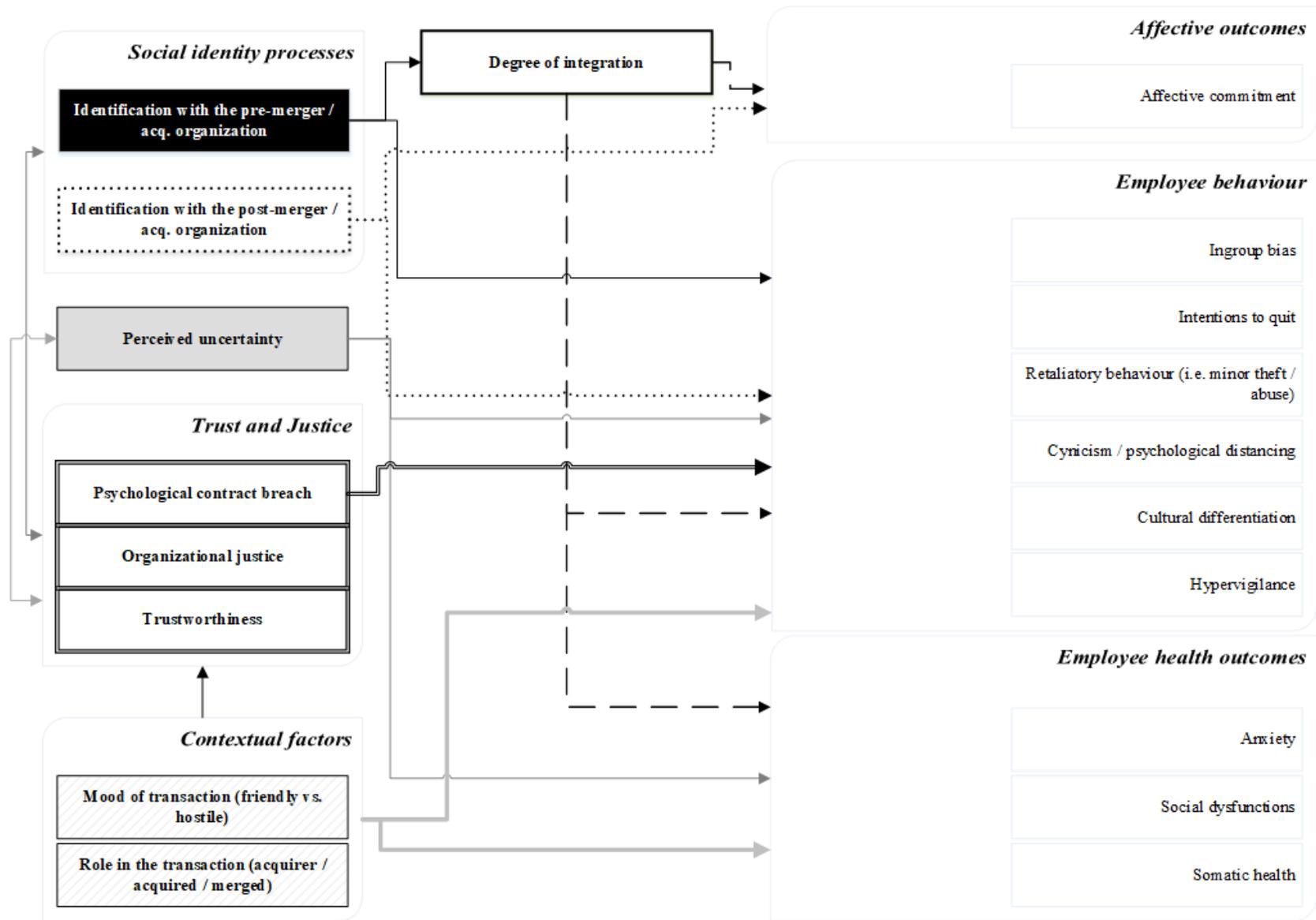


Figure 1: Hypothesized relations between social identity processes, uncertainty, trust and justice measures, contextual factors and employee outcomes.

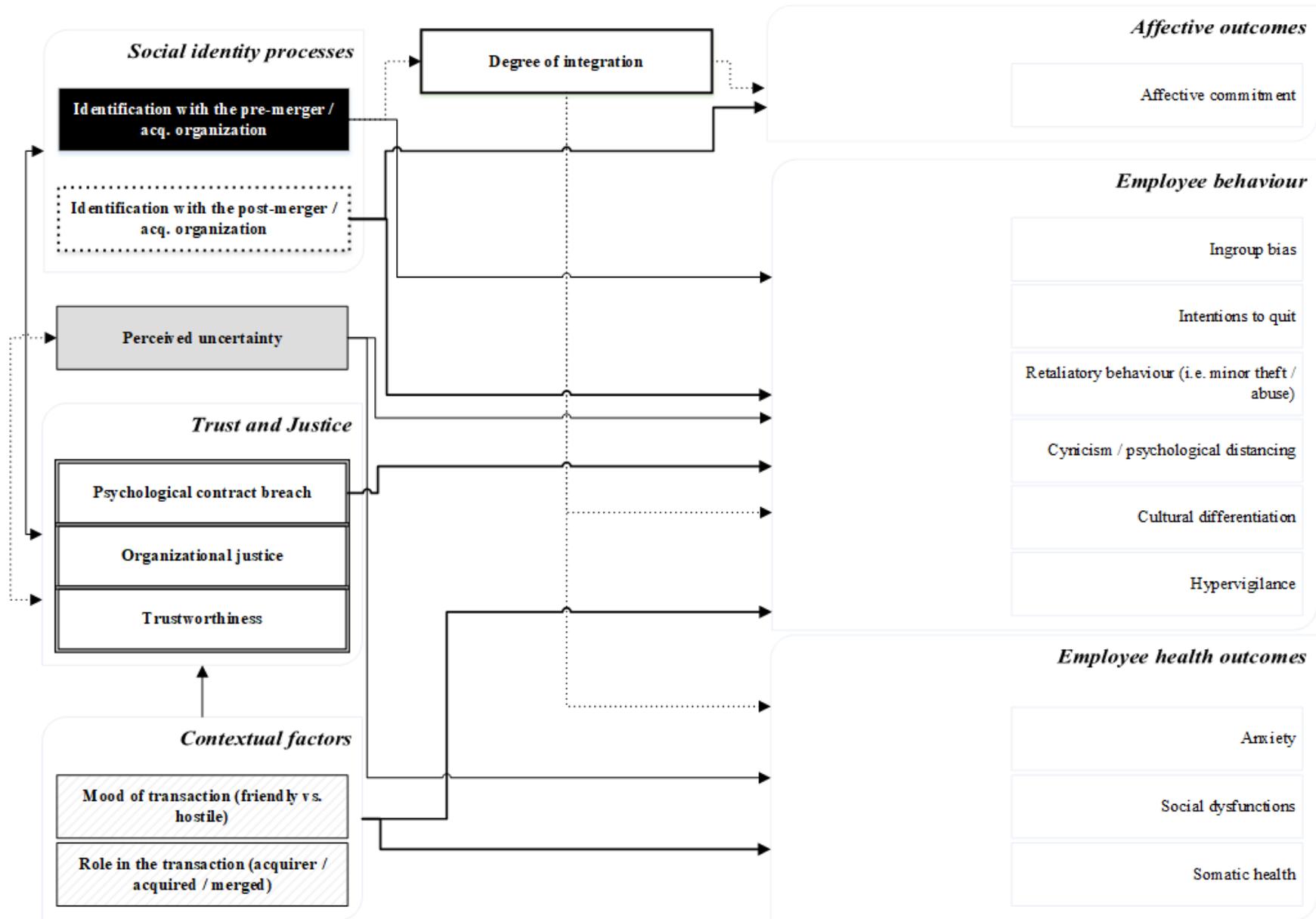


Figure 2: Results of the structural equation modelling and comparative analyses. Solid connectors represent significant associations. Dashed connectors represent non-significant associations at $p > .05$

The results obtained through standard statistics (structural equation modelling and analyses of variance) provide us some preliminary understanding on how these perspectives can be reconciled to explain employee outcomes in mergers and acquisitions, and how social identity perspective may represent a theoretical integrative platform as suggested in my meta-analysis.

From a contextual perspective, the results show employees in hostile transactions tend to become more cynical towards the organization and engage in retaliatory behaviour. This supports the existing evidence on the negative impact of hostile transactions on the employees (Fried et al., 1996). From a social identity theory standpoint, hostile transactions may cause more pronounced identity threats (Branscombe et al., 1999; Zhou, Shin & Cannella, 2008; Clark et al., 2010; van Vuuren, Beelen & de Jong, 2010), because they are likely to trigger more disruptive changes at the workplace in terms of human resources or work performance policies, or a more abrupt change in organizational status-quo versus friendly transactions (Conyon et al., 2001). This explanation would be in accordance with the literature in mergers and acquisitions discussing employees' feelings of threat (Clark et al., 2010; Amiot, Terry & Callan, 2007) which links employees' strength of organizational identification with this emotion of threat. In turn, perceptions of threat may lead to more pronounced tendencies on the part of the employees to perceive their jobs as less meaningful (Aslam, Ilyas & Imran, 2016) and engage in more deviant behaviours against the organization (Guerrero, 2008; Fried et al., 1996, Hambrick & Cannella, 1993; Walsh & Kosnik, 1993). Another contextual factor, namely role in the transaction, emerged as significant predictor of employee outcomes. Employees from the acquired organizations perceive the post-merger / acquisition organization as less fair compared to employees from the acquirer organization and employees experiencing a merger. These results support the results of my meta-analysis and existing research (Edwards & Edwards, 2012), and the idea that acquired

employees' expectation of significantly more job-related changes after a merger or an acquisition and the ensuing continuity threats versus acquirer employees makes justice judgments salient for the employees.

The important role of context for employee outcomes in mergers and acquisitions was also supported by the results of the two inductive algorithms. Apart from role in the transaction and mood of transaction, several other factors emerged. For instance, degree of integration appeared to be a significant predictor of employee somatic health problems. Motive for the merger or the acquisition also appeared to be an important predictor for employee social dysfunctions, as well as industry relatedness of the two organizations involved in the merger or the acquisition. Transactions between unrelated organizations seem to be more problematic for the employees compared with transactions between firms operating in the same or similar industry. These results support previous research (Coff, 2002; Homberg, Rost & Osterloh) but does not support the results of Stahl and Voigt's (2008) meta-analysis conclusion that degree of relatedness is not an important factor. One explanation for this may be related to the way relatedness was measured. In this study, I used employees' responses to industry items and coded relatedness as a binary variable, which takes the value of 1 if both organizations operate in the same industry and 0 otherwise. In contrast, Stahl and Voigt (2008) used a measure of relatedness that relied on companies' SIC codes. Another possible reason for this is that the sample of studies in their meta-analysis includes companies based in North America, while this study includes also European companies. Nevertheless, it is important here to emphasize the diversity of the measures used for examining the impact of relatedness in mergers and acquisitions. Several studies examine relatedness between the organizations involved in the merger or the acquisition from a national culture standpoint (Larsson & Lubatkin, 2001; Vaara et al., 2012; Slangen,

2006). Other studies examine relatedness from an organizational culture standpoint (Homburg & Bucerius, 2006). Other studies discuss relatedness from a technological standpoint (Puranam & Srikanth, 2007). In a meta-analysis of 67 studies meant to clarify how these measures of relatedness impact a merger or an acquisition, Homberg, Rost and Osterloh (2009) found relatedness measures based on industry similarity and those relying on technological development to be the most important in terms of acquisition performance, skill transfer and business longevity versus measures based on organizational / national culture or organizational size. Therefore, this study supports this idea that mergers and acquisitions between unrelated organizations cause employees more health problems versus those that are between related organizations.

Another contextual variable that emerged as important was motive for the merger or the acquisition. I found through both linear and non-linear statistics that employees involved in mergers or acquisitions driven by rapid growth and diversification to be more prone to social dysfunctions problems versus transactions driven by acquisition of knowledge or geographic expansion. Both motive and industry relatedness emerged as important predictors also for retaliatory behaviour. Overall, these findings suggest employees experiencing a merger or an acquisition between unrelated organizations that are driven by rapid growth or diversification are more susceptible to negative health and behavioural outcomes. These seem to resonate with the results obtained through comparative analyses and discussed previously regarding the role of transaction mood. Hostile takeovers are often driven by rapid growth motives (Drucker, 1986; Morck & Yeung, 1998) which seem to trigger more resistance from the employees and negative health outcomes, probably because it generates more insecurity (Guerrero, 2008) or threat.

The systematic literature review noted the important role of justice and trust measures in mergers and acquisitions. The main tenet is that employees perceive a sense of inequality among co-workers after a merger or an acquisition (Searle & Ball, 2004; Lipponen, Olkkonen & Moilanen, 2004; Klendauer & Deller, 2009; Clarke & Salleh, 2011). These perceptions appear to differ as a function of status of the group (or merger/ acquisition partner organization) they belong to (Clarke & Salleh, 2011) and to be linked with employees' strength of identification (Lipponen, Olkkonen & Moilanen, 2004; Edwards & Edwards, 2012). This study found support to these ideas. The results obtained through structural equation modelling and comparative analyses confirm that acquired employees perceive more inequality compared to employees of the acquirer organization and versus employees involved in a merger. Furthermore, it also supported the link between organizational justice and between identification with the post-merger/acquisition organization. Decision tree analysis revealed organizational justice, more specifically, procedural justice, to be linked with cynicism and desire for quitting. The relations between procedural justice and these outcomes are not in itself surprising considering the evidence in extant literature (Daly & Geyer, 1994; Korsgaard, Sapienza & Schweiger; Bernerth et al., 2007). Regarding the former outcome, the very concept of cynicism is defined in relation to some trust measure: "a belief on the part of an individual that his or her organization lacks integrity, and that principles such as fairness, honesty, and sincerity are" sacrificed in favor of organizational self-interest (Atwater, Waldman, Atwater, & Cartier, 2000, p. 279). For instance, Vance, Brooks and Tesluk (1995) proposed that ensuring a sense of procedural, distributive, and interactional fairness diminishes employee apathy and suspicion bred by cynicism. Also, regarding the latter outcome, namely turnover intentions, extant literature provides ample evidence of the fact that injustice at the workplace is associated with employees planning to quit

(Parker & Kohlmeyer, 2005; Nadiri & Tanova, 2010; DeConinck & Stilwell, 2004). However, the surprising fact is that that none of the other justice dimensions, namely interactional justice, distributive justice and informational justice were selected in any of the inductive models fitted. For instance, considering the impact of communication quality and quantity on employee outcomes in mergers and acquisitions found in literature (Basinger, 2008; Bhal, Bhaskar & Ratnam, 2009; Bartels, Pruyn & De Jong, 2009), we might reasonably assume interactional justice would be equally important (Armenakis & Harris, 2002). However, the results of my cross-sectional study contradict this assumption. It appears, that a merger or an acquisition may create the context in which the underlying construct of procedural fairness is more salient for the employees. Organizational justice theorists (Lind & Tyler, 1988; Thibaut & Walker, 1975) propose that a fundamental premise of procedural justice is that individuals who contribute or have a voice in the procedures are more likely to view the decision as fair and just. Thus, employees having the opportunity to provide input into the post-merger / acquisition integration process may create a sense of procedural fairness among the employees (Cobb et al., 1995) which might diminish employee cynicism and discourage employees from quitting. Organizational change literature (Daly, 1995; Fedor et al., 2006; Gopinath & Becker, 2000; Shapiro & Kirkman, 1999; Wanberg & Banas, 2000) suggests the more participation an employee engages in during the change or transition process, the more likely he or she will be motivated to commit to the program (Neubert & Cady, 2001). Thus, the results of this study imply that for employees it is much more important to feel involved in the change process following a merger or an acquisition, to feel empowered and to have a voice. Feeling like being part of the post-merger / acquisition process, this study suggests, employees will be more

committed and more supportive of the change. In social identity terms, employees need to develop a psychological bond with the new organization, or identify with it.

The results obtained in this study offers interesting insights also with regards to another trust-related concept, a correlate of organizational justice, namely psychological contract. Results showed that employees who perceive the organization has failed on its promises are also those likely to plan on quitting the organization. In contrast, these are also the employees less likely to engage in deviant behaviours at the workplace, such as minor theft and abuse. I have interpreted these results as a first evidence of the co-existence of two trust processes, one directed at the post-merger / acquisition organization, and the other at the pre-merger / acquisition organization. That is because employees may not manifest instances of retaliation against an organization with which the psychological contract has not (yet) been negotiated, but may manifest against the pre-merger/acquisition organization as a result of employees' construal of the merger or acquisition itself as a trust-destroying event (Searle & Ball, 2004; Bellou, 2007; Linde & Schalk, 2008). These processes seem to be evident also when we look at the relation that emerged between employees' identification with the pre- and post-merger organization and instances of retaliation. I found that a high identification with the post-merger organization is associated with higher occurrence of minor theft and abuse. The opposite pattern was found when I examined employees' identification with the pre-merger organization. Taken together, this seems to suggest that retaliation, as a function of psychological contract breach, does not epitomize a deteriorated relation between the employee and an organization with which there is no psychological attachment. Rather, it reflects the relation between an employee and an organization the employee identifies with (or perceives some form of identity continuity after the merger or the acquisition, Jetten & Hutchinson, 2011; Giessner, 2011; Lupina-Wegener et al., 2014).

Nevertheless, the results of the structural equation modelling and inductive analyses reveal that employees' perceptions that the organization has broken down on its promises is an important stressor which seems to be associated with somatic health problems, and employees being suspicious of each other. This supports extant research on the effects of psychological contract breach (Reimann & Guzy, 2017; Guest & Conway, 2003), and emphasizes that in mergers and acquisitions it remains an important psychosocial stressor which poses an important risk to employee health.

Both the organizational case study (Chapter 4) and the cross-sectional study (Chapter 5) showed the importance of uncertainty for employees' affective, behavioural and health outcomes. Structural equation modelling and inductive analyses discussed in the cross-sectional study provided quantitative evidence of how important uncertainty is in employee behavioural and health outcomes. In case of structural equation modelling, across most outcome variables (i.e. intentions to quit, retaliation, cynicism, hypervigilance, anxiety, social dysfunctions and somatic health), perceptions of uncertainty, emerged as the most important predictor. Through inductive algorithms, uncertainty emerged as an important predictor for outcome variables such as somatic health, anxiety, cynicism, retaliation, and turnover intentions. Despite its relevant role in employee psychology in mergers and acquisitions, there were only 4 studies included in my systematic literature review that examine uncertainty and link it to employee outcomes (Eriksson & Sundgren, 2005; Marmenout, 2010; Giessner, 2011; Cartwright, Tytherleigh & Robertson, 2007). There is a consensus on the fact that employees experience a great deal of ambiguity on how the changes caused by the merger might affect them in terms of work processes (Spedale, van den Bosch & Volberda, 2007; Kavanagh & Ashkanasy, 2006; Drori, Wrzesniewski & Ellis, 2013), their jobs and pay (Guerrero, 2008), and on how new standards and practices may strip

them of the underlying system of values on which they built their professional competence and hence, professional status. This study provides further evidence of this, which emerged both in my case study, and in my cross-sectional study through structural equation modelling and also through inductive analyses. However, there was an interesting association which I will discuss here. Uncertainty perceptions correlated positively with perceived differences between groups, a relation that I did not hypothesized but will try to relate it back to the findings of my systematic review and meta-analysis on the role of social identity process.

This link suggests that the more the employees perceive the two groups (i.e. organizations) involved in the merger or the acquisition as different, the more uncertain they perceive the working environment. This link may be interpreted within the social identity framework, as it may be evocative of intergroup processes, namely intergroup differentiation (Turner et al., 1987; Stets & Burke, 2000). Apart from the fact that employees experience uncertainty about how aspects of their working life might be changing following a merger or an acquisition, employees may also experience ambiguity and a sense of instability in terms of intergroup structure and the emerging hierarchical system (Oancea & Neundlinger, 2017; Terry & Callan, 1998). According to social identity theory, uncertainty in terms of intergroup structure implies that individuals perceive they can alter the existing intergroup hierarchical structure in a way that elevates ingroup status (Tajfel & Turner, 1979). As such, employees in mergers and acquisitions may be uncertain about their standing in a post-merger context and feel confused about how to behave and what to expect from the organizational environment. As the social identity theory suggests, individuals belonging to groups whose status is uncertain are motivated to reduce the ambiguity about their standing by seeking diagnostic evidence (Hogg & Mullin, 1999). This explanations seems to be supported by the significant association between

uncertainty perceptions and hypervigilance found in this study both through structural equation modelling and through inductive analyses for outcomes such as somatic health, anxiety, retaliatory behaviour and turnover intentions.

To conclude, this study revealed that multiple factors contribute to negative employee outcomes in mergers and acquisitions. These perspectives refer to contextual factors, trust and justice, social identity processes and perceptions of uncertainty. While these perspectives evolved in fragmentary manner, the relations found in this thesis shows these can be reconciled in an integrative model that can work across different contexts and account for the inherent heterogeneity of the merger/acquisition phenomena. This thesis also revealed and provided theoretical explanations that social identity processes may find reflection into how employees perceive the employees of the other organization involved in the merger or the acquisition, how they allocate trust in the new working environment and how contextual factors may form the basis for intergroup differentiation. It also revealed that these processes represent important psychosocial stressors that find expression in negative behaviours, quitting intentions, somatic health problems, anxiety and social dysfunctions. The points discussed here raise several important implications for both theory and practice. Likewise, I hope they raised more research questions than what I aimed to answer. In the next two chapters, I will discuss the implications for researchers and practitioners in the field of organisational psychology for mergers and acquisitions and conclude my thesis with an overview of limitations and proposals for future research.

6.4. Implications and contributions to practice and psychological research of employees in mergers and acquisitions

The systematic literature review of employee emotions, behaviour and psychosomatic health in mergers and acquisitions revealed important practical and theoretical implications. On a practical level, the research highlights that executives and managers responsible with the post-merger integration need to understand and empathize with employees' ways of perceiving and interpreting the merger or the acquisition and the working environment. Employees may construe the merger or the acquisition as a threatening event as fears of losing jobs, status and culture may ensue. Equally, employees may gradually become dissatisfied with their work, become disengaged or feel like their skills and competences would be rendered obsolete by the merger or the acquisition. Therefore, it is important that executives become aware of these employee reactions and show them support and compassion which can alleviate their anxieties. This review also highlighted the need of the employees to have a sense of belonging to the new organization so the integration efforts would need to include actions that facilitate employees' socialization into new working culture and routines. Another practical implication of this review is that executives responsible with the post-merger/acquisition integration need to eliminate uncertainties and communicate frequently and honestly with the employees. Ambiguity surrounding their work may fuel a range of negative emotional and behavioural reactions on the part of the employees, as both the systematic literature review highlighted and cross-sectional study confirmed.

On a theoretical level, my systematic literature review highlighted several theoretical implications and inconsistencies. For instance, the review raised certain relevant questions, such as what is the role of employees' group identities in engaging in passive (psychological withdrawal) or deviant behaviours (such as abuse or theft). Employees may sometimes decide to quit the organization after a merger or an acquisition. Equally, they may also engage in deviant behaviours such as abuse or theft. These behaviours may also be linked with group status in the new organization. Does status or position in a post-merger/acquisition hierarchical arrangement in the organization may animate more passive or more aggressive behaviours? Also on a theoretical level, the systematic literature review suggested there may be two trust-processes at work in a merger or an acquisition context. On the one hand, there is the trust-destruction process, which refers to employees' trust relation with the pre-merger / acquisition organization. On the other hand, there is a trust-destruction process, which refers to the trust relation between the employees and the post-merger / acquisition organization. The co-existence of these two processes, however, need to be validated in empirical research. The systematic literature review also showed that there may be certain contextual factors that may make certain employees more predisposed to certain emotional, behavioural and health outcomes compared to others. The factors may be related to the degree of integration, the role in the transaction (acquirer, acquired, merged), mood of the transaction (i.e. friendly or hostile), etc. However, due to the scarce literature on the contextual factors impacting employee psychology in mergers and acquisitions, these relations need to be further tested in empirical research.

Another factor that emerged in my systematic literature review was the lack of a meta-analytic research of the studies carried within the social identity perspective, despite its central role in understanding employee psychology of mergers and acquisition in existing research.

Therefore, Chapter 3 discussed the results of my meta-analysis on the impact of group status on employee outcomes and the association between strength of identification with the post-merger / acquisition organization and employees' satisfaction with their work situation. With this meta-analysis I aimed to bring several theoretical contributions to the literature. Firstly, this is the first meta-analysis to investigate the role of social identity-related factors in a merger or an acquisition context. Secondly, this is the first meta-analytic study to investigate the role of status measurement on the relation between group status and employee outcomes. While previous survey studies do address the theoretical implications of subjective and objective measurements of status (van Knippenberg et al., 2002), this is the first study to provide quantitative evidence of this. Thirdly, this meta-analysis confirmed the empirical applicability of social identity theory to the study of employee psychology in mergers and acquisitions. The significant results found across studies suggest mergers and acquisitions create the psychological climate for the manifestation of employees' group identities in the form of intergroup behaviour, such as ingroup bias, intergroup differentiation, etc, and it is important that future studies on employee psychology of mergers and acquisitions include social identity-related factors.

The organizational case study presented here provided valuable theoretical insights in terms of other aspects that appear to be relevant for employees. It emphasized the role of trust following the sell-off announcement and the emergence of cynical attitudes towards the management. It also provided support to the idea that perceived uncertainty is an important antecedent to various negative outcomes for the employees (Giessner, 2011; Marmenout, 2010), namely heightened feelings of threat, fear and instances of hypervigilance. In concert with the meta-analytic findings, this study provided some support to the idea that group identity salience and "us" versus "them" thinking may take shape sooner, in the pre-merger/acquisition period.

Lastly, this study emphasized the relevance of including these aspects in an integrative theoretical model of employee psychology in mergers and acquisitions.

In my cross-sectional study, a survey among 108 employees who experienced a merger or an acquisition at the workplace, I aimed to address the limitations revealed in my systematic literature review, and bring several theoretical and empirical contributions to the literature. Firstly, this study is one of the few studies discussing employee psychology in mergers and acquisitions that recruit participants from multiple merged, acquired or acquiring organizations and from more than one country. This recruitment strategy was chosen with the aim to increase sample diversity in order to eliminate any bias arising from sampling participants from one culture or one case of merger or acquisition. Thus, this study addresses the generalizability limitations in existing research. Secondly, the use of quantitative methodologies allows us to make generalizable and valid inferences on the relationship between certain aspects related to the context in which the merger or the acquisition is carried, employee cognition and how these influence employee emotions, behaviour and psychosomatic health. Thirdly, this is the first empirical study to my knowledge to take an integrative approach to the investigation of employee psychology in mergers and acquisitions in which the contextual, cognitive, employee affect and psychosomatic health perspectives intersect. As part of my objective to integrate these perspectives in my study, it is also the first study to my knowledge to discuss employee hypervigilance, paranoid cognitions and cynicism as a function of employees' group identities and perceived uncertainty. Lastly, by taking an inductive approach, this is the first study to my knowledge in mergers and acquisitions literature and among the few in occupational psychology (Parker & Grote, 2020; Shatte, Hutchinson & Teague, 2019) to use algorithms inspired from the machine learning and artificial intelligence literature for the prediction of employee outcomes.

This study revealed important implications for academics, for organizations undergoing a merger or an acquisition, and for practitioners. For academics, this study emphasized the theoretical and practical utility of using advanced inductive methods such as decision trees. Existing quantitative methodologies are limiting in advancing our knowledge in several ways. On the one hand, traditional quantitative methodologies rely on hypothetico-deductive methods which are fundamentally limiting in the way research is conducted. In this sense, in the reductionist approach of positivist tradition, the researcher makes logical deductions from a priori assumptions in formulating the research hypotheses (Lee, 1991). The positivist tradition involves formulating hypotheses that follow the rules of formal hypothetico-deductive logic so that the results are falsifiable, follow a logical consistency and have relative explanatory power (Lee, 1991). This means the aim of the research within this tradition is to test and generalize existing theories at a larger degree. However, as grounded theorists argue (Bryant & Charmaz, 2012; Charmaz, 1996) much of the truth about reality may be neglected as our theoretical knowledge of the truth may be limited. There may be no theoretical framework based on which we can generalize the result of the research. It may be that a lot of the truth residing in human experience is not captured by existing theoretical formulations, thus neglecting the aspects which cannot be explained by our current understanding of the human experience (Johnson & Onwuegbuzie, 2004). These methods do not allow the discovery of new theories or links between aspects of human experience. While the alternative would be to conduct qualitative research in order to address these claims, there are several epistemological limitations which would pose additional concerns, such as validity and generalizability bias (Norris, 1997; Galdas, 2017). Therefore, there is a need for new integrative methodological approaches that can address these fundamental limitations of positivist tradition, the inherent biases of qualitative research

and which can allow for theory to emerge from the data in a way that can be generalizable and reliable through statistical analyses.

The inductive methods used in this thesis, namely logistic regression with stepwise logistic regression and decision trees can combine the inherent advantages of performing statistical analysis for determining reliability of the findings via statistical analyses, as in objectivism epistemology. These methods do not require imposing any theoretical limitations meant to confirm or invalidate a theory, thus allowing the theory to emerge from the data.

Nevertheless, while the standards of linearity in understanding relationship between constructs in social science research are, without a doubt, firmly established as methodology, their limitations have rarely been properly addressed in the literature, though some concerns have been raised in the occupational psychology research (Ferris et al., 2006). Associations between constructs are not always based on a simple proportional relationship. They rarely do in nature. Nonlinear methods can incorporate variables and constructs unidentified by the linear hypothesis function, but in reality, these variables may have a much higher discriminative or predictive potential. Such constructs may be overlooked both in empirical research and in practice, if the quantitative methodology of choice remains restricted within the bounds of linearity. The inductive methods used here and the comparative analysis of linear and non-linear algorithms revealed the differences in terms of variables that emerged as predictors in one or the other model, thus extending the research beyond the examination of linear forms exclusively. I conclude that future research in organizational psychology using inductive methods as those used in this thesis would inspire fresh theoretical perspectives and a rejuvenation of the traditional methodological approaches to the study of human experience at work. Provided that dedicated methodological and reporting guidelines are in place, more studies using inductive approaches

would, I believe, contribute to our understanding of psychological phenomena in general and help us formulate data- and evidence-based tools for practitioners. Specifically in the field of employee psychology in mergers and acquisitions which lies at the intersection of multiple disciplines, more studies using decision trees such as the ones used in this study among a larger sample would be useful to validate the results obtain in this thesis.

Taken together, the studies discussed in this thesis can help us formulate a set of recommendations for practitioners at different levels and from different functions across an organization when engaging in a merger or an acquisition.

Before the merger or the acquisition

When planning a merger or an acquisition, the acquirer conducts an in-depth due diligence of the target organization, whereby the former collects pertinent information about the business fundamentals of the latter. This information usually refers to financial data, customers, contracts and so on. Considering the findings of this thesis, regarding the negative feelings, health and behaviour of the employees after a merger or an acquisition, and the consequences of these for the organization (e.g. loss in productivity, absenteeism, high turnover rates, etc) an important recommendation is to acknowledge the severity of employees' psychological problems and include organizational psychology matters in this due diligence. Some of the important indicators that emerged in my thesis to have an impact on employee psychology and which can be included in this due diligence are: national and organizational culture measures, estimated degree of integration, type of transaction (i.e. horizontal, conglomerate, vertical), organizational size relative to the acquirer size, motive for the merger or the acquisition, industry relatedness and employee demographics. Collection of these indicators is often not invasive, does not require employees to participate in surveys and hence does not raise confidentiality concerns.

Furthermore, this information is generally available before the expression of intent by the acquirer. However, it is essential that this information is interpreted not only in an economic or financial context, but also with the aim to estimate employee friction and devise an integration plan that prevents rather than corrects. For instance, employees with a long tenure in the acquired organization may struggle with an acquisition that require a high degree of integration, which is often the case with horizontal mergers or acquisitions. The results of this thesis revealed they represent a vulnerable category that is predisposed to severe somatic health problems, or anxiety during the course of the post-merger integration. Also, employees experiencing a merger or an acquisition where the motive was knowledge acquisition or geographic expansion and where the two merger/acquisition partners do not operate in the same industry are more likely to experience social dysfunctions and engage in retaliatory behaviour. Therefore, acknowledging the importance of these indicators for employee psychological health is of the utmost importance before the merger or the acquisition, at the due diligence stage. This not only helps the acquirer anticipate the likely sources of post-merger/ acquisition friction, poor performance or productivity, but also take precautionary steps to assess these vulnerabilities and plan accordingly.

As the merger or the acquisition is announced to the employees, it is important that practitioners (leaders, line managers, human resources professionals) address employees' concerns. As emphasized in my systematic literature review and in my organizational case study, as soon as the employees learn about an upcoming acquisition, uncertainty, worry and “us-versus-them” thinking sets in. These feelings are exacerbated by the fact that there may be no real sense of certainty about the merger/acquisition until the completion of the transaction, and the managers are constrained by confidentiality clauses to share more information top-down to

the employees. Employees may worry about whether they will still have a job, be demoted, how would working procedures change and so on (Eriksson & Sundgren, 2005). Considering the important role of perceived uncertainty that emerged in this thesis, and the wide implications of this for employee health and well-being, one important recommendation to practitioners is to hold frequent communication sessions with employees about the progress of the discussions with potential merger/acquisition partners and utility of the merger / acquisition (Bartels et al., 2006). Previous research discussed in my systematic review shows employees value honest and direct communication, which in some cases may be even more important than satisfaction at the workplace (Bligh & Carsten, 2005; Eriksson & Sundgren, 2005). As long as employees understand the utility of the merger, perceive the communication climate and communication about the transaction in positive terms, they are more likely to be accepting of the merger/acquisition and frame it as an opportunity rather than as a threat. Therefore, before the merger or the acquisition, HR practices such as open communication, empowerment (Tzafrir et al., 2004) and early socialization into the cultures of potential acquirer/acquired organizations (Searle & Skinner, 2011) may help alleviate, at least partially the excessive worry, provide a sense of psychological safety and facilitate/reinforce trust in the new organization.

During the merger or the acquisition (~1 year after the closing)

After the transaction is concluded, the two organizations generally initiate an integration plan, which usually involves a harmonization of the internal IT systems, branding and marketing, policies, work procedures, HR practices and so on, which can take several months or even one year (Fugate et al., 2002). According to research reviewed in Chapter 2, this is a sensitive and volatile period, as it may involve downsizing, office changes, demotion, change in benefits, transfers and so on which have personal implications for the employees. Depending on the

breadth of changes required for the post-merger integration, one possible route for a sustainable transition from an employee psychological health perspective is to have dedicated HR programs in place. These are meant to provide employees with the necessary resources to help them reduce the physiological and psychological cost of the change. Post-merger integration officers may focus on personal resources such as self-efficacy perceptions (Bandura, 1989), self-esteem (Pierce, Gardner, Cummings, & Dunham, 1989), optimism (Scheier & Carver, 1985) and assertiveness (Bakker & Wingerden, 2021). Some interventions showing positive impact on an individual's personal resources and hence, adaptability, have been positive work reflection exercises, mindfulness exercises (Fredrickson et al., 2008) or skills training (see Lupsa et al., 2020 for a review). For instance, Affect Regulation Training (ART, Berking & Schwarz, 2014) has been found to be effective in improving employee emotion regulation skills and well-being (Buruck et al., 2016). Furthermore, social skills training focused on open communication, giving and receiving feedback and practicing assertiveness proposed by Bakker and Wingerden (2021) has been found to be effective in boosting self-efficacy and resilience.

My meta-analysis and cross-sectional study have shown that groups have different sets of motivations and react differently to the merger or the acquisition. I have also emphasized that employees' group identities and the antagonistic relations between the two groups belonging to the two merger/acquisition partners leads to ingroup bias, derogatory behaviour, discrimination, reluctance in sharing knowledge and so on. Leaders and line managers may attempt to address these frictions by motivating employees to focus more on the collective interest, such as the performance of the newly-merged organization. More specifically, leaders and line managers could design a high task interdependence workflow by creating high outcome interdependence among the two groups through for example project team setup involving members of both

groups. This way, members belonging to both merger/acquisition groups would need to cooperate, work together and share knowledge in order to achieve team objectives, thus weakening the level of territoriality in terms of knowledge ownership. Furthermore, considering the strong relation between perceived status, identity, trust and organizational justice that emerged in my cross-sectional study, organizational justice may also represent a valid interventional factor that can stimulate a cooperative and interactive climate between the employees of the two merger / acquisition groups. Managers can improve perceptions of organizational justice by clearly conveying to employees that they are compensated fairly, by treating employees with equality of respect, by enhancing the perception of trust among employees (Aryee et al., 2002; Brown et al., 2005; Laschinger, 2004) and by displaying ethical leadership. Socialization training targeted on learning about the other group culture, or trainings focused on specific job-related knowledge and skills may enhance employee's organizational commitment and interpersonal relationships, in a way that employees will no longer view the outgroup members as opponents (Huo et al, 2016).

For HR practitioners, this thesis also revealed the importance of having specific monitoring devices in place to identify employees experiencing health and well-being problems, or engaging in deviant behaviours. Regular in-depth organizational diagnoses would be useful to identify employees at risk and take remedial actions. This thesis and models used in my cross-sectional study (measures that emerged through decision tree modelling) can be a useful starting point for practitioners to diagnose and identify employees predisposed to experience psychological distress or anxiety, adopt cynical attitudes, intend on leaving the organization or engage in retaliatory behaviour.

After the merger or the acquisition (+1 year after the closing)

Longitudinal evidence reviewed in Chapter 2 showed that the effects of the merger / acquisition and the ensuing changes on employee evaluation of their job situation are still pervasive even after one year since the acquisition. For instance, Hambrick and Cannella (1993) found that 40% of the managers leave the organization after one year since the acquisition, largely due to autonomy removal or status decline. Among the lower-level employees, longitudinal evidence suggests intergroup thinking and territorial behaviour still persist, even up to 6 years after the closure of the transaction (Empson, 2001). Therefore, the organizational development interventions outlined above that enables individuals to rethink their job situation, reframing their new positions, and their perceptions of the members of the outgroup may be useful also after one year since the closing of the transaction. Research suggests these employee outcomes tend to subside with time, as new working arrangements stabilize and employees internalize new work principles and values. As such, organizational development programs meant to improve employee relations and strengthening employees' personal resources to cope with the changes may be replaced by other *stabilization* methods, such as team-buildings, or trainings focused on intergroup collaboration and communication (Westover, 2010; Glisson, 2008; Rafferty & Griffin, 2009).

An important aspect about post-merger integration and OD measures meant to support employees in the transition to a new working situation is that HR practitioners, managers and change agents allow employees sufficient time to reflect on the changes and adapt. Homburg and Bucerius (2006) found that a fast post-merger / acquisition integration strategy is sometimes detrimental to the long-term success of the new organization. This seems to apply in particular to organizations that have different cultures, management styles or strategic orientations. Therefore, it is important the change agents, HR practitioners and managers empathize with employees'

need for time to adjust to the new conditions and acknowledge the important psychological cost these changes have on their health and well-being.

6.5. Limitations and future research directions

By systematically examining the existing evidence on employee psychology of mergers and acquisitions and by taking an integrative approach to the investigation of employee outcomes in mergers and acquisitions, this thesis, opens up, I hope, new research directions and fresh ways of studying employee psychology. In this last chapter, I discuss the key limitations in my studies and discuss some potential research directions.

A key limitation in my systematic literature review was that the search was restricted to PsycINFO and PsycARTICLES databases which might have lead to the exclusion of relevant articles not included in these sources. It would be useful that future reviews broaden the list of sources to include other relevant databases, such as Business Source Premier or Academic Search Complete. Furthermore, the systematic literature review as well as the cross-sectional study revealed the importance of adopting an integrative view on employee psychology in mergers and acquisitions. I argued that a new integrative approach from both theoretical and methodological standpoints that better capture the complexity of the phenomenon and encompass the basic building blocks highlighted by each perspective would improve our understanding of employee psychology of mergers and acquisitions. It would be useful that future studies take into account the various elements that can lead to negative outcomes both in

terms of employee health and well-being and in terms of post-merger/acquisition organizational performance and merger/acquisition implementation success.

The meta-analysis discussed in Chapter 3 had several limitations and revealed important areas for future research. Firstly, the heterogeneity issue might have caused the sensitivity analyses and outlier diagnostic to exaggerate the impact of particular studies. It would be useful that future meta-analyses on the role of identity processes in mergers and acquisitions include a larger sample of studies in order to clarify the consistency of the results obtained in the literature. Another key limitation to the meta-analysis refers to the presence of potentially moderating factors which could have been accounted for in the calculations because this information is generally not reported in research. Considering the results of my studies discussed in this thesis on the role of merger/acquisition information (i.e. type of transaction, mood of transaction, motive, business relatedness, etc.) it will be useful that future studies disclose this information and control for them in the statistical calculations. Another important avenue for future research arising from this limitation is that future meta-analytic studies could focus on obtaining effect estimates on the role of the varied contextual variables for employee cognitive, affective, behavioural or health outcomes that emerged as relevant in this thesis. One meta-analytic approach that would bode well to the current state of the literature would be the use of frequentist methods, or Bayesian network meta-analysis (Higgins & Whitehead, 1996; Efthimiou et al., 2016; Dias et al., 2013) which are becoming popular meta-analytic techniques in medical research (Lam & Owen, 2007; Rabelo et al., 2015); Windecker et al., 2015). Specifically, a network approach would be useful because it allows the combination of results also from studies that investigate only one specific contextual condition. That is, for obtaining the effect size estimates, both arm-level data (i.e. absolute odds or absolute risk) or contrast-level data (i.e.

which shows the contrast of effects) can be used. For example, we may be interested in whether employees in domestic mergers or acquisitions have a higher risk of depression compared with employees in cross-border mergers or acquisitions. A standard pairwise meta-analytic approach would require the extraction of contrast effects (i.e. F statistic or mean differences) from primary studies. However, as I have discussed in Chapter 2, most of the studies in the organizational psychology of mergers and acquisitions rely on data from one case of a merger or an acquisition, and the number of studies with a diversified sample of cases of mergers or acquisitions are very limited or there are no head-to-head comparisons reported. The network approach would make such analysis possible because we would be able to calculate head-to-head estimates of the comparative effects of geographical reach of a merger or an acquisition by including also those studies reporting data for only one condition (e.g. domestic mergers / acquisitions). It allows the broadening of the sample of studies meta-analysed beyond those reporting pairwise comparisons to also those comparisons that are not available in the literature (Tonin et al., 2017; White et al., 2012; Seide, Jensen & Kieser, 2020). This may be a solution to the several sampling limitations of the existing mergers and acquisitions literature that I have emphasized here and in Chapter 2, that make any standard pairwise comparison analytic strategy difficult if not impossible, and may be an interesting area for future research.

There were several important limitations to my cross-sectional study (Chapter 5) which I have discussed in section 5.5. I will only briefly summarize here and link them to some further possible areas for future research. An important limitation was that in this study it was impossible to measure employees' perceptions of status. The systematic literature review and the meta-analysis revealed some important aspects regarding the way employees construe and interpret the intergroup hierarchy after a merger or an acquisition. It would be useful that future

studies provide more evidence in the area of status perceptions in mergers and acquisitions and contrast the construct with objective measurements (i.e. role in the transaction, pre-merger/acquisition organizational prestige, etc.) in terms of employee outcomes. Pairwise comparisons would provide further evidence on whether subjective measurements have a higher explanatory power in the relation with various employee outcomes or objective measurements.

Another key limitation in my cross-sectional study is related to the small sample size (108 participants) which might have raised validity concerns and thus reflected in the model fit indexes. The small sample size might have also caused some overfitting issues with the logistic regression and decision tree modelling. Further studies with more than 100 participants to test the relations found in this study both inductively or hypothesis-driven would be useful to validate these findings.

From a theoretical standpoint, several important future research ideas can be extracted. In my cross-sectional study, I found a significant link between identification with the post-merger/acquisition organization and perceived organizational justice, and that these justice perceptions differ across role in the transaction (i.e. acquirer, acquired, merged). These findings resonate with the results of the meta-analyses discussed in Chapter 3. One explanation to these findings may be that perceptions of organizational justice might have strengthened one's identification with the group. In contrast, these results might also suggest that identification is in fact a precursor of justice perceptions, in accordance with Blader (2007). This implies a bidirectional relationship between justice perceptions and identification. In this sense, employees' identification with the post-merger/acquisition organization may both shape or be shaped by employees' justice evaluations along with group status. These suggestions may warrant this topic a closer inspection in longitudinal studies that could assess the role of

identification, status and justice perceptions. Future longitudinal studies are needed to better understand the role of identification, status and justice perceptions.

Secondly, the systematic literature review, the case study and the cross-sectional study offer a first indication of the co-existence of two trust processes in mergers and acquisitions, a trust-building process oriented towards the post-merger / acquisition organization and a trust-destruction process, oriented towards the pre-merger / acquisition organization. Future studies into the employee trust processes, target of employee behaviour and evolvement of psychological contract are needed to confirm the coexistence of these processes and how these trust dynamics find expression in more or less negative behaviours among employees.

Thirdly, this study revealed that employees may have different behavioural reactions in mergers and acquisitions. Namely, the more employees identify with the pre-merger/acquisition organization, the more likely they will engage in ingroup bias. In contrast, the more employees identify with the post-merger/ acquisition organization, the more likely they will engage in minor abuse and theft. These findings obtained through correlational and regression analyses were confirmed by the models produced through logistic regression with stepwise feature selection for the classification of employees who engage in retaliation (high) or not (low). It may be that the objective of the two groups for these behaviours is functionally similar, namely a positive self-esteem as deriving from their social identities. However, future longitudinal studies focusing on the motivational aspects of ingroup bias and retaliation would improve our understanding of the different employees' behavioural patterns in mergers and acquisitions.

Fourthly, the systematic literature review and the study showed employees in mergers and acquisitions may become hypervigilant and cynical in mergers and acquisitions, a concept understudied in mergers and acquisitions. It may be that employees may become hypervigilant as

a matter of their group identities or as a matter of the uncertainty surrounding the merger or the acquisition context. It would be useful that future studies provide clarity on the motivational aspects of extreme suspicion in a merger or an acquisition context in longitudinal investigations.

Lastly, the results obtained through inductive methods, namely, logistic regression with stepwise feature selection and decision trees revealed interesting associations between demographic, contextual, cognitive and emotional factors and employee behavioural and health outcome variables. The fact that this study was cross-sectional means it does not necessarily imply a cause and effect path in the models generated through inductive methods. It would be useful that future studies aim at testing the relationship found inductively here using deductive methods in other empirical settings as a means toward improving generalizability and strengthening the credibility of such inductive methods in future organizational psychological research.

References

- Abraham, R. (2000). Organizational cynicism: Bases and consequences. *Genetic, Social, and General Psychology Monographs*, 126, 269–292.
- Abrams D, Hogg MA. *Social Identity Theory: Constructive and Critical Advances*. (Abrams D, Hogg MA, eds.). New York, NY: Springer-Verlag Publishing; 1990.
- Abrams, D., & Hogg, M. A. (1988). Comments on the motivational status of self-esteem in social identity and intergroup discrimination. *European Journal Of Social Psychology*, 18(4), 317-334.
- Abrams, D., & Hogg, M. A. (1990). *Social identity theory: Constructive and critical advances*. (D. Abrams & M. A. Hogg, Eds.). New York, NY: Springer-Verlag Publishing.
- Abrams, D., Ando, K., & Hinkle, S. (1998). Psychological Attachment to the Group: Cross-Cultural Differences in Organizational Identification and Subjective Norms as Predictors of Workers' Turnover Intentions. *Personality and Social Psychology Bulletin*, 24(10), 1027–1039.
- Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, vol. 2 (pp. 267–299). New York: Academic Press.
- Adelman, M. A. (1954). A Note on Corporate Concentration and Turnover. *American Economic Review*, 44(3), 392.
- Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., & Syme, S. L. (1994). Socioeconomic status and health: the challenge of the gradient. *American psychologist*, 49(1), 15.

- Adler, P. A., & Adler, P. (1994). Observational techniques. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 377–392). Sage Publications, Inc.
- Agarwal, R., Anand, J., Bercovitz, J., & Croson, R. (2012). Spillovers across organizational architectures: The role of prior resource allocation and communication in post-acquisition coordination outcomes. *Strategic Management Journal*, 33(6), 710-733.
- Ailon-Souday, G., & Kunda, G. (2003). The Local Selves of Global Workers: The Social Construction of National Identity in the Face of Organizational Globalization. *Organization Studies*, 24(7), 1073-1096.
- Ajzen, I. & Fishbein, M. (2000). Attitudes and the Attitude-Behaviour Relation: Reasoned and Automatic Processes. *European Review of Social Psychology*, 11 (1), 1-33.
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour And Human Decision Processes*, 50(2), 179-211.
- Ajzen, I. (2002). Perceived Behavioural Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behaviour. *Journal of Applied Social Psychology*, 32(4), 665–683.
- Ajzen, I. (2005). *Attitudes, personality, and behaviour*. Maidenhead, Berkshire, England: Open University Press.
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioural control. *Journal of Experimental Social Psychology*, 22(5), 453–474.
- Aktas, N., Bodt, E. de, & Roll, R. (2007). Is European M&A Regulation Protectionist? *Economic Journal*, 117(522), 1096–1121.

- Aktas, N., de Bodt, E., Levasseur, M., & Schmitt, A. (2001). The Emerging Role of the European Commission in Merger and Acquisition Monitoring: The Boeing–McDonnell Douglas Case. *European Financial Management*, 7(4), 447.
- Albert, S. & Whetten, D. A. (1985). Organizational Identity. In B. M. Staw and L. L. Cummings (Eds.), *Research in Organizational Behaviour* (pp. 263-295). Greenwich: JAI Press.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, 30(2), 217-237.
- Alexandridis, G., Mavrovitis, C. F. & Travlos, N. G. (2012). How have M&As changed? Evidence from the sixth merger wave. *The European Journal of Finance*, 18 (8), 663-688.
- Al-Khalifa, A. K., & Peterson, S. E. (2004). On the relationship between initial motivation, and satisfaction and performance in joint ventures. *European Journal of Marketing*, 38(1/2), 150–174.
- Allen, F., Thorsten, B., Carletti, E., Lane, P., Schoenmaker, D. & Wagner, W. (2011). *Cross-Border Banking in Europe: Implications for Financial Stability and Macroeconomic Policies*. London, UK: Centre for Economic Policy Research.
- Allen, N. J., & John P., M. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal Of Occupational Psychology*, 63(1), 1-18.
- Almeder, R. & Carey, D. (1991). In defense of sharks moral issues in hostile liquidating takeovers. *Journal of Business Ethics*, 10 (7), 471-484.

- Alvesson, M. (1991). Organizational Symbolism and Ideology. *Journal of Management Studies*, 28(3), 207–225.
- Ambrose, M. L., & Schminke, M. (2009). The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of Applied Psychology*, 94(2), 491–500.
- American Psychological Association (2019). *Current titles and ISSNs for all journals covered in PsycARTICLES*
<https://www.apa.org/pubs/databases/psycarticles/coverage-list>
- American Psychological Association (2019). *PsycINFO Journal Coverage List*. Retrieved from <https://www.apa.org/pubs/databases/psycinfo/coverage>
- Amersh, A. H., & Sunder, S. (1987). Failure of Stock Prices to Discipline Managers in a Rational Expectations Economy. *Journal of Accounting Research (Wiley-Blackwell)*, 25(2), 177–195.
- Amihud, Y., & Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *Bell Journal of Economics*, 12(2), 605–617.
- Amiot, C. E., Terry, D. J., & Callan, V. J. (2007). Status, equity and social identification during an intergroup merger: a longitudinal study. *The British Journal Of Social Psychology*, 46(Pt 3), 557-577.
- Amiot, C. E., Terry, D. J., & Jimmieson, N. L. & Callan, V. J. (2006). A Longitudinal Investigation of Coping Processes During a Merger: Implications for Job Satisfaction and Organizational Identification. *Journal Of Management*, 32(4), 552-574.
- Amir, D., Vallengia, C., Srinivasan, M., Sugiyama, L. S., & Dunham, Y. (2019). Measuring subjective social status in children of diverse societies. *Plos one*, 14(12), e0226550.

- Andersen, T. A., Ansoff, H. I., Norton, F., & Weston, J. F. (1959). Planning for Diversification Through Merger. *California Management Review*, 1(4), 24–35.
- Andersson, L. M. & Bateman, T. S. (1997). Cynicism in the workplace: Some causes and effects. *Journal of Organizational Behaviour*, 18, 449–469.
- Andersson, L. M. (1996). Employee cynicism: An examination using a contract violation framework. *Human Relations*, 49, 1395–1418.
- Andrade, E. B. (2005). Behavioural Consequences of Affect: Combining Evaluative and Regulatory Mechanisms. *Journal of Consumer Research*, 32(3), 355–362.
- Andreeva, E., Brenner, M. H., Theorell, T. & Goldberg, M. (2017). Risk of psychological ill health and methods of organisational downsizing: a cross-sectional survey in four European countries. *BMC Public Health*, 17(1), 758.
- Angwin, D. (2012). Merger and acquisition typologies: a review. In D. Faulkner, S. Teerikangas & R.J. Joseph (Eds.), *The Handbook of Mergers and Acquisitions*. Oxford University Press.
- Apfelthaler, G., Muller, H. J., & Rehder, R. R. (2002). Corporate global culture as competitive advantage: learning from Germany and Japan in Alabama and Austria?. *Journal Of World Business*, 37(2), 108-118.
- Appelbaum, S. H., & Gandell, J. (2003). A cross method analysis of the impact of culture and communications upon a health care merger: Prescriptions for human resources management. *Journal of Management Development*, 22(5), 370–409.
- Areeda, P. (1983). Justice's Mergers Guidelines: The General Theory. *California Law Review*, 71(2), 303.

- Arikan, A. M., & McGahan, A. M. (2010). The development of capabilities in new firms. *Strategic Management Journal*, *31*(1), 1–18.
- Armenakis, A. A., & Harris, S. G. (2002). Crafting a change message to create transformational readiness. *Journal of Organizational Change Management*, *15*, 169-183.
- Armstrong-Stassen, M., & Cameron, S. J. (2003). The Influence of Prior Coping Resources and Constraints on Nurses' Coping Responses to Hospital Amalgamation in Canada. *International Journal Of Stress Management*, *10*(2), 158-172.
- Artz, B., & Kaya, I. (2014). The impact of job security on job satisfaction in economic contractions versus expansions. *Applied Economics*, *46*(24), 2873–2890.
- Aryee, S., Budhwar, P. S., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *23*(3), 267-285.
- Ashford, S. J. (1988). Individual strategies for coping with stress during organizational transitions. *Journal of Applied Behavioural Science*, *24*, 19–36.
- Ashforth, B. E., & Mael, F. (1989). Social Identity Theory and the Organization. *Academy of Management Review*, *14*(1), 20–39.
- Ashton-James, C. E., & Ashkanasy, N. M. (2008). Affective events theory: A strategic perspective. In *Emotions, ethics and decision-making*. Emerald Group Publishing Limited.
- Aslam, U., Ilyas, M., Imran, M. K., & Rahman, U.-U. (2016). Detrimental effects of cynicism on organizational change: An interactive model of organizational cynicism

- (a study of employees in public sector organizations). *Journal of Organizational Change Management*, 29(4), 580–598.
- Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: Self-regulation and proactive coping. *Psychological Bulletin*, 121, 417–436.
- Astrachan, J. H. (1990). *Mergers, acquisitions, and employee anxiety: A study of separation anxiety in a corporate context*. New York, NY: Praeger Publishers.
- Astrachan, J. H. (2004). Organizational departures: The impact of separation anxiety as studied in a mergers and acquisitions simulation. *Journal Of Applied Behavioural Science*, 40(1), 91-110.
- Atkins, R. (1999, November, 20). Punching power of titans puts champions of history on back foot culture clash consensus versus foreign invader. *Financial Times, London Edition*, 12.
- Atkins, R. (2000, December 13). The businessman who refused to play dirty: interview Klaus Esser, formerly of Mannesmann: Nearly a year after Vodafone bought his company, Klaus Esser talks to Ralph Atkins about the lessons of the hostile takeover and what he might have done differently. *Financial Times, London edition*.
- Atwater, L. E., Waldman, D. A., Atwater, D., & Cartier, P. (2000). An upward feedback field experiment: Supervisors' cynicism, reactions, and commitment to subordinates. *Personnel Psychology*, 53, 275-297.
- Avanzi, L., Schuh, S. C., Fraccaroli, F. & van Dick, R. (2014). Why does organizational identification relate to reduced employee burnout? The mediating influence of social support and collective efficacy, *Work & Stress*, 29 (1), 1-10.

- Babić, V. M., Savović, S. D., & Domanović, V. M. (2014). Transformational leadership and post-acquisition performance in transitional economies. *Journal of Organizational Change Management*, 27(6), 856–876.
- Bagozzi, R. P., Baumgartner, H., Pieters, R. & Zeelenberg, M. (2000). The role of emotions in goal-directed behaviour. In S. Ratneshwar, D. G. Mick, & C. Huffman. *The why of consumption: Contemporary perspectives on consumer motives, goals and desires* (pp. 36-58). London: Routledge.
- Bakker, A. B. & Oerlemans, G. M. (2010). Subjective well-being in organizations. In K. Cameron & G. Spreitzer (Eds.), *Handbook of Positive Organizational Scholarship*. Oxford University Press.
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
- Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *The Career Development International*, 13(3), 209-223.
- Bakker, A. B., & Oerlemans, W. M. (2012). Subjective well-being. In K. S. Cameron, G. M. Spreitzer, K. S. Cameron, G. M. Spreitzer (Eds.) , *The Oxford handbook of positive organizational scholarship* (pp. 178-187). New York, NY, US: Oxford University Press
- Bakker, A. B., & van Wingerden, J. (2021). Do personal resources and strengths use increase work engagement? The effects of a training intervention. *Journal of Occupational Health Psychology*, 26(1), 20.
- Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, 43, 83–104.

- Bakker, A. B., Demerouti, E., Taris, T. W., Schaufeli, W. B., & Schreurs, P. G. (2003). A multigroup analysis of the job demands-resources model in four home care organizations. *International Journal Of Stress Management*, *10*(1), 16-38.
- Bakker, A. B., Schaufeli, W. B., Sixma, H. J., Bosveld, W., & van Dierendonck, D. (2000). Patient demands, lack of reciprocity, and burnout: A five-year longitudinal study among general... *Journal Of Organizational Behaviour*, *21*(4), 425.
- Bal, P. M., De Cooman, R., & Mol, S. T. (2013). Dynamics of psychological contracts with work engagement and turnover intention: The influence of organizational tenure. *European journal of work and organizational psychology*, *22*(1), 107-122.
- Bamford, S., & Ward, R. (2008). Predispositions to approach and avoid are contextually sensitive and goal dependent. *Emotion*, *8*(2), 174–183.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*, 1175–1184.
- Banks, M. H., Clegg, C. W., Jackson, P. R., Kemp, N. J., Stafford, E. M., & Wall, T. D. (1980). The use of the General Health Questionnaire as an indicator of mental health in occupational studies. *Journal of Occupational Psychology*, *53*(3), 187–194.
- Banks, T. L. (1983). European Economic Community. *Antitrust Law Journal*, *52*(4), 1005.
- Barefoot, J. C., Siegler, I. C., Nowlin, J. B., Peterson, B. L., Haney, T. L., & Williams Jr, R. B. (1987). Suspiciousness, health, and mortality: a follow-up study of 500 older adults. *Psychosomatic Medicine*, *49*(5), 450-457.
- Barkema, H. G., & Schijven, M. (2008). How do firms learn to make acquisitions? A review of past research and an agenda for the future. *Journal of Management*, *34*(3), 594–634.

- Barlow, D H. 2000. "Unraveling the mysteries of anxiety and its disorders from the perspective of emotion theory." *The American Psychologist* 55, no. 11: 1247-1263. MEDLINE, EBSCOhost (accessed June 26, 2018).
- Baron, D. P. (1983). Tender Offers and Management Resistance . *Journal of Finance (Wiley-Blackwell)*, 38(2), 331–343.
- Barratt-Pugh, L., Bahn, S., & Gakere, E. (2013). Managers as change agents: Implications for human resource managers engaging with culture change. *Journal Of Organizational Change Management*, 26(4), 748-764.
- Barriga, K. J., Hamman, R. F., Hoag, S., Marshall, J. A., Shetterly, S.M. (1996). Population screening for glucose intolerant subjects using decision tree analyses, *Diabetes Research and Clinical Practice*, 34(1), S17-S29.
- Bartels, J., Douwes, R., de Jong, M., & Pruyn, A. (2006). Organizational identification during a merger: Determinants of employees' expected identification with the new organization. *British Journal Of Management*, 17(Suppl 1), S49-S67.
- Bartels, J., Pruyn, A., & de Jong, M. (2009). Employee identification before and after an internal merger: A longitudinal analysis. *Journal of Occupational & Organizational Psychology*, 82(1), 113–128.
- Bartunek, J. M., & Franzak, F. J. (1988). The Effects of Organizational Restructuring on Frames of Reference and Cooperation. *Journal Of Management*, 14(4), 579-592.
- Basinger, N. W., & Peterson, J. R. (2008). Where you stand depends on where you sit: Participation and reactions to change. *Nonprofit Management And Leadership*, 19(2), 243-257.

- Bastien, D. T. (1987). Common Patterns of Behaviour and Communication in Corporate Mergers and Acquisitions. *Human Resource Management, 26*(1), 17–33.
- Bauer, F., & Matzler, K. (2014). Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration. *Strategic Management Journal, 35*(2), 269-291.
- Baughn, M. K., & Finzel, P. A. (2009). A Clash of Cultures in a Merger of Two Acquisition Project Offices. *Engineering Management Journal, 21*(2), 11–17.
- Baum, A., Garofalo, J. P., & Yali, A. M. (1999). Socioeconomic status and chronic stress: does stress account for SES effects on health?. *Annals of the New York Academy of Sciences, 896*(1), 131-144.
- Baumeister, R. F., Vohs, K. D., & Oettingen, G. (2016). Pragmatic prospection: How and why people think about the future. *Review of General Psychology, 20*(1), 3–16.
- Becerra, M., Lunnan, R., & Huemer, L. (2008). Trustworthiness, risk, and the transfer of tacit and explicit knowledge between alliance partners. *Journal Of Management Studies, 45*(4), 691-713.
- Bechara, A., Damasio, A. R., Damasio, H., & Anderson, S. W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. *Cognition, 50*(1-3), 7-15.
- Beck, A. T., Emery, G., & Greenberg, R. L. (2005). *Anxiety disorders and phobias: A cognitive perspective*. New York, NY: Basic Books.
- Belizario, G. O., Junior, R.G.B, Salvini, R., Lafer, B. & Dias, R.D.S. (2019). Predominant polarity classification and associated clinical variables in bipolar disorder: A machine learning approach. *J Affect Disord. , 15*(245), 279-282.

- Bell, J. W. (1932). Session on Recent Changes in Banking. *American Economic Review*, 22, 185.
- Bellou, V. (2007). Psychological contract assessment after a major organizational change: The case of mergers and acquisitions. *Employee Relations*, 29(1), 68-88.
- Bellou, V. (2008). Exploring civic virtue and turnover intention during organizational changes. *Journal Of Business Research*, 61(7), 778-789.
- Bender, R., & Lange, S. (2001). Adjusting for multiple testing—when and how?. *Journal of clinical epidemiology*, 54(4), 343-349.
- Bennigson, L. A. (1985). Managing Corporate Cultures. *Management Review*, 74(2), 30.
- Benston, G. J. (1985). The self-serving management hypothesis . Some evidence. *Journal of Accounting & Economics*, 7(1/2/3), 67–84.
- Bentler, P. M. (1995). *EQS structural equations program manual*. Encino, CA: Multivariate Software.
- Bentler, P. M., and Chou, C.-P. (1987). Practical issues in structural modeling. *Sociol. Methods Res.* 16, 78–117.
- Berking, M., & Schwarz, J. (2014). Affect regulation training. *Handbook of emotion regulation*, 2, 529-547.
- Berkman, B. F. (1985). The relationship of social networks and social support to morbidity and mortality. In S. Cohen & S. L. Syme (Eds.), *Social support and health*. New York: Academic Press.
- Berkovitch, E., Narayanan, M. P. (1993). Motives for takeovers: an empirical investigation. *The Journal of Financial and Quantitative Analysis*, 28(3): 347-362.

- Bernerth, J. B., Armenakis, A. A., Feild, H. S., & Walker, H. J. (2007). Justice, cynicism, and commitment: A study of important organizational change variables. *The Journal of Applied Behavioral Science, 43*(3), 303-326.
- Betancourt, H., Hardin, C., & Manzi, J. (1992). Beliefs, value orientation, and culture in attribution processes and helping behaviour. *Journal of Cross-Cultural Psychology, 23*(2), 179–195.
- Betton, S., Eckbo, B. E., & Thorburn, K. S. (2009). Merger negotiations and the toehold puzzle. *Journal Of Financial Economics, 91*(2), 158-178.
- Bhagat, R. S., McQuaid, S. J., Lindholm, H., & Segovis, J. (1985). Total life stress: A multimethod validation of the construct and its effects on organizationally valued outcomes and withdrawal behaviours . *Journal Of Applied Psychology, 70*(1), 202-214.
- Bhal, K. T., Bhaskar, A. U., & Ratnam, C. V. (2009). Employee reactions to M&A: Role of LMX and leader communication. *Leadership & Organization Development Journal, 30*(7), 604-624.
- Bhattacharjee, A. (2012). *Social science research: principles, methods and practices*. Textbooks Collection. 3.
- Bhide, A. (1989). In praise of corporate raiders. *Policy Review, 47*, 21-23.
- Bhui, K. S., Dinos, S., Stansfeld, S. A., & White, P. D. (2012). A Synthesis of the Evidence for Managing Stress at Work: A Review of the Reviews Reporting on Anxiety, Depression, and Absenteeism. *Journal of Environmental & Public Health, 1–21*.

- Bies, R. J., & Moag, J. F. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiations in organizations* (Vol. 1, pp. 43-55). Greenwich, CT: JAI Press.
- Bijlsma-Frankema, K. (2001). On managing cultural integration and cultural change processes in mergers and acquisitions. *Journal of European Industrial Training*, 25(2–4), 192.
- Birtchnell, J., Evans, C., & Kennard, J. (1988). The total score of the Crown-Crisp Experiential Index: A useful and valid measure of psychoneurotic pathology. *British Journal Of Medical Psychology*, 61(3), 255-266.
- Björkman, I., Stahl, G. K., & Vaara, E. (2007). Cultural differences and capability transfer in cross-border acquisitions: the mediating roles of capability complementarity, absorptive capacity, and social integration. *Journal of International Business Studies*, 38(4), 658–672.
- Blader, S. L. (2007). What determines people's fairness judgments? Identification and outcomes influence procedural justice evaluations under uncertainty. *Journal of Experimental Social Psychology*, 43, 986–994.
- Blader, S. L., Chang, C., & Tyler, T. R. (2001). Procedural justice and retaliation in organizations: Comparing cross-nationally the importance of fair group processes. *International Journal Of Conflict Management*, 12(4), 295-311.
- Blake, R. R., & Mouton, J. S. (1985). How to achieve integration on the human side of the merger. *Organizational Dynamics*, 13(3), 41–56.
- Blanchard, D. C., Hynd, A. L., Minke, K. A., Minemoto, T., & Blanchard, R. J. (2001). Human defensive behaviours to threat scenarios show parallels to fear- and anxiety-

- related defense patterns of non-human mammals. *Neuroscience And Biobehavioural Reviews*, 25(7-8), 761-770.
- Blatt, S. J. (2004). *Experiences of depression: Theoretical, clinical, and research perspectives*. Washington, DC: American Psychological Association.
- Blau, G. J. (1985). Relationship of Extrinsic, Intrinsic, and Demographic Predictors to Various Types of Withdrawal Behaviours . *Journal Of Applied Psychology*, 70(3), 442-450.
- Blaylock, B. K., & Rees, L. P. (1984). Cognitive Style and the Usefulness of Information. *Decision Sciences*, 15(1), 74–91.
- Bliese, P. D., & Castro, C. A. (2000). Role clarity, work overload and organizational support: multilevel evidence of the importance of support. *Work & Stress*, 14(1), 65–73.
- Bligh, M. C., & Carsten, M. K. (2005). Post-merger psychological contracts: exploring a "multiple foci" conceptualization. *Employee Relations*, 27(5), 495-510.
- Bloomberg (2016). *Global M&A market review. Financial rankings 2015*. Retrieved on January 30, from <http://www.bloomberg.com/professional/content/uploads/sites/4/global-ma-financial-2015.pdf>.
- Boateng, A., Naraidoo, R., & Uddin, M. (2011). An Analysis of the Inward Cross-Border Mergers and Acquisitions in the U.K.: A Macroeconomic Perspective. *Journal of International Financial Management & Accounting*, 22(2), 91–113.
- Bodolica, V. & Spraggon, M. (2018). *Mergers and Acquisitions and Executive Compensation*. Routledge

- Boen, F., Vanbeselaere, N., Brebels, L., Huybens, W., & Millet, K. (2007). Post-merger identification as a function of pre-merger identification, relative representation, and pre-merger status. *European Journal of Social Psychology, 37*(2), 380-389.
- Bonbright, J. C. (1945). Original Cost as a Rate Base. *Accounting Review, 20*(4), 441.
- Bordia, P., Kiazad, K., Restubog, S. L. D., DiFonzo, N., Stenson, N., & Tang, R. L. (2014). Rumor as Revenge in the Workplace. *Group & Organization Management, 39*(4), 363–388.
- Bordia, P., Restubog, S. L. D., & Tang, R. L. (2008). When employees strike back: Investigating mediating mechanisms between psychological contract breach and workplace deviance. *Journal of Applied Psychology, 93*(5), 1104–1117.
- Borenstein, M., Hedges, L. V., Higgins, J. P., & Rothstein, H. R. (2011). *Introduction to meta-analysis*. John Wiley & Sons.
- Borys, B., & Jemison, D. (1989). Hybrid Arrangements as Strategic Alliances: Theoretical Issues in Organizational Combinations. *Academy Of Management Review, 14*(2), 234-249.
- Boyd, J. (2003). A Quest for Cinergy: The War Metaphor and the Construction of Identity. *Communication Studies, 54*(3), 249.
- Brannen, M. Y., & Salk, J. E. (2000). Partnering across borders: Negotiating organizational culture in a German-Japanese joint venture. *Human Relations, 53*(4), 451–487.
- Branscombe, N. R., & Wann, D. L. (1994). Collective self-esteem consequences of outgroup derogation when a valued social identity is on trial. *European Journal of Social Psychology, 24*(6), 641–657.

- Branscombe, N. R., Ellemers, N., Spears, R., & Doosje, B. (1999). The context and content of social identity threat. *Social identity: Context, commitment, content*, 35-58.
- Bray, S. R., & Brawley, L. R. (2002). Role Efficacy, Role Clarity, and Role Performance Effectiveness. *Small Group Research*, 33(2), 233.
- Brealey, R.A. & Meyers, S.C. (2006). *Principles of Corporate Finance*. New York, NY: McGraw-Hill/Irwin.
- Breiman, L, Friedman, J., Olshen, R. & Stone, C. (1984). *Classification and Regression Trees*. Wadsworth Int. Group.
- Brennan, N. M., Daly, C.A., Harrington, C.S. (2010). Rhetoric, argument and impression management in hostile takeover defence documents. *The British Accounting Review*, 42(4), 253-268.
- Brenner, P. S., & DeLamater, J. (2016). Lies, damned lies, and survey self-reports? Identity as a cause of measurement bias. *Social psychology quarterly*, 79(4), 333-354.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality & Social Psychology Bulletin*, 17(5), 475–482.
- Brewer, M. B. (1993). Social identity, distinctiveness, and in-group homogeneity. *Social Cognition*, 11(1), 150–164.
- Brewer, M. B. (1999). The psychology of prejudice: Ingroup love or outgroup hate?. *Journal Of Social Issues*, 55(3), 429-444.
- Brewer, M. B. (2003). Optimal distinctiveness, social identity, and the self. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 480–491). New York, NY: Guilford Press

- Brewer, M. B. (2008). Depersonalized trust and ingroup cooperation, In Krueger, J., (Ed.), *Rationality and social responsibility: Essays in honor of Robyn Mason Dawes*, New York, NY, US: Psychology Press, 215-232.
- Brewer, M. B., & Gardner, W. (1996). Who is This "We"? Levels of Collective Identity and Self Representations. *Journal Of Personality & Social Psychology*, 71(1), 83-93.
- Brewer, M. B., Manzi, J. M., & Shaw, J. S. (1993). In-group identification as a function of depersonalization, distinctiveness, and status. *Psychological Science*, 4(2), 88–92.
- Brickley, J. A., & James, C. M. (1987). The Takeover Market, Corporate Board Composition, and Ownership Structure: The Case of Banking. *Journal of Law & Economics*, 30(1), 161–180.
- Brislin, R. (1993). *Understanding culture's influence on behaviour*. San Diego, CA: Harcourt Brace Jovanovich.
- Brothers, D. (2011). *Toward a psychology of uncertainty: Trauma-centered psychoanalysis*. Routledge.
- Brown, A. D., & Humphreys, M. (2003). Epic and tragic tales: Making sense of change. *Journal Of Applied Behavioural Science*, 39(2), 121-144.
- Brown, G., Lawrence, T. B., & Robinson, S. L. (2005). Territoriality in organizations. *Academy of Management Review*, 30(3), 577-594.
- Brown, R. (2000). Social identity theory: past achievements, current problems and future challenges. *European Journal of Social Psychology*, 30(6), 745–778.
- Brown, W. F. (1951). I. Regulation of Monopoly. *Journal of Marketing*, 15(4), 494–496.
- Bruner, R. F. (2005). *Deals from hell: M&A lessons that rise above the ashes*. New York: John Wiley & Sons.

- Bryant, A., & Charmaz, K. (2012). Grounded theory and psychological research. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological*. (pp. 39–56). American Psychological Association.
- Buchwald, A. M., & Rudick-Davis, D. (1993). The symptoms of major depression. *Journal of Abnormal Psychology, 102*(2), 197–205.
- Bufford, S. (1983). Swiss Acquisition and Merger Law. *Antitrust Law Journal, 52*(4), 1031.
- Buono, A. F. (1997). Technology transfer through acquisition. *Management Decision, 35*(3/4), 194.
- Buono, A. F., & Bowditch, J. L. (1989). *The human side of mergers and acquisitions: Managing collisions between people, cultures, and organizations*. San Francisco, CA: Jossey-Bass.
- Buono, A. F., Bowditch, J. L., & Lewis, J. W. (1985). When cultures collide: The anatomy of a merger. *Human Relations, 38*(5), 477–500.
- Burck, G. (1967). The Perils of the Multimarket Corporation. *Management Review, 56*(3), 42.
- Burgess, P. M., Mazzocco, L. & Campbell, I. M. (1987). Discriminant validity of the CrownCrisp Experiential Index. *British Journal of Medical Psychology, 60*, 61-69.
- Burlew, L. D., Pederson, J. E., & Bradley, B. (1994). The Reaction of Managers to the Pre-Acquisition Stage of a Corporate Merger: A Qualitative Study. *Journal Of Career Development (Springer Science & Business Media B.V.), 21*(1), 11-22.

- Burman, P. (1989). A comparative study of ordinary cross-validation, v-fold cross-validation and the repeated learning-testing methods, *Biometrika*, 76, 503–514.
- Burns, A. R. (1933). The Process of Industrial Concentration. *Quarterly Journal of Economics*, 47(2), 277–311.
- Burt, J. R., Torosdagli, N., Khosravan, N., RaviPrakash, H., Mortazi, A., Tissavirasingham, F., ... & Bagci, U. (2018). Deep learning beyond cats and dogs: recent advances in diagnosing breast cancer with deep neural networks. *The British journal of radiology*, 91(1089), 20170545.
- Buruck, G., Dörfel, D., Kugler, J., & Brom, S. S. (2016). Enhancing well-being at work: The role of emotion regulation skills as personal resources. *Journal of occupational health psychology*, 21(4), 480.
- Butler, F. C., Perryman, A. A., & Ranft, A. L. (2012). Examining the Effects of Acquired Top Management Team Turnover on Firm Performance Post-acquisition: A Meta-analysis. *Journal Of Managerial Issues*, 24(1), 47-60.
- Butters, J. K., & Cary, W. L. (1951). Motives Affecting Form of Sales and Purchases of Businesses. *Harvard Law Review*, 64(5), 697–726.
- Butters, J. K., & Lintner, J. (1951). Tax and Non-Tax Motivations for Mergers. *Journal of Finance (Wiley-Blackwell)*, 6(4), 361–382.
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14(5), 365-376.
- Byrnes, T. W. (1953). Where Are You Going, Cpa? *Accounting Review*, 28(2), 177.

- Cann Jr., W. A. (1983). The New Merger Guidelines - Is the Department of Justice Enforcing the Law? *American Business Law Journal*, 21(1), 1.
- Cannella Jr., A. A., & Hambrick, D. C. (1993). Effects of Executive Departures on the Performance of Acquired Firms. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 14, 137–152.
- Cantor, N. (1990). From Thought to Behavior: “Having” and “Doing” in the Study of Personality and Cognition. *American Psychologist*, 45(6), 735–750.
- Capie, F., & Rodrik-Bali, G. (1982). Concentration in British Banking. *Business History*, 24(3), 280.
- Carnap, R. (1962). The aim of inductive logic. In E. Nagel, P. Suppes & A. Tarski (Eds.), *Logic, methodology and philosophy of science*. (pp. 303-318). Stanford, CA: Stanford University Press.
- Carter, M. E., & Pavur, E. J. (2003). Management Psychology during Mergers and Acquisitions. *The Psychologist-Manager Journal*, 6(2), 31-46..
- Carter, P. (1945). Some Issues Involved in “Original Cost.” *Accounting Review*, 20(2), 222.
- Cartwright, S. & Cooper, C. L. (1996). *Managing mergers, acquisitions, and strategic alliances: Integrating people and cultures*. Routledge.
- Cartwright, S., & Cooper, C. (1990). The Impact of Mergers and Acquisitions on People at Work: Existing Research and Issues. *British Journal Of Management*, 1(2), 65-76.
- Cartwright, S., & Cooper, C. L. (1993). The Psychological Impact of Merger and Acquisition on the Individual: A Study of Building Society Managers. *Human Relations*, 46(3), 327-347.

- Cartwright, S., & Cooper, C. L. (1993). The role of culture compatibility in successful organizational marriage. *Academy of Management Executive*, 7, 57-70.
- Cartwright, S., & Cooper, C.L. (1996). *Managing mergers, acquisitions and strategic alliances* (2nd ed.).Oxford, UK: Butterworth-Heinemann.
- Cartwright, S., & Holmes, N. (2006). The meaning of work: The challenge of regaining employee engagement and reducing cynicism. *Human resource management review*, 16(2), 199-208.
- Cartwright, S., & Schoenberg, R. (2006). Thirty Years of Mergers and Acquisitions Research: Recent Advances and Future Opportunities. *British Journal of Management*, 17, S1–S5.
- Cartwright, S., Cooper, C. L. (1992). *Mergers and acquisitions: The human factor*. Oxford: Boston: Butterworth Heinemann.
- Cartwright, S., Tytherleigh, M., & Robertson, S. (2007). Are mergers always stressful? Some evidence from the higher education sector. *European Journal Of Work And Organizational Psychology*, 16(4), 456-478.
- Carver, C. S. (2006). Approach, Avoidance, and the Self-Regulation of Affect and Action. *Motivation & Emotion*, 30(2), 105-110.
- Carver, C. S., & Harmon-Jones, E. (2009). Anger is an approach-related affect: evidence and implications. *Psychological Bulletin*, 135(2), 183-204.
- Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review*, 97(1), 19–35.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behaviour*. New York, NY: Cambridge University Press.

- Casey, R., Dodd, P. & Dolan, P. (1987). Takeovers and corporate raiders: empirical evidence from extended event studies. *Australian Journal of Management*, 12 (2), 201-220.
- Cattell, R. B. (1966). Psychological theory and scientific method. In R. B. Cattell (Ed.), *Handbook of multivariate experimental psychology* (pp. 1–18). Chicago: Rand McNally.
- Cavanaugh, M. A., & Noe, R. A. (1999). Antecedents and consequences of relational components of the new psychological contract. *Journal of Organizational Behaviour*, 20(3), 323.
- Cawley, G. C., & Talbot, N. L. C. (2007). Preventing Over-Fitting during Model Selection via Bayesian Regularisation of the Hyper-Parameters. *Journal of Machine Learning Research*, 8(4), 841–861.
- Chan, P. S., & Wong, A. (1994). Global strategic alliances and organizational learning. *Leadership & Organization Development Journal*, 15(4), 31–36.
- Chanmugam, R., Shill, W., Mann, D., Ficery, K., & Pursche, B. (2005). The intelligent clean room: ensuring value capture in mergers and acquisitions. *Journal of Business Strategy*, 26(3), 43–49.
- Charmaz, K. (1996). The search for meanings – Grounded Theory. In J. A. Smith, R. Harre & L. Van Langenhove (Eds.), *Rethinking Methods in Psychology*. (pp. 27-49). London: Sage Publications.
- Chatterjee, S., & Wernerfelt, B. (1991). The link between resources and type of diversification: Theory and evidence. *Strategic management journal*, 12(1), 33-48.

- Chatterjee, S., Lubatkin, M. H., Schweiger, D. M., & Weber, Y. (1992). Cultural differences and shareholder value in related mergers: linking equity and human capital. *Strategic Management Journal*, 13(5), 319-334.
- Chaudhry, M. S., Sabir, H. M., Rafi, N., & Kalyar, M. N. (2011). Exploring the Relationship between Salary Satisfaction and Job Satisfaction: A Comparison of Public and Private Sector Organizations. *Journal of Commerce (22206043)*, 3(4), 1–14.
- Chen, C., Chang, Y., & Lin, M. (2010). The performance impact of post-M&A interdepartmental integration: An empirical analysis. *Industrial Marketing Management*, 39(7), 1150-1161.
- Chen, C.-H., & Lin, M. J. (2011). An assessment of post-M&A integration influences on new product development performance: An empirical analysis from China, Taiwan, and HK. *Asia Pacific Journal of Management*, 28(4), 807–831.
- Chiaburu, D. S., Peng, A. C., Oh, I.-S., Banks, G. C., & Lomeli, L. C. (2013). Antecedents and consequences of employee organizational cynicism: A meta-analysis. *Journal of Vocational Behaviour*, 83(2), 181–197.
- Chirkowska-Smolak, T., & Kleka, P. (2011). The Maslach burnout inventory—general survey: Validation across different occupational groups in Poland. *Polish Psychological Bulletin*, 42(2), 86-94.
- Chiu, S.-F., & Peng, J.-C. (2008). The relationship between psychological contract breach and employee deviance: The moderating role of hostile attributional style. *Journal of Vocational Behaviour*, 73(3), 426–433.
- Choda, N., Wakai, K., Naito, M., Imaeda, N., Goto, C., Maruyama, K., Kadomatsu, Y., Tsukamoto, M., Sasakabe, T., Kubo, Y., Okada, R., Kawai, S., Tamura, T., Hishida,

- A., Takeuchi, K., Mori, A., & Hamajima, N. (2020). Associations between diet and mental health using the 12-item General Health Questionnaire: cross-sectional and prospective analyses from the Japan Multi-Institutional Collaborative Cohort Study. *Nutrition Journal*, *19*(1), 1–14.
- Choi, S., Holmberg, I., Löwstedt, J., & Brommels, M. (2011). Executive management in radical change—The case of the Karolinska University Hospital merger. *Scandinavian Journal Of Management*, *27*(1), 11-23.
- Choi, Y. G., Choi, B. J., Park, T. H., Uhm, J. Y., Lee, D. B., Chang, S. S., & Kim, S. Y. (2019). A study on the characteristics of Maslach Burnout Inventory-General Survey (MBI-GS) of workers in one electronics company. *Annals of occupational and environmental medicine*, *31*, e29.
- Chua, A. Y., & Goh, D. H. (2009). Why the whole is less than the sum of its parts: Examining knowledge management in acquisitions. *International Journal Of Information Management*, *29*(1), 78-86.
- Chun, R., & Davies, G. (2010). The effect of merger on employee views of corporate reputation: Time and space dependent theory. *Industrial Marketing Management*, *39*(5), 721-727.
- Chung, G. H., Du, J., & Choi, J. N. (2014). How do employees adapt to organizational change driven by cross-border M&As? A case in China. *Journal of World Business*, *49*(1), 78–86.
- Citera, M., & Rentsch, J. R. (1993). Is there justice in organizational acquisitions? The role of distributive and procedural fairness in corporate acquisitions. In R. Cropanzano

- (Ed.), *Justice in the workplace: Approaching fairness in human resource management*. (pp. 211–230). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Citera, M., & Stuhlmacher, A. F. (2001). A policy-modeling approach to examining fairness judgments in organizational acquisitions. *Journal Of Behavioural Decision Making, 14*(4), 309-327.
- Citron, F. M., Gray, M. A., Critchley, H. D., Weekes, B. S., & Ferstl, E. C. (2014). Emotional valence and arousal affect reading in an interactive way: neuroimaging evidence for an approach-withdrawal framework. *Neuropsychologia, 56*79-89.
- Clark, S. M., Gioia, D. A., Ketchen, J. J., & Thomas, J. B. (2010). Transitional Identity as a Facilitator of Organizational Identity Change during a Merger. *Administrative Science Quarterly, 55*(3), 397-438.
- Clarke, N., & Salleh, N. M. (2011). Emotions and their management during a merger in Brunei. *Human Resource Development International, 14*(3), 291-304.
- Claxton, A. J., Chawla, A. J., & Kennedy, S. (1999). Absenteeism among employees treated for depression. *Journal Of Occupational And Environmental Medicine, 41*(7), 605–611.
- Coff, R. W. (2002). Human capital, shared expertise, and the likelihood of impasse in corporate acquisitions. *Journal of Management, 28*(1), 107-128.
- Cohen, A., & Freund, A. (2005). A longitudinal analysis of the relationship between multiple commitments and withdrawal cognitions. *Scandinavian Journal Of Management, 21*(3), 329-351.
- Cohen, J. (1983). The cost of dichotomization. *Applied Psychological Measurement, 7*, 249–253.

- Cohen, J. (1988). *Statistical power analysis for the behavioural sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310-357.
- Cohen-Charash, Y., & Spector, P. E. (2001). The Role of Justice in Organizations: A Meta-Analysis. *Organizational Behaviour & Human Decision Processes*, 86(2), 278–321.
- Coie, J. D., & Dodge, K. A. (1998). Aggression and antisocial behaviour. In W. Damon & N. Eisenberg (Ed.), *Handbook of child psychology: Social, emotional, and personality development* (p. 779–862). John Wiley & Sons Inc.
- Cole, M. S., Bernerth, J. B., Walter, F., & Holt, D. T. (2010). Organizational justice and individuals' withdrawal: Unlocking the influence of emotional exhaustion. *Journal of Management Studies*, 47(3), 367–390.
- Collins, G., & Wickham, J. (2002). Experiencing mergers: a woman's eye view. *Women's Studies International Forum*, 25(5), 573.
- Collins, N. R., & Preston, L. E. (1961). The Size Structure of the Largest Industrial Firms, 1909-1958. *American Economic Review*, 51(5), 986–1011.
- Colman, H. L., & Lunnan, R. (2011). Organizational Identification and Serendipitous Value Creation in Post-Acquisition Integration. *Journal Of Management*, 37(3), 839-860.
- Colombo, M. G., & Mariotti, S. (1998). Cross-border Mergers and Acquisitions and the Competitive Positioning of European National Industries. *Competition & Change*, 2(4), 359.
- Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure, *Journal of Applied Psychology*, 86, 386–400.

- Colquitt, J. A. (2012). Organizational justice. In S. W. J. Kozlowski (Ed.), *Oxford library of psychology. The Oxford handbook of organizational psychology, Vol. 1* (p. 526–547). Oxford University Press.
- Colquitt, J. A. and Rodell, J. B. (2011). Justice, trust and trustworthiness: A longitudinal analysis integrating three theoretical perspectives. *Academy of Management Journal*, 54 (6), 1183-1206
- Colquitt, J. A., Scott, B. A., & LePine, J. A. (2007). Trust, trustworthiness, and trust propensity: A meta-analytic test of their unique relationships with risk taking and job performance. *Journal of Applied Psychology*, 92(4), 909–927.
- Colquitt, J. A., Scott, B. A., Rodell, J. B., Long, D. M., Zapata, C. P., Conlon, D. E., & Wesson, M. J. (2013). Justice at the millennium, a decade later: A meta-analytic test of social exchange and affect-based perspectives. *Journal of Applied Psychology*, 98(2), 199–236.
- Colyer, A. (1999). Financing as a driver for mergers and acquisitions. *Nature Biotechnology*, 17, 13.
- Comanor, W. S. (1967). Vertical Mergers, Market Powers, and the Antitrust Laws. *American Economic Review*, 57(2), 254.
- Conyon, M. J., Girma, S., Thompson, S., & Wright, P. W. (2001). Do hostile mergers destroy jobs?. *Journal of Economic Behavior & Organization*, 45(4), 427-440.
- Cooper, C. L. (1999). The changing psychological contract at work. *European Business Journal*, 11(3), 115.
- Corbin, J., & Strauss, A. (2014). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage publications.

- Cordes, C. L. & Dougherty, T. W. (1993). A review and integration of research on burnout, *Academy of Management Review*, 18 (4), 621-656.
- Cording, M., Christmann, P., & King, D. R. (2008). Reducing causal ambiguity in acquisition integration: intermediate goals as mediators of integration decisions and acquisition performance. *Academy Of Management Journal*, 51(4), 744-767.
- Cording, M., Harrison, J. S., Hoskisson, R. E., & Jonsen, K. (2014). Walking the talk: A multistakeholder exploration of organizational authenticity, employee productivity, and post-merger performance. *The Academy Of Management Perspectives*, 28(1), 38-56.
- Corhay, A. & Rad, T. A. (2000). International acquisitions and shareholder wealth: evidence from the Netherlands. *International Review of Financial Analysis*, 9 (2), 163-174.
- Cornell, J. E., Mulrow, C. D., Localio, R., Stack, C. B., Meibohm, A. R., Guallar, E., & Goodman, S. N. (2014). Random-effects meta-analysis of inconsistent effects: a time for change. *Annals of internal medicine*, 160(4), 267-270.
- Correia, M. F., Cunha, R. C. e, & Scholten, M. (2013). Impact of M&As on organizational performance: The moderating role of HRM centrality. *European Management Journal*, 31(4), 323–332.
- Corrigan, T. (1999, November 30). Esser fights for company and country: German group's chief battles nationalist bias and Vodafone. *Financial Times*, p.35.
- Corti, K., Reddy, G., Choi, E., & Gillespie, A. (2015). The researcher as experimental subject: Using self-experimentation to access experiences, understand social phenomena, and stimulate reflexivity. *Integrative Psychological and Behavioral Science*, 49(2), 288-308.

- Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of applied psychology*, 78(1), 98.
- Costello, T. W., Kubis, J. F., & Shaffer, C. L. (1963). An Analysis of Attitudes toward a Planned Merger. *Administrative Science Quarterly*, 8(2), 235–249.
- Coughlan, A. T., & Schmidt, R. M. (1985). Executive compensation, management turnover, and firm performance . An Empirical Investigation. *Journal of Accounting & Economics*, 7(1/2/3), 43–66.
- Covin, T. J., Sightler, K. W., Kolenko, T. A., & Tudor, K. R. (1996). An investigation of post-acquisition satisfaction with the merger. *Journal Of Applied Behavioural Science*, 32(2), 125-142.
- Cowen, A. P. (2012). An Expanded Model of Status Dynamics: The Effects of Status Transfer and Interfirm Coordination. *Academy of Management Journal*, 55(5), 1169–1186.
- Cowie, M. G., & De Mattos, C. C. A. (1999). Antitrust review of mergers, acquisitions, and joint ventures in Brazil. *Antitrust Law Journal*, 67(1), 113.
- Cox, E., Martin, B.C., Van Staa, T., Garbe, E., Siebert, U. and Johnson, M.L. (2009), Good Research Practices for Comparative Effectiveness Research: Approaches to Mitigate Bias and Confounding in the Design of Nonrandomized Studies of Treatment Effects Using Secondary Data Sources: The International Society for Pharmacoeconomics and Outcomes Research Good Research Practices for Retrospective Database Analysis Task Force Report—Part II. *Value in Health*, 12, 1053-1061.
- Coyle-Shapiro, J., & Kessler, I. (2000). Consequences of the psychological contract for the employment relationship: A large scale survey. *Journal of management studies*, 37(7), 903-930.

- Crawford, M. (1989). R&D suffers after corporate raids. *Science*, 243(4893), 882.
- Creasy, T., Stull, M., & Peck, S. (2009). Understanding employee-level dynamics within the merger and acquisition process. *Journal of General Management*, 35(2), 21–42.
- Creswell, J.W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications
- Creswell, J.W., & Plano Clark, V.L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Cronbach, L. J., & Furby, L. (1970). How we should measure "change": Or should we?. *Psychological bulletin*, 74(1), 68.
- Cuijpers, P., Smit, F., & Van Straten, A. (2007). Psychological treatments of subthreshold depression: a meta-analytic review. *Acta Psychiatrica Scandinavica*, 115(6), 434-441.
- Cuijpers, P., van Straten, A., Warmerdam, L., & Andersson, G. (2009). Psychotherapy versus the combination of psychotherapy and pharmacotherapy in the treatment of depression: a meta-analysis. *Depression and anxiety*, 26(3), 279-288.
- Curran, K. J. (1956). I. Regulation of Monopolistic Methods. *Journal of Marketing*, 21(1), 108–113.
- Curran, W. J., Scott., C. B., Horton, J., Nelson, J. S. et al. (1993). Recursive partitioning analysis of prognostic factors in three radiation therapy oncology group malignant glioma trials, *Journal of the National Cancer Institute*, 85(9) 704–710.
- Curtin, F., & Schulz, P. (1998). Multiple correlations and Bonferroni's correction. *Biological psychiatry*, 44(8), 775-777.
- Cybo-Ottone, A. & Murgia, M. (2000). Mergers and shareholder wealth in European banking. *Journal of Banking & Finance*, 24 (6), 831-859.

- Dacin, M. T., Hitt, M. A., & Levitas, E. (1997). Selecting Partners for Successful International Alliances: Examination of U.S. and Korean Firms. (cover story). *Journal of World Business*, 32(1), 3–16.
- Dackert, I., Jackson, P. R., Brenner, S., & Johansson, C. R. (2003). Eliciting and analysing employees' expectations of a merger. *Human Relations*, 56(6), 705-725.
- Daggett, S. (1913). The Decision on the Union Pacific Merger. *Quarterly Journal of Economics*, 27(2), 295.
- Daggett, S. (1914). Later Developments in the Union Pacific Merger Case. *Quarterly Journal of Economics*, 28(4), 772–794.
- Dailey, R. C., & Kirk, D. J. (1992). Distributive and procedural justice as antecedents of job dissatisfaction and intent to turnover. *Human relations*, 45(3), 305-317.
- Daley, L., Mehrotra, V. & Sivakumar, R. (1997). Corporate focus and value creation evidence from spinoffs. *Journal of Financial Economics*, 45 (2), 257-281.
- Dalhoff, D. (2002). Marketing-related motives in mergers & acquisitions. Wiesbaden, Germany: Springer.
- Daly, J. P. (1995). Explaining changes to employees: The influence of justifications and change outcomes on employees' fairness judgments. *The Journal of Applied Behavioral Science*, 31, 415-428.
- Das, T.K. & Bing-Sheng, T. (2000). Instabilities of strategic alliances: an internal tensions perspective. *Organization Science*, 11(1), 77-101.
- Datta, D. & Puia, G. (1995). Cross-border acquisitions: an examination of the influence of relatedness and cultural fit on shareholder value creation in US acquiring firms. *Management International Review*, 35(4), 337-359.

- Datta, D. K. (1991). Organizational Fit and Acquisition Performance: Effects of Post-Acquisition Integration. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 12(4), 281–297.
- Datta, D. K., & Grant, J. H. (1990). Relationship Between Type of Acquisition, The Autonomy Given to the Acquired Firm, and Acquisition Success: An Empirical Analysis. *Journal of Management*, 16(1), 29.
- Datta, D. K., Pinches, G. E., & Narayanan, V. K. (1992). Factors influencing wealth creation from mergers and acquisitions: a meta-analysis. *Strategic Management Journal*, 13(1), 67-84.
- Datta, D. K., Rajagopalan, N., & Rasheed, A. M. A. (1991). Diversification and Performance: Critical Review and Future Directions. *Journal of Management Studies (Wiley-Blackwell)*, 28(5), 529–558.
- Dauber, D. (2012). Opposing positions in M&A research: Culture, integration and performance. *Cross Cultural Management*, 19(3), 375–398.
- Davidson, C., & Deneckere, R. (1984). Horizontal Mergers and Collusive Behaviour. *International Journal of Industrial Organization*, 2(2), 117.
- Davidson, R. J., & Irwin, W. (1999). The functional neuroanatomy of emotion and affective style. *Trends In Cognitive Sciences*, 3(1), 11-21.
- Davis, T. (1985). Managing culture at the bottom. In R. H. Kilmann, M. Saxton, R. Serpa et al. (Eds.) *Gaining Control of Corporate Culture*. San Francisco, CA, USA: Jossey Bass.

- de Castro, J. O., & Uhlenbruck, K. (1997). Characteristics of Privatization: Evidence from Developed, Less-Developed, and Former Communist Countries. *Journal of International Business Studies*, 28(1), 123–143.
- de Rond, M. & Bouchikhi, H. (2004). On the dialectics of strategic alliances. *Organization Science*, 15(1), 56-69.
- De Wit, F. R., Greer, L. L., & Jehn, K. A. (2012). The paradox of intragroup conflict: a meta-analysis. *Journal of applied psychology*, 97(2), 360.
- Dealogic (2007). *Dealogic M&A review, first half, 2007*. Retrieved on January 30, 2016, from http://www.theage.com.au/ed_docs/review.pdf.
- Dean, J. W. Jr., Brandes, P., & Dharwadkar, R. (1998). Organizational cynicism. *Academy of Management Review*, 23(2), 342–352.
- DeConinck, J. B., & Stilwell, C. D. (2004). Incorporating organizational justice, role states, pay satisfaction and supervisor satisfaction in a model of turnover intentions. *Journal of Business Research*, 57(3), 225-231.
- deCoster, J. Gallucci, M. & Iselin, A.-M.R. (2011). Best practices for using median splits, artificial categorization and their continuous alternatives, *Journal of Experimental Psychopathology*, 2(2), 197-209.
- Deeks, J. J., Macaskill, P., & Irwig, L. (2005). The performance of tests of publication bias and other sample size effects in systematic reviews of diagnostic test accuracy was assessed. *Journal Of Clinical Epidemiology*, 58(9), 882–893.
- Deery, S., Iverson, R. & Walsh, J. (2002). Work relationships in telephone call centers: understanding emotional exhaustion and employee withdrawal, *Journal of Management Studies*, 39 (4), 471-496.

- Delen, D., Zaim, H., Kuzey, C., & Zaim, S. (2013). A comparative analysis of machine learning systems for measuring the impact of knowledge management practices. *Decision Support Systems*, 54(2), 1150–1160.
- Delice, A. (2010). The Sampling Issues in Quantitative Research. *Educational Sciences: Theory & Practice*, 10(4), 2001–2018.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal Of Applied Psychology*, 86(3), 499-512.
- deMunck, V. C. & Sobo, E. J. (Eds) (1998). *Using methods in the field: a practical introduction and casebook*. Walnut Creek, CA: AltaMira Press.
- Deng, L., Yang, M., & Marcoulides, K. M. (2018). Structural Equation Modeling With Many Variables: A Systematic Review of Issues and Developments. *Frontiers in psychology*, 9, 580.
- Denzin, N. K. (1989). *Interpretive biography* (Vol. 17). Sage.
- Denzin, N. K. (1997). *Interpretive ethnography: Ethnographic practices for the 21st century*. Sage.
- D'Errico, F., Paciello, M., & Amadei, M. (2018). Behind Our Words: Psychological Paths Underlying the Un/Supportive Stance Toward Immigrants in Social Media. *2018 IEEE 5th International Conference on Data Science and Advanced Analytics (DSAA)*, 649-656.
- DerSimonian, R., & Laird, N. (1986). Meta-analysis in clinical trials. *Controlled clinical trials*, 7(3), 177-188.

- DeSantis, V. S., & Durst, S. L. (1996). Comparing Job Satisfaction among Public- and Private-Sector Employees. *The American Review of Public Administration*, 26(3), 327–343.
- Deutsch, M. (1958). Trust and suspicion. *Journal of Conflict Resolution*, 2, 265-279.
- Deutsch, M. (1960). Trust, trustworthiness, and the F Scale. *The journal of abnormal and social psychology*, 61(1), 138.
- DeWalt, K M. & DeWalt, B.R. (2002). *Participant observation: a guide for fieldworkers*. Walnut Creek, CA: AltaMira Press.
- Dewing, A. S. (1921). A Statistical Test of the Success of Consolidations. *Quarterly Journal of Economics*, 36(1), 84–101.
- di Norcia, V. (1988). Mergers, takeovers and a property ethic. *Journal of Business Ethics*, 7(1/2), 109-116.
- Dias, S., Sutton, A. J., Ades, A. E., & Welton, N. J. (2013). Evidence synthesis for decision making 2: a generalized linear modeling framework for pairwise and network meta-analysis of randomized controlled trials. *Medical Decision Making*, 33(5), 607-617.
- Dirks, K. T., & Ferrin, D. L. (2001). The role of trust in organizational settings. *Organization Science*, 12(4), 450-467.
- Dirlik, A. (2002). Rethinking colonialism: globalization, postcolonialism and the nation. *International Journal of Postcolonial Studies*, 4(3), 428-448.
- Doi, Y. & Minowa, M. (2003). Factor structure of the 12-item General Health Questionnaire in the Japanese general adult population. *Psychiatry and Clinical Neurosciences*, 57, 379-383.

- Doosje, B., Spears, R., Ellemers, N. & Koomen, W. (1999) Perceived Group Variability in Intergroup Relations: The Distinctive Role of Social Identity. *European Review of Social Psychology*, 10(1), 41-74.
- Doukas, J. & Travlos, N. G. (1988). The effect of corporate multinationalism on shareholders' wealth: evidence from international acquisitions. *The Journal of Finance*, 43 (5), 1161-1175.
- Doukas, J. A., Petmezas, D. (2007). Acquisitions, overconfident managers and self-attribution bias. *European Financial Management* 13(3): 531-577.
- Dranove, D., & Shanley, M. (1995). Cost Reductions or Reputation Enhancement as Motives for Mergers: The Logic of Multihospital Systems. *Strategic Management Journal* (John Wiley & Sons, Inc.), 16(1), 55–74.
- Drori, I., Wrzesniewski, A., & Ellis, S. (2013). One out of many? Boundary negotiation and identity formation in postmerger integration. *Organization Science*, 24(6), 1717-1741.
- Drucker, P. F. (1986). Corporate takeovers-what is to be done?. *The Public Interest*, 82, 3.
- Duffy, M. K., & Ferrier, W. J. (2003). Birds of a feather? How supervisor-subordinate dissimilarity moderates the influence of supervisor behaviours on workplace attitudes. *Group & Organization Management*, 28(2), 217–248.
- Duhaime, I. M., & Schwenk, C. R. (1985). Conjectures on Cognitive Simplification in Acquisition and Divestment Decision Making. *Academy of Management Review*, 10(2), 287–295.
- Dumond, J. -. (2005). Sans licenciements, pourquoi les restructurations sont-elles encore brutales? = Why are mergers without layoffs still rough?. *Psychologie Du Travail Et Des Organisations*, 11(4), 241-255.

- Duncan, R. B. (1972). Characteristics of Organizational Environments and Perceived Environmental Uncertainty. *Administrative Science Quarterly*, 17(3), 313–327.
- Duncan, W. (2006). *Enterprise optimization. Making acquisitions pay off*. Indianapolis, IN: Dog Ear Publishing.
- Duval, S., & Tweedie, R. (2000). Trim and fill: a simple funnel-plot–based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, 56(2), 455-463.
- Dwan, K., Gamble, C., Williamson, P. R., & Kirkham, J. J. (2013). Systematic Review of the Empirical Evidence of Study Publication Bias and Outcome Reporting Bias — An Updated Review. *PLoS ONE*, 8(7), 1–37.
- Ebeling Jr., H. W., & Doorley III, T. L. (1983). A Strategic Approach to Acquisitions. *Journal of Business Strategy*, 3(3), 44.
- Ebneyamini, S., & Sadeghi Moghadam, M. R. (2018). Toward developing a framework for conducting case study research. *International Journal of Qualitative Methods*, 17(1), 1609406918817954.
- Eckbo, B. E. (1983). Horizontal Mergers, Collusion, and Stockholder Wealth. *Journal of Financial Economics*, 11(1–4), 241–273.
- Economist, The (2000, February, 12). Europe's new capitalism: Bidding for the future. *The Economist*, 71-72, 74.
- Eddey, P. H. (1991). Corporate raiders and takeover targets. *Journal of Business Finance & Accounting*, 18 (2), 151-171.
- Eddy, A., & Seifert, B. (1984). International Benefits and Foreign Acquisitions by U.S. Firms. *Management International Review (MIR)*, 24(4), 27–35.

- Edge, J. R., Buffington, P. W., & Slemons, D. E. (1980). Anxiety and cynicism: companions of the police officer. *American Journal of Criminal Justice*, 5(2), 18-24.
- Edmonds, C. C. (1923). Tendencies in the Automobile Industry. *American Economic Review*, 13(3), 422.
- Edwards, J. R. (1991). Person-job fit: A conceptual integration, literature review, and methodological critique. In C. L. Cooper & I. T. Robertson (Ed.), *International Review of Industrial and Organizational Psychology* (pp. 285-357). New York: John Wiley & Sons.
- Edwards, M. R., & Edwards, T. (2012). Procedural justice and identification with the acquirer: The moderating effects of job continuity, organisational identity strength and organisational similarity. *Human Resource Management Journal*, 22(2), 109-128.
- Efthimiou, O., Debray, T. P., van Valkenhoef, G., Trelle, S., Panayidou, K., Moons, K. G., ... & GetReal Methods Review Group. (2016). GetReal in network meta-analysis: a review of the methodology. *Research synthesis methods*, 7(3), 236-263.
- Eis, C. (1969). The 1919-1930 Merger Movement in American Industry. *The Journal of Law & Economics*, 12(2), 267-296. Retrieved from www.jstor.org/stable/724754
- Ellemers, N. (2003). Identity, culture, and change in organizations: A social identity analysis and three illustrative cases. In S. A. Haslam, D. Van Knippenberg, M. Platow & N. Ellemers (Eds.), *Social identity at work: Developing theory for organizational practice* (pp.191–204). New York: Psychology Press.
- Ellemers, N., & Van Rijswijk, W. (1997). Identity needs versus social opportunities: The use of group-level and individual-level identity management strategies. *Social Psychology Quarterly*, 60(1), 52–65.

- Ellemers, N., Kortekaas, P., & Ouwerkerk, J. W. (1999). Self-categorisation, commitment to the group and group self-esteem as related but distinct aspects of social identity. *European Journal of Social Psychology, 29*(2/3), 371–389.
- Ellemers, N., Spears, R., & Doosje, B. (2002). Self and Social Identity. *Annual Review of Psychology, 53*(1), 161.
- Ellemers, N., van Knippenberg, A., de Vries, N., & Wilke, H. (1988). Social identification and permeability of group boundaries. *European Journal of Social Psychology, 18*(6), 497–513.
- Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative, reflexivity: Researcher as subject. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 733–768). Thousand Oaks, CA: Sage
- Ellis, C., & Bochner, A. P. (Eds.). (1996). *Composing ethnography: Alternative forms of qualitative writing* (Vol. 1). Rowman Altamira.
- Ellis, K. M., Reus, T. H., & Lamont, B. T. (2009). The effects of procedural and informational justice in the integration of related acquisitions. *Strategic Management Journal, 30*(2), 137-161.
- Elomaa, T. & Rousu, J. (2004). Efficient multisplitting revisited: optima-preserving elimination of partition candidates, *Data Mining and Knowledge Discovery, 8*, 97-126.
- Elovainio, M., Kivimäki, M., & Vahtera, J. (2002). Organizational Justice: Evidence of a New Psychosocial Predictor of Health. *American Journal of Public Health, 92*(1), 105–108.

- Elovainio, M., van den Bos, K., Linna, A., Kivimäki, M., Ala-Mursula, L., Pentti, J., & Vahtera, J. (2005). Combined effects of uncertainty and organizational justice on employee health: Testing the uncertainty management model of fairness judgments among Finnish public sector employees. *Social Science & Medicine*, *61*(12), 2501–2512.
- Elsass, P. M., & Veiga, J. F. (1994). Acculturation in Acquired Organizations: A Force-Field Perspective. *Human Relations*, *47*(4), 431–454.
- El-Serag, H.B., Graham, D.Y., Richardson, P. & Inadomi, J.M. (2002). Prevention of complicated ulcer disease among chronic users of nonsteroidal anti-inflammatory drugs: The use of a nomogram in cost-effectiveness analysis, *Arch Intern Med*. *162*(18), 2105–2110..
- Elstak, M. N., Bhatt, M., Van Riel, C. M., Pratt, M. G., & Berens, G. M. (2014). Organizational identification during a merger: The role of self-enhancement and uncertainty reduction motives during a major organizational change. *Journal Of Management Studies*, *52*(1), 32-62.
- Empson, L. (2001). Fear of exploitation and fear of contamination: Impediments to knowledge transfer in mergers between professional service firms. *Human Relations*, *54*(7), 839-862.
- Erez, M. (2000). Make Management Practice fit the National Culture. In E.A., Locke, (Ed.), *Basic Principles of Organizational Behavior: A Handbook* (pp. 418-434). NY: Blackwell.

- Eriksson, M., & Sundgren, M. (2005). Managing Change: Strategy or Serendipity-- Reflections from the Merger of Astra and Zeneca. *Journal Of Change Management*, 5(1), 15-28.
- Evangelista, F., & Hau, L. N. (2009). Organizational context and knowledge acquisition in IJVs: An empirical study. *Journal of World Business*, 44(1), 63–73.
- Evans-Lacko, S., & Knapp, M. (2016). Global patterns of workplace productivity for people with depression: Absenteeism and presenteeism costs across eight diverse countries. *Social Psychiatry and Psychiatric Epidemiology: The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services*, 51(11), 1525–1537.
- Fairfield-Sonn, J. W., Ogilvie, J. R., & DelVecchio, G. A. (2002). Mergers, Acquisitions and Long-Term Employee Attitudes. *Journal of Business & Economic Studies*, 8(2), 1.
- Falconer, J.A., Naughton, B.J., Dunlop, D.D., Roth, E.J., Strasser, D.C. & Sinacore, J.M. (1994), Predicting stroke inpatient rehabilitation outcome using a classification tree approach, *Arch Phys Med Rehabil*, 75(6), 619-25.
- Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88 (2), 288-307.
- Fama, E. F., & Jensen, M. C. (1986). Separation of ownership and control. In J. B. Barney & W. G. Ouchi (Eds.), *Organizational economics: Toward a new paradigm for understanding and studying organizations*. (pp. 276–298). San Francisco, CA: Jossey-Bass.
- Farrington, D. P., & Loeber, R. (2000). Some benefits of dichotomization in psychiatric and criminological research, *Criminal Behaviour and Mental Health*, 10, 100-122.

- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behaviour Research Methods, 41*, 1149-1160.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioural, and biomedical sciences. *Behaviour Research Methods, 39*, 175-191.
- Federer, L. (2013). The librarian as research informationist: a case study. *Journal of the Medical Library Association: JMLA, 101*(4), 298.
- Fedor, D. B., Caldwell, S., & Herold, D. M. (2006). The effects of organizational changes on employee commitment: A multilevel investigation. *Personnel Psychology, 59*, 1-29.
- Fein, S. (1996). Effects of suspicion on attributional thinking and the correspondence bias. *Journal of Personality and Social Psychology, 70*(6), 1164–1184.
- Feldman, R. D. (2001). Deregulation and the New Power Company Model for Mergers and Acquisitions. *Journal of Project Finance, 7*(2), 12.
- Fenigstein, A. & Venable, P.A. (1992). Paranoia and self-consciousness. *Journal of Personality and Social Psychology, 62*(1), 129-138.
- Fergus, T. A., Kelley, L. P., & Griggs, J. O. (2018). The combination of health anxiety and somatic symptoms: A prospective predictor of healthcare usage in primary care. *Journal of Behavioural Medicine*.
- Ferreira, L.D., Spadon, G. & Rodrigues, J.F. (2018). A comparative analysis of the automatic modeling of Learning Styles through Machine Learning techniques, *IEEE Frontiers in Education Conference (FIE)*.

- Ferrie, J. E., Shipley, M. J., Marmot, M. G., Stansfeld, S., & Smith, G. D. (1998). The health effects of major organisational change and job insecurity. *Social Science and Medicine*, 46, 243–254.
- Ferris, G. R., Bowen, M. G., Treadway, D. C., Hochwarter, W. A., Hall, A. T., & Perrewé, P. L. (2006). The assumed linearity of organizational phenomena: Implications for occupational stress and well-being. In P. L. Perrewé & D. C. Ganster (Eds.), *Employee health, coping and methodologies*. (Vol. 5, pp. 203–232). Elsevier Science/JAI Press.
- Fielding, A. (1977) Binary segmentation: the automatic interaction detector and related techniques for exploring data structure. In C.A. O’Muirheartaigh & C. Payne (Eds), *The analysis of survey data*, 221–257. JohnWiley & Sons: Chichester, UK.
- Firstbrook, C. (2007). Transnational mergers and acquisitions: how to beat the odds of disaster. *Journal of Business Strategy*, 28(1), 53–56.
- Fischer, P., Greitemeyer, T., Omay, S. I., & Frey, D. (2007). Mergers and group status: the impact of high, low and equal group status on identification and satisfaction with a company merger, experienced controllability, group identity and group cohesion. *Journal Of Community & Applied Social Psychology*, 17(3), 203-217.
- Fiske, S. T. (1993). Controlling other people: The impact of power on stereotyping. *American Psychologist*, 48(6), 621-628.
- Fiske, S. T., & Taylor, S. E. (2013). *Social cognition., 2nd ed.* New York, NY, England: Mcgraw-Hill Book Company.

- Fitzgerald, M. (2002). *Organizational cynicism: its relationship to perceived organizational injustice and explanatory style*. (Electronic Thesis or Dissertation). Retrieved from <https://etd.ohiolink.edu/>
- Fligstein, N. (1990). *The transformation of corporate control*. Cambridge, UK: Harvard University Press.
- Floares, A. G., Ferisgan, M., Onita, D., Ciuparu, A., ... Manolache, F. (2017). The Smallest Sample Size for the Desired Diagnosis Accuracy. *International Journal of Oncology and Cancer Therapy*, 2, 2534-8868.
- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal Of Personality And Social Psychology*, 50(5), 992-1003.
- Fook, J. (1999). Reflexivity as method. *Annual Review of Health Social Science*, 9(1), 11-20.
- Foremand, T. W. (2009). Job satisfaction and turnover in the Chinese retail industry. *Chinese Management Studies* 3(4), 356-378.
- Fornell, C. D., & Lacker, D. F. (1981). Evaluating Structural Equation models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18, 39-50.
- Fox, E. M. (1983). The 1982 Merger Guidelines: When Economists Are Kings? *California Law Review*, 71(2), 281.
- Fox, J. J. (1967). Planning --The Key to Successful Mergers and Acquisitions. *Management Review*, 56(9), 12.
- Franks, J., & Mayer, C. (1996). Hostile takeovers and the correction of managerial failure. *Journal of Financial Economics*, 40(1), 163–181.

- Fred Weston, J. (1963). Planning for Corporate Merger. *California Management Review*, 5(3), 25–30.
- Frederick, W. R., & de la Fuente Rodriguez, A. (1994). A Spanish Acquisition in Eastern Germany: Culture Shock. *Journal of Management Development*, 13(2), 42.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. The broaden-and-build theory of positive emotions. *The American Psychologist*, 56(3), 218-226.
- Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of personality and social psychology*, 95(5), 1045.
- Freeman, D., McManus, S., Brugha, T., Meltzer, H., Jenkins, R., & Bebbington, P. (2011). Concomitants of paranoia in the general population. *Psychological medicine*, 41(5), 923.
- Freeman, E., Gilbert, D. R. & Jacobson, C. (1987). The ethics of greenmail. *Journal of Business Ethics*, 6 (3), 165-178.
- Freeman, R. E., & Reed, D. L. (1983). Stockholders and Stakeholders: A New Perspective on Corporate Governance. *California Management Review*, 25(3), 88–106.
- Frey, L. & Fisher D. (1999). Modeling Decision Tree Performance with the Power Law. *Proceedings of the Seventh International Workshop on Artificial Intelligence and Statistics*, San Francisco, CA: Morgan-Kaufmann, 59-65.

- Fried, Y., Tiegs, R. B., Naughton, T. J., & Ashforth, B. E. (1996). Managers' reactions to a corporate acquisition: a test of an integrative model. *Journal Of Organizational Behaviour, 17*(5), 401-427.
- Frijda, N. H. (1986). *The emotions*. London, England: Cambridge University Press.
- Frijns, B., Gilbert, A., Lehnert, T., & Tourani-Rad, A. (2013). Uncertainty avoidance, risk tolerance and corporate takeover decisions. *Journal of Banking & Finance, 37*(7), 2457–2471.
- Fryers, T., Brugha, T., Morgan, Z., Smith, J., Hill, T., Carta, M., ... & Kovess, V. (2004). Prevalence of psychiatric disorder in Europe: the potential and reality of meta-analysis. *Social Psychiatry and Psychiatric Epidemiology, 39*(11), 899-905.
- Fryxell, C. A. (1930). Should Appreciation Be Brought into the Accounts? *Accounting Review, 5*(2), 157.
- Fugate, M., Kinicki, A. J., & Scheck, C. L. (2002). Coping with an organizational merger over four stages. *Personnel Psychology, 55*(4), 905-928.
- Fugate, M., Prussia, G. E., & Kinicki, A. J. (2012). Managing Employee Withdrawal During Organizational Change: The Role of Threat Appraisal. *Journal Of Management, 38*(3), 890-914.
- Fuld, J. J. (1947). Some Practical Aspects of a Merger. *Harvard Law Review, 60*(7), 76–102.
- Fullan, M. (2010). *Motion Leadership*. Corwin Press: Thousand Oaks, CA.
- Furuya-Kanamori, L., Barendregt, J. J., & Doi, S. A. (2018). A new improved graphical and quantitative method for detecting bias in meta-analysis. *International journal of evidence-based healthcare, 16*(4), 195-203.

- Fushiki, T. (2009). Estimation of prediction error by using K-fold cross-validation, *Statistics and Computing*, 21 (2), 137-146.
- Gable, P. A., & Harmon-Jones, E. (2008). Approach-motivated positive affect reduces breadth of attention. *Psychological Science*, 19, 476-482.
- Gable, P., & Harmon-Jones, E. (2010). The motivational dimensional model of affect: Implications for breadth of attention, memory, and cognitive categorisation. *Cognition And Emotion*, 24(2), 322-337.
- Gaertner, S. L., Dovidio, J. F., & Bachman, B. A. (1996). Revisiting the contact hypothesis: The induction of a common ingroup identity. *International Journal of Intercultural Relations*, 20(3-4), 271-290.
- Galdas, P. (2017). Revisiting Bias in Qualitative Research. *International Journal of Qualitative Methods*, 16(1), 1.
- Galliers, R. D. (1992). *Information systems research: Issues, methods and practical guidelines*. Oxford, UK: Blackwell.
- Garb, H. N. (1998). *Studying the clinician: Judgment research and psychological assessment*. Washington, DC, US: American Psychological Association.
- Garcia, J. B. & Torre-Enciso, I. M. (1995). Mergers and acquisitions in the European Union frame. *International Advances in Economic Research*, 1 (4), 339-349.
- Garrett, C. S. (2001). Towards a New Model of German Capitalism? The Mannesmann--Vodafone Merger and its Implications for the German Economy. *German Politics*, 10(3), 83.

- Garrett, D. K. & McDaniel, A. M. (2001). A new look at nurse burnout: the effect of environmental uncertainty and social climate. *Journal of Nursing Administration*, 31(2), 91-96.
- Gaughan, P. (2007). *Mergers, acquisitions and corporate restructurings* (4th ed.). Hoboken, NJ: John Wiley & Sons.
- Gaughan, P. (2015). *Mergers, acquisitions and corporate restructurings* (6th ed.). Hoboken, NJ: John Wiley & Sons.
- Gavetti, G. (2005). Cognition and Hierarchy: Rethinking the Microfoundations of Capabilities' Development. *Organization Science*, 16(6), 599–617.
- George, D., & Mallery, P. (2005). *SPSS for Windows step by step: A Simple Guide and Reference* (10th ed.). Boston, MA: Pearson.
- Gerber, A. J., Posner, J., Gorman, D., Colibazzi, T., Yu, S., Wang, Z., Kangarlu, A., Zhu, H., Russell, J., & Peterson, B. S. (2008). An affective circumplex model of neural systems subserving valence, arousal, and cognitive overlay during the appraisal of emotional faces. *Neuropsychologia*, 46(8), 2129–2139.
- Geroski, P. A. & Vlassopoulos, A. (1990). Recent patterns of European merger activity. *Business Strategy Review*, 1(2), 17-27.
- Gertsen, M. C. (Ed.), Söderberg, A. (Ed.) & Torp, J. (Ed.) (1998). *Cultural Dimensions of International Mergers and Acquisitions*. Berlin, Boston: De Gruyter.
- Geurts, S., Schaufeli, W., & De Jonge, J. (1998). Burnout and intention to leave among mental health-care professionals: A social psychological approach. *Journal of Social and Clinical Psychology*, 17(3), 341–362.

- Ghysen, A. (2003). The origin and evolution of the nervous system. *The International Journal of Developmental Biology*, 47, 555–562.
- Giessner, S. R. (2011). Is the merger necessary? The interactive effect of perceived necessity and sense of continuity on post-merger identification. *Human Relations*, 64(8), 1079-1098.
- Giessner, S. R., Ullrich, J. & van Dick, R. (2012). A Social Identity Analysis of Mergers & Acquisitions. In D. Faulkner, S. Teerikangas & R.J. Joseph (Eds.), *The Handbook of Mergers and Acquisitions*. Oxford University Press.
- Giessner, S. R., Ullrich, J., & van Dick, R. (2011). Teaching & learning guide for: Social identity and corporate mergers. *Social and Personality Psychology Compass*, 5(7), 500–504.
- Giessner, S. R., Viki, G. T., Otten, S., Terry, D. J., & Täuber, S. (2006). The challenge of merging: merger patterns, premerger status, and merger support. *Personality & Social Psychology Bulletin*, 32(3), 339-352.
- Gifford, W. E., Bobbit, H. R., & Slocum Jr., J. W. (1979). Message Characteristics and Perceptions of Uncertainty by Organizational Decision Makers. *Academy Of Management Journal*, 22(3), 458-481.
- Gilbert, E. W. & Lyn, E. O. (1990). The impact of target managerial resistance on the shareholders of bidding firms. *Journal of Business Finance & Accounting*, 17 (4), 497-510.
- Gill, H., Meyer, J., Lee, K., Shin, K.-H., & Yoon, C.-Y. (2011). Affective and continuance commitment and their relations with deviant workplace behaviours in Korea. *Asia Pacific Journal of Management*, 28(3), 595–607.

- Gill, H., Meyer, J.P., Lee, K. et al. Asia Pac J Manag (2011) Affective and continuance commitment and their relations with deviant workplace behaviours in Korea 28: 595.
- Gillon, S. M., & Matson, C. D. (2013). *The American experiment: A history of the United States*. Australia: Wadsworth Cengage Learning.
- Gilmer, L. D. (1952). The Treasury Stock Kaleidoscope: a consideration of variable tax implications of a corporation's acquisition and subsequent disposal of share of its own stock. *Journal of the American Society of Chartered Life Underwriters*, 6(2), 169–185.
- Giovannoli, R. (2000). The narrative method of inquiry. *Sonic. net*.
- Gleibs, I. H., Mummendey, A., & Noack, P. (2008). Predictors of change in postmerger identification during a merger process: a longitudinal study. *Journal Of Personality And Social Psychology*, 95(5), 1095-1112.
- Gleibs, I. H., Täuber, S., Viki, G. T., & Giessner, S. R. (2013). When what we get is not what we want: The role of implemented versus desired merger patterns in support for mergers. *Social Psychology*, 44(3), 177-190.
- Glisson, C. (2008). Intervention with organizations. *Comprehensive handbook of social work and social welfare*, 3.
- Goddard, S., & Palmer, A. (2010). An evaluation of the effects of a National Health Service Trust merger on the learning and development of staff. *Human Resource Development International*, 13(5), 557-573.
- Goldberg, J. P. & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire, *Psychological Medicine*, 9, 135-145.

- Goldman, L., Cook, E.F., Johnson, P.A., Brand, D.A., Rouan, G.W. & Lee, T.H. (1996), Prediction of the need for intensive care in patients who come to emergency departments with acute chest pain, *The New England Journal of Medicine*, 334(23), 1498-504.
- Gollwitzer, P. M., & Bargh, J. A. (1996). *The psychology of action: Linking cognition and motivation to behaviour*. (P. M. Gollwitzer & J. A. Bargh, Eds.). New York, NY: Guilford Press.
- Gonzalez, P., Vasconcellos, G. M., & Kish, R. J. (1998). Cross-border mergers and acquisitions: The undervaluation hypothesis. *Quarterly Review of Economics & Finance*, 38(1), 25.
- Gonzalez, P., Vasconcellos, G. M., Kish, R. J., & Kramer, J. K. (1997). Cross-border mergers and acquisitions: maximizing the value of the firm. *Applied Financial Economics*, 7(3), 295–305.
- Goodfellow, I., Bengio, Y., & Courville, A. (2016). Machine learning basics. *Deep learning*, 1, 98-164.
- Gopinath, C., & Becker, T. E. (2000). Communication, procedural justice, and employee attitudes: Relationships under conditions of divestiture. *Journal of Management*, 26, 63-83.
- Goranova, M., Dharwadkar, R., & Brandes, P. (2010). Owners on both sides of the deal: Mergers and acquisitions and overlapping institutional ownership. *Strategic Management Journal*, 31(10), 1114–1135.
- Gotlib, I. H., & Hammen, C. L. (1992). *Psychological aspects of depression: Toward a cognitive-interpersonal integration*. Oxford: John Wiley & Sons.

- Goutte C. & Gaussier E. (2005) A Probabilistic Interpretation of Precision, Recall and F-Score, with Implication for Evaluation. In: D.E. Losada, J.M. Fernández-Luna (Eds.), *Advances in Information Retrieval. ECIR 2005. Lecture Notes in Computer Science*, vol 3408. Springer: Berlin, Heidelberg.
- Gravetter, F., & Wallnau, L. (2014). *Essentials of Statistics for the Behavioural Sciences* (8th ed.). Belmont, CA: Wadsworth.
- Green, M.B. (2018). Mergers and Acquisitions. In D. Richardson, N. Castree, M.F. Goodchild, A. Kobayashi, W. Liu & R.A. Marston (Eds.), *International Encyclopedia of Geography* (pp 1-9). John Wiley & Sons.
- Greenberg, J. (1987). A Taxonomy of Organizational Justice Theories. *Academy Of Management Review*, 12(1), 9-22.
- Greenberg, J. (1990). Organizational Justice: Yesterday, Today, and Tomorrow. *Journal of Management*, 16(2), 399.
- Greenberg, J. (1993). The social side of fairness: Interpersonal and informational classes of organizational justice. In R. Cropanzano (Ed.), *Justice in the workplace: Approaching fairness in human resource management* (pp. 79–103). Hillsdale, NJ: Erlbaum.
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., Veeder, M., Kirkland, S., & Lyon, D. (1990). Evidence for terror management theory II: The effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. *Journal Of Personality And Social Psychology*, 58(2), 308-318.
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements.

- In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 29, pp. 61-139). San Diego, CA, US: Academic Press.
- Greene, J. C. (1994). Qualitative program evaluation: Practice and promise. In N. K. Denzin. a. Y. S. Lincoln (Ed.), *Handbook of qualitative research* (pp. 530-534). Thousand Oaks, CA: Sage.
- Greene, J. C. (2007). *Mixing methods in social inquiry*. San Francisco: Jossey Bass.
- Greenwood, R., Hinings, C., & Brown, J. (1994). Merging Professional Service Firms. *Organization Science*, 5(2), 239-257.
- Groenwold, R. H. H., Van Deursen, A. M. M., Hoes, A. W., & Hak, E. (2008). Poor quality of reporting confounding bias in observational intervention studies: a systematic review. *Annals Of Epidemiology*, 18(10), 746–751.
- Gruenewald, T. L., Mroczek, D. K., Ryff, C. D., & Singer, B. H. (2008). Diverse pathways to positive and negative affect in adulthood and later life: An integrative approach using recursive partitioning. *Developmental Psychology*, 44, 330–343.
- Gudykunst, W. B. (1985). An exploratory comparison of close intracultural and intercultural friendships. *Communication Quarterly*, 33, 270–283.
- Gudykunst, W. B. (1993). Toward a theory of effective interpersonal and intergroup communication: An anxiety=uncertainty management (AUM) perspective. In R. L. Wiseman & J. Koester (Eds.), *Intercultural communication competence* (pp. 33–71). Newbury Park, CA: Sage.
- Gudykunst, W. B. (1995). Anxiety = uncertainty management (AUM) theory: Current status. In R. L. Wiseman (Ed.), *Intercultural communication theory* (pp. 8–58). Thousand Oaks, CA: Sage.

- Gudykunst, W. B. (2005). *Theorizing About Intercultural Communication*, Thousand Oaks: SAGE Publications.
- Guerrero, S. (2008). Changes in employees' attitudes at work following an acquisition: A comparative study by acquisition type. *Human Resource Management Journal*, 18(3), 216-236.
- Guest, D. E., & Conway, N. (2003). The psychological contract, health and well-being. *The handbook of work and health psychology*, 143.
- Gulliver, P., Towell, D., & Peck, E. (2003). Staff morale in the merger of mental health and social care organizations in England. *Journal Of Psychiatric And Mental Health Nursing*, 10(1), 101-107.
- Gurtman, M. B. (1992). Trust, distrust, and interpersonal problems: A circumplex analysis. *Journal Of Personality And Social Psychology*, 62(6), 989-1002.
- Gussoni, M., & Mangani, A. (2012). Corporate branding strategies in mergers and acquisitions. *Journal of Brand Management*, 19(9), 772–787.
- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L. & Black, W. C. (1995). *Multivariate Data Analysis* (3rd ed). New York: Macmillan.
- Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal Of School Psychology*, 43(6), 495-513.
- Haleblian, J. (John), Ji-Yub (Jay) Kim, & Rajagoplan, N. (2006). The Influence of Acquisition Experience and Performance on Acquisition Behavior: Evidence from the U.S. Commercial Banking Industry. *Academy of Management Journal*, 49(2), 357–370.

- Haleblian, J., Devers, C. E., McNamara, G., Carpenter, M. A., & Davison, R. B. (2009). Taking Stock of What We Know About Mergers and Acquisitions: A Review and Research Agenda. *Journal of Management*, 35(3), 469–502.
- Hall, P. D., & Norburn, D. (1987). The management factor in acquisition performance. *Leadership & Organization Development Journal*, 8(3), 23–30.
- Hall, R. (1993). Macro theory and the recession of 1990-1991. *American Economic Review*, 83 (2), 275-279.
- Halonon, J. I., Hiilamo, A., Butterworth, P., Wooden, M., Ervasti, J., Virtanen, M., Sivertsen, B., Aalto, V., Oksanen, T., Kivimäki, M., & Lallukka, T. (2020). Psychological distress and sickness absence: Within- versus between-individual analysis. *Journal of Affective Disorders*, 264, 333–339.
- Halsall, R. (2008). Intercultural Mergers and Acquisitions as “Legitimacy Crises” of Models of Capitalism: A UK--German Case Study. *Organization*, 15(6), 797–809.
- Hambrick, D. C., & Cannella, J. A. (1993). Relative standing: a framework for understanding departures of acquired executives. *Academy Of Management Journal*, 36(4), 733-762.
- Hammersley, M. (2001). On ‘systematic’ reviews of research literatures: A ‘narrative’ response to Evans and Benefield. *British Educational Research Journal*, 27(5), 543–554.
- Hanisch, K. A., & Hulin, C. L. (1990). Job attitudes and organizational withdrawal: An examination of retirement and other voluntary withdrawal behaviours . *Journal Of Vocational Behaviour*, 37(1), 60-78.
- Hannay, W. M. (2000). Transnational Competition Law Aspects of Mergers and Acquisitions. *Northwestern Journal of International Law & Business*, 20(2), 287.

- Hao, Z., Wayne, S. J., Glibkowski, B. C., & Bravo, J. (2007). The impact of psychological contract breach on work-related outcomes: a meta-analysis. *Personnel Psychology*, 60(3), 647-680.
- Harbeson, R. W. (1958). The Clayton Act: Sleeping Giant of Antitrust? *American Economic Review*, 48(1), 92
- Harden, A., & Thomas, J. (2005). Methodological Issues in Combining Diverse Study Types in Systematic Reviews. *International Journal of Social Research Methodology*, 8(3), 257–271.
- Harrington, N. (2005). It's too difficult! Frustration intolerance beliefs and procrastination. *Personality & Individual Differences*, 39(5), 873-883.
- Harris, G. E., & Cameron, J. E. (2005). Multiple Dimensions of Organizational Identification and Commitment as Predictors of Turnover Intentions and Psychological Well-Being. *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*, 37(3), 159–169.
- Harris, P. R., Moran, R. T., & Moran, S. V. (2004). *Managing cultural differences*. Amsterdam: Elsevier/Butterworth-Heinemann.
- Harris, R. G., & Jorde, T. M. (1983). Market Definition in the Merger Guidelines: Implications for Antitrust Enforcement. *California Law Review*, 71(2), 464.
- Harrison, J. S., Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1991). Synergies and post-acquisition performance: Differences versus similarities in resource allocations. *Journal of management*, 17(1), 173-190.

- Harrison, J. S., Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (2001). Resource complementarity in business combinations: Extending the logic to organizational alliances. *Journal of Management*, 27(6), 679.
- Harshbarger, D. (1987). Takeover: A Tale of Loss, Change and Growth. *Academy of Management Executive* (08963789), 1(4), 339–343.
- Harwood, I., & Ashleigh, M. (2005). The impact of trust and confidentiality on strategic organizational change programmes: a case study of post-acquisition integration. *Strategic Change*, 14(2), 63-75.
- Haslam, S. A., Jetten, J., & Waghorn, C. (2009). Social identification, stress and citizenship in teams: a five-phase longitudinal study. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 25(1), 21-30.
- Haslam, S. A., Oakes, P. J., Reynolds, K. J., & Turner, J. C. (1999). Social identity salience and the emergence of stereotype consensus. *Personality and Social Psychology Bulletin*, 25(7), 809–818.
- Haslam, S. A., O'Brien, A., Jetten, J., Vormedal, K., & Penna, S. (2005). Taking the strain: Social identity, social support, and the experience of stress. *British journal of social psychology*, 44(3), 355-370.
- Hatch, M. J. (1993). The Dynamics of Organizational Culture. *Academy of Management Review*, 18(4), 657–693.
- Haunschild, P. R., Davis-Blake, A., & Fichman, M. (1994). Managerial Overcommitment in Corporate Acquisition Processes. *Organization Science*, 5(4), 528–540.
- Hawkins, D. M. (2004). The problem of overfitting. *J. Chem. Inf. Comput. Sci*, 44, 1-2.

- Hayward, M. L. A., Hambrick, D. C. 1997. Explaining the premiums paid for large acquisitions: evidence of CEO hubris. *Administrative Science Quarterly*, 42(1): 103-127
- Hazelkorn, T., Zenner, M., & Shivdasani, A. (2004). Creating Value with Mergers and Acquisitions. *Journal of Applied Corporate Finance*, 16(2/3), 81–90.
- Heaton, J. (2017). An empirical analysis of feature engineering for predictive modeling. *SoutheastCon 2016 Conference Proceedings*, Norfolk, USA.
- Hebous, S. k, Ruf, M., & Weichenrieder, A. J. (2011). The Effects of Taxation on the Location Decision of Multinational Firms: M&A Versus Greenfield Investments. *National Tax Journal*, 64(3), 817–838.
- Hedges, L. V., & Olkin, I. (2014). *Statistical methods for meta-analysis*. Academic press.
- Heimeriks, K. H., Schijven, M., & Gates, S. (2012). Manifestations of higher-order routines: The underlying mechanisms of deliberate learning in the context of postacquisition integration. *Academy Of Management Journal*, 55(3), 703-726.
- Heine, S. J., & Lehman, D. R. (1995). Cultural variation in unrealistic optimism: Does the West feel more vulnerable than the East? *Journal of Personality and Social Psychology*, 68(4), 595–607.
- Hellerstein, J. R. (1957). Mergers, Taxes, and Realism. *Harvard Law Review*, 71(2), 254–292.
- Henderson, S., Duncan-Jones, P., Byrne, D. G., Scott, R. & Adcock, S. (1979). Psychiatric disorder in Canberra. *Ada Psychiatrica Scandinavica* 60, 355-374.

- Herger, N. & McCriston, S. (2014). Horizontal, Vertical, and Conglomerate FDI: Evidence from Cross Border Acquisitions, *Econstore, Working Paper (14.02)*, Swiss National Bank, Study Center Gerzensee, Gerzensee.
- Herman, D. H. J. (2017). Restorative justice and retributive justice: An opportunity for cooperation or an occasion for conflict in the search for justice. *Seattle Journal for Social Justice, 16*(1), 71-103.
- Hessen, R. (1975). *Steel Titan: The Life of Charles M. Schwab*. Pittsburgh Pa.: University of Pittsburgh Press.
- Hietala, P., Kaplan, S. N., Robinson, D. T. (2003). What is the price of hubris? Using takeover battles to infer overpayments and synergies. *Financial Management 32*(3): 5-31.
- Higgins, J. P., & Whitehead, A. (1996). Borrowing strength from external trials in a meta-analysis. *Statistics in medicine, 15*(24), 2733-2749.
- Hill, T. M., Dixon, R. L., Mautz, R. K., McMullen, S. Y., Moonitz, M., Powell, W., & Thorsteinson, E. H. (1955). Consolidated Financial Statements. *Accounting Review, 30*(2), 194.
- Hilton, L., Maher, A. R., Colaiaco, B., Apaydin, E., Sorbero, M. E., Booth, M., Shanman, R. M., & Hempel, S. (2017). Meditation for posttraumatic stress: Systematic review and meta-analysis. *Psychological Trauma: Theory, Research, Practice, and Policy, 9*(4), 453–460.
- Hirsch, P. M. (1986). From ambushes to golden parachutes: corporate takeovers as instances of cultural framing and institutional integration. *American Journal of Sociology, 91*(4), 800-837.

- Hirschfeld, R. M. A., Montgomery, S. A., Keller, M. B., Kasper, S., Schatzberg, A. F., Möller, H.-J., ... Bourgeois, M. (2000). Social functioning in depression: A review. *The Journal of Clinical Psychiatry*, *61*(4), 268–275.
- Hisey, K. B., & Caves, R. E. (1985). Diversification Strategy and Choice of Country: Diversifying Acquisitions Abroad by U.S. Multinationals, 1978-1980. *Journal of International Business Studies*, *16*(2), 51–64.
- Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1990). Mergers and Acquisitions and Managerial Commitment to Innovation in M-Form Firms. *Strategic Management Journal (John Wiley & Sons, Inc.)*, *11*(4), 29–47.
- Hitt, M. A., Hoskisson, R. E., Johnson, R. A., & Moesel, D. D. (1996). The Market for Corporate Control and Firm Innovation. *Academy of Management Journal*, *39*(5), 1084–1119.
- Hitt, M. A., Ireland, R. D., Harrison, J. S., & Hoskisson, R. E. (1991). Effects of Acquisitions on R&D Inputs and Outputs. *Academy of Management Journal*, *34*(3), 693–706.
- Hoberg, G., & Phillips, G. (2010). Product Market Synergies and Competition in Mergers and Acquisitions: A Text-Based Analysis. *Review of Financial Studies*, *23*(10), 3773–3811.
- Hobfoll, S. E. (1989). Conservation of resources: a new attempt at conceptualizing stress, *American Psychologist*, *44*, 512-524.
- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, *6*, 307–324.

- Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal Of Personality And Social Psychology*, *84*(3), 632-643.
- Hogg, M. A. (1996). Intragroup processes, group structure and social identity. In W. P. Robinson (Ed.), *Social Groups and Identities. Developing the Legacy of Henri Tajfel* (pp. 65-94). Cornwall, UK: Hartnolls
- Hogg, M. A. (2001). Social categorization, depersonalization and group behaviour. In M. A., Hogg & R. S. Tindale (Eds.), *Blackwell Handbook of Social Psychology: Group Processes*. (pp. 56–85). Malden: Blackwell Publishing.
- Hogg, M. A. (2003). Social identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 462-479). New York, NY, US: The Guilford Press.
- Hogg, M. A. and Abrams, D. (1988). *Social Identifications: A Social Psychology of Intergroup Relations and Group Processes*. London: Routledge
- Hogg, M. A. (2000). Subjective Uncertainty Reduction through Self-categorization: A Motivational Theory of Social Identity Processes, *European Review of Social Psychology*, *11*(1), 223-255.
- Hogg, M. A., & Abrams, D. (1993). Towards a single-process uncertainty-reduction model of social motivation in groups. In M. A. Hogg, D. Abrams, M. A. Hogg, D. Abrams (Eds.) , *Group motivation: Social psychological perspectives* (pp. 173-190). Hertfordshire, HP2 7EZ, England: Harvester Wheatsheaf.
- Hogg, M. A., & Mullin, B.-A. (1999). Joining groups to reduce uncertainty: Subjective uncertainty reduction and group identification. In D. Abrams & M. A. Hogg

- (Eds.), *Social identity and social cognition*. (pp. 249–279). Malden: Blackwell Publishing.
- Hogg, M. A., & Reid, S. A. (2006). Social identity, self-categorization, and the communication of group norms. *Communication Theory*, 16(1), 7–30.
- Hogg, M. A., & Terry, D. J. (2000). Social identity and self-categorization processes in organizational contexts. *The Academy Of Management Review*, 25(1), 121-140.
- Hogg, M. A., & Williams, K. D. (2000). From I to we: Social identity and the collective self. *Group Dynamics: Theory, Research, and Practice*, 4(1), 81–97.
- Hogg, M. A., Hardie, E. A., & Reynolds, K. J. (1995). Prototypical similarity, self-categorization, and depersonalized attraction: a perspective on group cohesiveness. *European Journal of Social Psychology*, 25(2), 159–177.
- Hogg, M.A. & Abrams, D. (1990). Social motivation, self-esteem and social identity. In Abrams, D. & Hogg, M.A. (Eds.), *Social identity theory: Constructive and critical advances*, pp.28-47. New York, NY, US: Springer-Verlag Publishing.
- Homburg, F., Rost, K., & Osterloh, M. (2009). Do synergies exist in related acquisitions? A meta-analysis of acquisition studies. *Review of Managerial Science*, 3(2), 75-116.
- Homburg, C. & Bucerius, M. (2006). Is Speed of Integration Really a Success Factor in Mergers and Acquisitions? An Analysis of the Role of Internal and External Relatedness. *Strategic Management Journal*, 27, 347–367.
- Horenczyk, G. (2004). Identity processes in intergroup encounters. In R. Halabi (Ed.), *Israeli and Palestinian identities in dialogue: The School for Peace approach* (pp. 179–184). New Brunswick, NJ: Rutgers University Press.

- Horvitz, P. M. (1957). Concentration and Competition in New England Banking. *Journal of Finance (Wiley-Blackwell)*, 12(4), 567–568.
- Huang, E., & Chuang, M. H. (2007). Extending the theory of planned behaviour as a model to explain post-merger employee behaviour of IS use. *Computers in Human Behaviour*, 23(1), 240–257.
- Hui, C., Law, K. S., & Chen, Z. X. (1999). A structural equation model of the effects of negative affectivity, leader–member exchange, and perceived job mobility on in-role and extra-role performance: A Chinese case. *Organizational Behaviour and Human Decision Processes*, 77(1), 3–21.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis: Correcting error and bias in research findings*. Newbury Park, CA: Sage.
- Hunter, J. E., & Schmidt, F. L. (2004). *Methods of meta-analysis: Correcting error and bias in research findings* (2nd ed.). Thousand Oaks, CA: Sage.
- Huo, W., Cai, Z., Luo, J., Men, C., & Jia, R. (2016). Antecedents and intervention mechanisms: a multi-level study of R&D team’s knowledge hiding behavior. *Journal of Knowledge Management*.
- Hussain, A. (2014). The Relationship Between Breach of Psychological Contract and Workplace Deviant Behaviour. *IUP Journal of Organizational Behaviour*, 13(2), 25–37.
- Hutzschenreuter, T., Kleindienst, I., & Schmitt, M. (2012). Path-related empirical research on M&A-outcome: Review and research agenda. *Review of Managerial Science*, 6(4), 375–405.

- Idel, M., Melamed, S., Merlob, P., Yahav, J., Hendel, T., & Kaplan, B. (2003). Influence of a merger on nurses' emotional well-being: the importance of self-efficacy and emotional reactivity. *Journal Of Nursing Management, 11*(1), 59-63
- Iliescu, D. (2004). Conflictul, ambiguitatea si supraincarcarea de rol, ca predictori ai comportamentelor negative de control al stressului ocupational [Role conflict, role ambiguity and role overload as predictors for bad behaviours in control of occupational stress]. *Psihologia Resurselor Umane Revista Asociatiei de Psihologie Industriala si Organizationala, 2*, 34–41.
- Ingraham, O. (1929). Capital and Capitalistic Organization. *American Economic Review, 19*(4), 701–704.
- Inkpen, A. C., & Dinur, A. (1998). Knowledge Management Processes and International Joint Ventures. *Organization Science, 9*(4), 454–468.
- Insko, C. A., & Schopler, J. (1998). Differential distrust of groups and individuals. In C. Sedikides, J. Schopler, & C. A. Insko (Eds.), *Intergroup cognition and intergroup behaviour*. (pp. 75–107).
- Insko, C. A., Kirchner, J. L., Pinter, B., Efav, J., & Wildschut, T. (2005). Inter-individual–intergroup discontinuity as a function of trust and categorization: The paradox of expected cooperation. *Journal of Personality and Social Psychology, 88*, 365–385.
- Insko, C. A., Schopler, J., Hoyle, R. H., Dardis, G. J., & Graetz, K. A. (1990). Individual–group discontinuity as a function of fear and greed. *Journal of Personality and Social Psychology, 58*, 68–79.

- Insko, C. A., Schopler, J., Pemberton, M. B., Wieselquist, J., McIlraith, S., Currey, D. P., et al. (1998). Long-term outcome maximization and the reduction of interindividual-intergroup discontinuity. *Journal of Personality and Social Psychology*, 75, 695–710.
- IntHout, J., Ioannidis, J. P., & Borm, G. F. (2014). The Hartung-Knapp-Sidik-Jonkman method for random effects meta-analysis is straightforward and considerably outperforms the standard DerSimonian-Laird method. *BMC medical research methodology*, 14(1), 25.
- Isen, A. M. (2003). Positive affect, systematic cognitive processing and behavior: toward integration of affect, cognition and motivation. *Research in Multi-Level Issues* 2,55-62.
- Issawi, C. (1978). The 1973 oil crisis and after. *Journal of Post Keynesian Economics*, 1(2), 3-26.
- Ivancevich, J. M., Schweiger, D. M., & Power, F. R. (1987). Strategies for Managing Human Resources During Mergers and Acquisitions. *Human Resource Planning*, 10(1), 19–35.
- Iyer, A., Jetten, J., Tsivrikos, D., Postmes, T., & Haslam, S. A. (2009). The more (and the more compatible) the merrier: multiple group memberships and identity compatibility as predictors of adjustment after life transitions. *The British journal of social psychology*, 48(Pt 4), 707–733.
- Jackson, S. E., & Maslach, C. (1982). After-effects of job-related stress: families as victims. *Journal Of Occupational Behaviour*, 3(1), 63-77.

- Jacobs, C. D., Oliver, D., & Heracleous, L. (2013). Diagnosing Organizational Identity Beliefs by Eliciting Complex, Multimodal Metaphors. *Journal Of Applied Behavioural Science*, 49(4), 485-507.
- Jacobucci, R. (2018). *Are decision trees stable enough for psychological research?*
- Jamal, M. (2004). Burnout, stress and health of employees on non-standard work schedules: a study of Canadian workers. *Stress & Health: Journal of the International Society for the Investigation of Stress*, 20(3), 113–119.
- James, C. (1984). An Analysis of the Effect of State Acquisition Laws on Managerial Efficiency: The Case of the Bank Holding Company Acquisitions. *Journal of Law & Economics*, 27(1), 211–226.
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour, *Journal of Occupational and Organizational Psychology*, 73, 287-302.
- Jarrell, G. A. & Poulsen, A. B. (1989). The returns to acquiring firms in tender offers: evidence from three decades. *The Journal of the Financial Management Association*, 18 (3), 12-19.
- Jemison, D. B., & Sitkin, S. B. (1986). Corporate Acquisitions: A Process Perspective. *Academy of Management Review*, 11(1), 145–163.
- Jennings, R., & Mazzeo, M. (1986). Resisting Takeovers Isn't Always Bad. *Business Horizons*, 29(2), 56.
- Jensen, M. C. (1984). Takeovers: folklore and science. *Harvard Business Review*, 62(6), 109–121.
- Jensen, M. C. (1988). Takeovers: Their Causes and Consequences. *Journal of Economic Perspectives*, 2(1), 21–48.

- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control. *Journal Of Financial Economics*, 11(1-4), 5-50.
- Jetten, J., & Hutchison, P. (2011). When groups have a lot to lose: Historical continuity enhances resistance to a merger. *European Journal Of Social Psychology*, 41(3), 335-343.
- Jetten, J., Duck, J., Terry, D. J., & O'Brien, A. (2002). Being attuned to intergroup differences in mergers: The role of aligned leaders for low-status groups. *Personality And Social Psychology Bulletin*, 28(9), 1194-1201.
- Jetten, J., Spears, R., & Manstead, A. S. R. (1996). Intergroup norms and intergroup discrimination: Distinctive self-categorization and social identity effects. *Journal of Personality and Social Psychology*, 71(6), 1222–1233.
- Johnson, J. L., & O'Leary-Kelly, A. M. (2003). The effects of psychological contract breach and organizational cynicism: Not all social exchange violations are created equal. *Journal of Organizational Behaviour*, 24, 627–647.
- Jöns, I., Froese, F. J., & Pak, Y. S. (2007). Cultural changes during the integration process of acquisitions: A comparative study between German and German-Korean acquisitions. *International Journal Of Intercultural Relations*, 31(5), 591-604.
- Joslin, F., Waters, L., & Dudgeon, P. (2010). Perceived acceptance and work standards as predictors of work attitudes and behaviour and employee psychological distress

- following an internal business merger. *Journal Of Managerial Psychology*, 25(1), 22-43.
- Jost, J. T., & Banaji, M. R. (1994). The role of stereotyping in system-justification and the production of false consciousness. *British Journal Of Social Psychology*, 33(1), 1-27.
- Judge, T. A., Van Vianen, A. M., & De Pater, I. E. (2004). Emotional stability, core self-evaluations, and job outcomes: A review of the evidence and an agenda for future research. *Human Performance*, 17(3), 325-346.
- Jung, J. & Dobbin, F. (2012). Finance and institutional investors. In Cetina, K. K. & Preda, A. (Eds.), *The Oxford Handbook of the Sociology of Finance* (pp. 52-74). Oxford, UK: Oxford University Press.
- Junni, P. (2011). Knowledge transfer in acquisitions: Fear of exploitation and contamination. *Scandinavian Journal Of Management*, 27(3), 307-321.
- Kahill, S. (1988). Symptoms of professional burnout: A review of the empirical evidence. *Canadian Psychology/Psychologie Canadienne*, 29(3), 284-297.
- Kale, P., & Singh, H. (2007). Building firm capabilities through learning: the role of the alliance learning process in alliance capability and firm-level alliance success. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 28(10), 981–1000.
- Kale, P., & Singh, H. (2009). Managing Strategic Alliances: What Do We Know Now, and Where Do We Go From Here? *Academy of Management Perspectives*, 23(3), 45–62.
- Kalimo, R., Pahkin, K., Mutanen, P., & Toppinen-Tanner, S. (2003). Staying well or burning out at work: Work characteristics and personal resources as long-term predictors. *Work and Stress*, 17, 109–122.

- Kamau-Mitchell, C. and Oancea, C. (2019). Employee Emotion Assessment Toolkit (EEAT). In C. Oancea and C. Kamau-Mitchell, *Organisational Psychology of Mergers and Acquisitions*. Routledge.
- Kanter, D. & Mirvis, P. (1989). *The Cynical Americans: Living and Working in the Age of Discontent and Disillusion*. San Francisco: Jossey-Bass.
- Kanter, R. M., & Seggerman, T. K. (1986). Managing Mergers, Acquisitions, and Divestitures. *Management Review*, 75(10), 16.
- Kaplan, A. D. H. (1955). The current merger movement analyzed. *Harvard Business Review*, 33(3), 91-98.
- Kass, G.V. (1980). An exploratory technique for investigating large quantities of categorical data. *Applied Statistics*, 29(2), 119–127.
- Kavanagh, M. H., & Ashkanasy, N. M. (2006). The Impact of Leadership and Change Management Strategy on Organizational Culture and Individual Acceptance of Change during a Merger. *British Journal of Management*, 17, S81–S103.
- Kelley, H. H., & Thibaut, J. W. (1978). *Interpersonal relations: A theory of interdependence*. New York: Wiley.
- Kernstock, J., & Brexendorf, T. O. (2012). Corporate brand integration in mergers and acquisitions — An action research-based approach. *Corporate Reputation Review*, 15(3), 169–178.
- Keyes, L. S. (1961). The Bethlehem-Youngstown Case and the Market-Share Criterion. *American Economic Review*, 51(4), 643–657.
- Keyes, L. S. (1967). Proposals for the Control of Conglomerate Mergers. *Southern Economic Journal*, 34(1), 67.

- Kiefer, T. (2005). Feeling bad: antecedents and consequences of negative emotions in ongoing change. *Journal Of Organizational Behaviour*, 26(8), 875-897.
- Kiefer, T., Müller, W. R., & Eicken, S. (2001). *Befindlichkeit in der Chemischen Industrie* (Forschungsbericht No. WWZ-Studie Nr. 59). Basel: Wirtschaftswissenschaftliches Zentrum (WWZ) der Univ
- Kiessling, T., Harvey, M., & Moeller, M. (2012). Supply-chain corporate venturing through acquisition: Key management team retention. *Journal Of World Business*, 47(1), 81-92.
- Kim, Y. S. (2008). Comparison of the decision tree, artificial neural network, and linear regression methods based on the number and types of independent variables and sample size. *Expert Systems with Applications*, 34(2), 1227–1234.
- King, D. R., Dalton, D. R., Daily, C. M., & Covin, J. G. (2004). Meta-analyses of post-acquisition performance: indications of unidentified moderators. *Strategic Management Journal*, 25(2), 187-200.
- Kitchen, J. S. (1983). Restrictions on the Acquisitions of United Kingdom Corporations by Foreigners. *Antitrust Law Journal*, 52(4), 1035.
- Klendauer, R., & Deller, J. (2009). Organizational justice and managerial commitment in corporate mergers. *Journal Of Managerial Psychology*, 24(1), 29-45.
- Knoeber, C. R. (1986). Golden Parachutes, Shark Repellents, and Hostile Tender Offers. *American Economic Review*, 76(1), 155.
- Koch, J. L. & Steers, R. M. (1976). Job attachment, satisfaction and turnover among public employees. *Technical Report No. 6*, Office of Naval Research, University of Oregon.

- Koh, C. H., Pronin, S., & Hughes, M. (2018). Chondroitinase ABC for neurological recovery after acute brain injury: systematic review and meta-analyses of preclinical studies. *Brain Injury*, 32(6), 715–729.
- Kohn, M. L. (1977). *Class and conformity: A study in values* (2nd ed.). Chicago: University of Chicago.
- Kolasky, W. J., & Dick, A. R. (2003). The Merger Guidelines and the Integration of Efficiencies into Antitrust Review of Horizontal Mergers. *Antitrust Law Journal*, 71(1), 207–251.
- Koller, V. (2002). 'A shotgun wedding': Co-occurrence of war and marriage metaphors in mergers and acquisitions discourse. *Metaphor And Symbol*, 17(3), 179-203.
- Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police. *Work & Stress*, 13(4), 326-340.
- Kotsiantis, S. & Kanellopoulos, D. (2006). Discretization techniques: a recent survey, *GESTS International Transactions on Computer Science and Engineering*, 32 (1), 47-58
- Koutsimani, P., Montgomery, A. & Georganta (2019). The Relationship Between Burnout, Depression, and Anxiety: A Systematic Review and Meta-Analysis. *Frontiers in Psychology*, 10, 284.
- Kovoor-Misra, S., & Smith, M. A. (2011). Artifacts, identification and support for change after an acquisition. *Leadership & Organization Development Journal*, 32(6), 584-604.
- Kramer, R. M. (1994). The sinister attribution error: Paranoid cognition and collective distrust in organizations. *Motivation and emotion*, 18(2), 199-230.

- Kramer, R. M. (1998). Paranoid cognition in social systems: Thinking and acting in the shadow of doubt. *Personality And Social Psychology Review*, 2(4), 251-275.
- Kramer, R. M. (2001). Organizational paranoia: origins and dynamics. *Research In Organizational Behaviour*, 231.
- Kramer, R. M. (2004a). The “Dark Side” of Social Context: The Role of Intergroup Paranoia in Intergroup Negotiations. In M. J. Gelfand & J. M. Brett (Eds.), *The handbook of negotiation and culture*. (pp. 219–237). Stanford University Press.
- Kramer, R., & Schaffer, J. (2014). Misconnecting the dots: Origins and dynamics of out-group paranoia. In J. Prooijen & P. Lange (Eds.), *Power, Politics, and Paranoia: Why People are Suspicious of their Leaders* (pp. 199-217). Cambridge: Cambridge University Press.
- Kristensen, H. (2000). Does fairness matter in corporate takeovers? *Journal of Economic Psychology*, 21(1), 43.
- Krug, J. A., & Nigh, D. (2001). Executive Perceptions in Foreign and Domestic Acquisitions: An Analysis of Foreign Ownership and its Effect on Executive Fate. *Journal Of World Business*, 36(1), 85.
- Kujanpää, T. S., Jokelainen, J., Auvinen, J. P., & Timonen, M. J. (2017). The association of generalized anxiety disorder and Somatic Symptoms with frequent attendance to health care services: A cross-sectional study from the Northern Finland Birth Cohort 1966. *International Journal Of Psychiatry In Medicine*, 52(2), 147–159.
- Kumar, K., Bakhshi, A., & Rani, E. (2009). Organizational Justice Perceptions as Predictor of Job Satisfaction and Organizational Commitment. *IUP Journal of Management Research*, 8(10), 24–37.

- Kurt, I., Ture, M. & Kurum, A. T. (2008). Comparing performances of logistic regression, classification and regression tree, and neural networks for predicting coronary artery disease. *Expert Systems with Applications*, 34(1), 366-374.
- Kwantes, C. T., & Bond, M. H. (2019). Organizational justice and autonomy as moderators of the relationship between social and organizational cynicism. *Personality & Individual Differences*, 151, N.PAG.
- Lai, C.H. (2019). The neural markers of MRI to differentiate depression and panic disorder. *Prog Neuropsychopharmacol Biol Psychiatry*, 20(91), 72-78.
- Lam, S. K., & Owen, A. (2007). Combined resynchronisation and implantable defibrillator therapy in left ventricular dysfunction: Bayesian network meta-analysis of randomised controlled trials. *Bmj*, 335(7626), 925.
- Lamoreaux, N. R. (1985). *The Great merger movement in American business, 1985-1904*. Cambridge, UK: Cambridge University Press.
- Lander, M. W., & Kooning, L. (2013). Boarding the aircraft: Trust development amongst negotiators of a complex merger. *Journal Of Management Studies*, 50(1), 1-30.
- Lane, P. J., Cannella, J. . A. A., & Lubatkin, M. H. (1998). Agency problems as antecedents to unrelated mergers and diversification: Amihud and Lev reconsidered. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 19(6), 555.
- Langley, A., Golden-Biddle, K., Reay, T., Denis, J., Hébert, Y., Lamothe, L., & Gervais, J. (2012). Identity Struggles in Merging Organizations: Renegotiating the Sameness–Difference Dialectic. *Journal Of Applied Behavioural Science*, 48(2), 135-167.

- Larsson, R., & Finkelstein, S. (1999). Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Survey of Synergy Realization. *Organization Science*, *10*(1), 1–26.
- Larsson, R., & Lubatkin, M. (2001). Achieving acculturation in mergers and acquisitions: An international case survey. *Human Relations*, *54*(12), 1573-1607.
- Laschinger, H. K. S. (2004). Hospital nurses' perceptions of respect and organizational justice. *JONA: The Journal of Nursing Administration*, *34*(7), 354-364.
- LaValley, M., McAlindon, T.E., Evans, S., Chaisson, C.E. & Felson, D.T. (2001): Problems in the development and validation of questionnaire-based screening instruments for ascertaining cases with symptomatic knee osteoarthritis: The Framingham Study, *Arthritis and Rheumatism*, *44*, 1105–1113
- Lawlor, J. (2013). Employee perspectives on the post-integration stage of a micro-merger. *Personnel Review*, *42*(6), 704-723.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Psychosomatic Medicine*, *55*(3), 234-247.
- Lee, A. S. (1991). Integrating Positivist and Interpretive Approaches to Organizational Research. *Organization Science*, *2*(4), 342–365.
- Lee, D., Kim, K., Kim, T. G., Kwon, S., & Cho, B. (2013). How and when organizational integration efforts matter in South Korea: a psychological process perspective on the post-merger integration. *International Journal Of Human Resource Management*, *24*(5), 944-965.

- Lee, J., Park, N. K., & Kim, H. (2014). The effect of change in organizational identity on knowledge creation by mobile R&D workers in M&As. *Journal Of Organizational Change Management*, 27(1), 41-58.
- Lee, J.-R., Chen, W.-R., & Kao, C. (2003). Determinants and performance impact of asymmetric governance structures in international joint ventures: An empirical investigation. *Journal of Business Research*, 56(10), 815–828.
- Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *The Journal Of Applied Psychology*, 81(2), 123-133.
- Lee, W. B., & Cooperman, E.S. (1989). Conglomerates in the 1980: A performance appraisal. *The Journal of the Financial Management Association*, 18 (1), 45-54.
- Lee, Y. (2010). Loss of productivity due to depression among Korean employees. *Journal Of Occupational Health*, 52(6), 389-394.
- Lei, D., & Hitt, M. A. (1995). Strategic Restructuring and Outsourcing: The Effect of Mergers and Acquisitions and LBOs on Building Firm Skills and Capabilities. *Journal of Management*, 21(5), 835–859.
- Leiter, M. P. (1993). Burnout as a developmental process: consideration of models. In W. B. Schaufeli, C. Maslach & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 237-250). Washington D.C.: Taylor & Francis.
- Lemon, S. C., Roy, J., Clark, M.A., Friedmann, P.D. & Rakowski, W. (2003). Classification and regression tree analysis in public health: methodological review and comparison with logistic regression, *Annals of Behavioural Medicine*, 26(3), 172:181.
- Leonardelli, G. J., Pickett, C. L., & Brewer, M. B. (2010). Optimal distinctiveness theory: A framework for social identity, social cognition, and intergroup relations. In M. P.

- Zanna & J. M. Olson (Eds.), *Advances in experimental social psychology, Vol 43*. (pp. 63–113). San Diego, CA: Academic Press.
- Lepore, S. J. (1995). Cynicism, social support, and cardiovascular reactivity. *Health Psychology, 14*(3), 210–216.
- Lerner, D., & Henke, R. M. (2008). What does research tell us about depression, job performance, and work productivity? *Journal of Occupational and Environmental Medicine, 50*(4), 401–410.
- Lerner, D., Adler, D. A., Chang, H., Lapitsky, L., Hood, M. Y., Perissinotto, C., ... Rogers, W. H. (2004). Unemployment, Job Retention, and Productivity Loss Among Employees With Depression. *Psychiatric Services, 55*(12), 1371–1378.
- Lescent-Giles, I. (2003). Globalisation as a long-term process: a case study of the British experience since 1700, *Enterprise et Histoire, 32*(1).
- Leung, D. H. Y & Qin, J. (2006). Analyzing survey data with incomplete responses using a method based on empirical likelihood, *Appl. Statist., 55*(3), 379-396
- Leventhal, G. S. (1976). The distribution of rewards and resources in groups and organizations. In L. Berkowitz & W. Walster (Eds.), *Advances in experimental social psychology*, (pp. 91–131). New York: Academic Press.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the study of fairness in social relationships. In K. Gergen, M. Greenberg & R. Willis (Eds.), *Social exchange: Advances in theory and research* (pp. 27–55). New York: Plenum.

- Levin, S., & Sidanius, J. (1999). Social dominance and social identity in the United States and Israel: Ingroup favoritism or outgroup derogation?. *Political Psychology*, 20(1), 99-126.
- Levine, J. M., & Moreland, R. L. (1991). Culture and socialization in work groups. In L. B. Resnick, J. M. Levine, & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 257-279). Washington, DC, US: American Psychological Association.
- Levine, R. M., Prosser, A., Evans, D., & Reicher, S. D. (2005) Identity and bystander intervention: how social group membership shapes helping behaviour. *Personality and Social Psychology Bulletin*, 31, 43–453.
- Lewellen, W. G. (1971). A Pure Financial Rationale for the Conglomerate Merger. *Journal of Finance (Wiley-Blackwell)*, 26(2), 521–537.
- Li, J. J. (2008). How to retain local senior managers in international joint ventures: The effects of alliance relationship characteristics. *Journal Of Business Research*, 61(9), 986-994.
- Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gotzsche PC, Ioannidis JP, et al. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *BMJ*, 339:b2700.
- Lind, E. A., & Tyler, R. R. (1988). *The social psychology of procedural justice*. New York: Plenum.
- Linde, B., & Schalk, R. (2008). Influence of pre-merger employment relations and individual characteristics on the psychological contract. *South African Journal Of Psychology*, 38(2), 305-320.
- Linowes, D. F. (1965). Is Merger Necessary? *Advanced Management Journal*, 30(2), 7.

- Lipponen, J., Helkama, K., & Juslin, M. (2003). Subgroup identification, superordinate identification and intergroup bias between the subgroups. *Group Processes & Intergroup Relations*, 6(3), 239–250.
- Lipponen, J., Olkkonen, M., & Moilanen, M. (2004). Perceived procedural justice and employee responses to an organizational merger. *European Journal Of Work And Organizational Psychology*, 13(3), 391-413.
- Lipponen, J., Wisse, B., & Perälä, J. (2011). Perceived justice and group identification: The moderating role of previous identification. *Journal of Personnel Psychology*, 10(1), 13–23.
- Lipton, M., & Brownstein, A. R. (1985). Takeover Responses and Directors' Responsibilities—An Update. *Business Lawyer*, 40(4), 1403.
- Livermore, S. (1935). The success of industrial mergers. *Quarterly Journal of Economics*, 50(1), 68-96.
- Lodorfos, G., & Boateng, A. (2006). The role of culture in the merger and acquisition process: Evidence from the European chemical industry. *Management Decision*, 44(10), 1405-1421.
- Loh, E. (2018). Medicine and the rise of the robots: a qualitative review of recent advances of artificial intelligence in health. *BMJ Leader*, leader-2018.
- Loh, W.Y. (2014). Fifty years of classification and regression trees, *Int Stat Rev.*, 82(3), 329-348.
- Lord, R. G., & Smith, J. E. (1983). Theoretical, Information Processing, and Situational Factors Affecting Attribution Theory Models of Organizational Behaviour. *Academy of Management Review*, 8(1), 50–60.

- Lubatkin, M. (1983). Mergers and the Performance of the Acquiring Firm. *Academy of Management Review*, 8(2), 218–225.
- Lubatkin, M., Schweiger, D., & Weber, Y. (1999). Top management turnover in related M & A's : An additional test of the theory of relative standing. *Journal Of Management*, 25(1), 55-73.
- Luhmann, N. (2000). *The Reality of the Mass Media*. Stanford University Press: Stanford.
- Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, 18(3), 302–318.
- Lum, Z. K., Siaw, M. Y. L., Lee, M. J. X., Koh, Z., Zhang, P. Q., Eng, S. K., Tan, S. C., & Lee, J. Y.-C. (2019). Impact of pharmaceutical care on mental well-being and perceived health among community-dwelling individuals with type 2 diabetes. *Quality of Life Research*, 28(12), 3273–3279.
- Lundbäck, M., & Hörte, S. (2005). Decision-making in conditions of constant change -- a case within the automotive industry. *Management Decision*, 43(2), 220-235.
- Lupina-Wegener, A. A. (2013). Human resource integration in subsidiary mergers and acquisitions: Evidence from Poland. *Journal Of Organizational Change Management*, 26(2), 286-304.
- Lupina-Wegener, A. A., Schneider, S. C., & van Dick, R. (2011). Different experiences of socio-cultural integration: a European merger in Mexico. *Journal Of Organizational Change Management*, 24(1), 65-89.
- Lupina-Wegener, A., Drzensky, F., Ullrich, J., & van Dick, R. (2014). Focusing on the bright tomorrow? A longitudinal study of organizational identification and projected

- continuity in a corporate merger. *The British Journal Of Social Psychology*, 53(4), 752-772.
- Luppino, F. S., de Wit, L. M., Bouvy, P. F., Stijnen, T., Cuijpers, P., Penninx, B. W. J. H., & Zitman, F. G. (2010). Overweight, obesity, and depression: A systematic review and meta-analysis of longitudinal studies. *Archives of General Psychiatry*, 67(3), 220–229.
- Lups,a, D., Virga, D., Maricutoiu, L. P., & Rusu, A. (2020). Increasing psychological capital: A pre-registered meta-analysis of controlled interventions. *Applied Psychology*, 69, 1506–1556.
- Lyons, T. F. (1971). Role clarity, need for clarity, satisfaction, tension, and withdrawal. *Organizational Behaviour & Human Performance*, 6(1), 99-110.
- M&A Statistics Database (n.d.). Retrieved on January 25, 2016, from Institute for Mergers and Acquisitions website, <https://imaa-institute.org/resources/statistics-mergers-acquisitions/>.
- MacCallum, R. C., Zhang, S., Preacher, K. J. & Rucker, D.D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods*, 7(1), 19-40.
- Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status. *The Academy Of Management Annals*, 2(1), 351-398.
- Maguire, S., & Phillips, N. (2008). ‘Citibankers’ at Citigroup: A Study of the Loss of Institutional Trust after a Merger. *Journal Of Management Studies*, 45(2), 372-401.
- Mahajan, A. (1984). Profitability Measures as Indicators of Post-Merger Efficiency Revisited. *Journal of Industrial Economics*, 33(1), 135.

- Mäkikangas, A., Feldt, T., & Kinnunen, U. (2007). Warr's scale of job-related affective well-being: A longitudinal examination of its structure and relationships with work characteristics. *Work & Stress*, 21(3), 197-219.
- Makri, E., & Hantzi, A. (2012). Merger pattern, pre-merger organizational status, and the mediating role of individual-level variables in predicting post-merger turnover intentions. *Interdisciplinary Journal Of Contemporary Research In Business*, 4(4), 165-190.
- Makri, E., & Ntalianis, F. (2015). Post M&A ill-health: Main, moderating and mediating effects of job stressors and perceived organizational support. *Employee Relations*, 37(2), 176-191.
- Makri, M., Hitt, M. A., & Lane, P. J. (2010). Complementary technologies, knowledge relatedness, and invention outcomes in high technology mergers and acquisitions. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 31(6), 602–628.
- Manne, H. G. (1965). Mergers and the Market for Corporate Control. *Journal of Political Economy*, 73(2), 110.
- Manzini, A. O., & Gridley, J. D. (1986). Human Resource Planning for Mergers and Acquisitions: Preparing for the “People Issues” That can Prevent Merger Synergies. *Human Resource Planning*, 9(2), 51–57.
- Manzon, J. . G. B., Sharp, D. J., & Travlos, N. G. (1994). An Empirical Study of the Consequences of U.S. Tax Rules for International Acquisitions by U.S. Firms. *Journal of Finance (Wiley-Blackwell)*, 49(5), 1893–1904.

- Marken, G. A. (1985). Does Your Management Know the Language of Takeover? *Public Relations Quarterly*, 30(4), 14.
- Marks, M. L. (1997). Consulting in mergers and acquisitions: Interventions spawned by recent trends. *Journal of Organizational Change Management*, 10(3), 267–279.
- Marks, M. L. (2006). Workplace recovery after mergers, acquisitions, and downsizings:: facilitating individual adaptation to major organizational transitions. *Organizational Dynamics*, 35(4), 384-399.
- Marks, M. L., & Mirvis, P. H. (1992). Rebuilding after the Merger: Dealing with “Survivor Sickness.” *Organizational Dynamics*, 21(2), 18–32.
- Marks, M. L., & Mirvis, P. H. (2000). Managing Mergers, Acquisitions, and Alliances: Creating an Effective Transition Structure. *Organizational Dynamics*, 28(3), 35–47.
- Marks, M. L., & Mirvis, P. H. (2001). Making mergers and acquisitions work: Strategic and psychological preparation. *Academy of Management Executive*, 15(2), 80–92.
- Marmenout, K. (2010). Employee Sensemaking in Mergers: How Deal Characteristics Shape Employee Attitudes. *Journal Of Applied Behavioural Science*, 46(3), 329-359.
- Marsh, P. (1989). Mergers in the drug industry. *BMJ: British Medical Journal (International Edition)*, 299(6703), 813.
- Martinelli, C., Cavanagh, K., & Dudley, R. E. (2013). The impact of rumination on state paranoid ideation in a nonclinical sample. *Behaviour Therapy*, 44(3), 385-394.
- Martynova, M. & Renneboog, L. (2011). The performance of the European market for corporate control: evidence from the fifth takeover wave. *European Financial Management*, 17 (2), 208–259.

- Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: what have we learned and where do we stand?. *Journal of Banking & Finance*, 32, 2148–2177.
- Maslach, C. Schaufeli, W. B. & Leiter, M. P. (2001). Job burnout, *Annual Review of Psychology*, 52, 397-422.
- Maslach, C., & Leiter, M. P. (1997). *The truth about burnout*. San Francisco: Jossey Bass.
- Maslach, C., & Schaufelli, W. B. (1993). Historical and conceptual development of burnout. In W. B. Schaufelli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research*. Washington DC: Taylor Francis.
- Mason, J. (2002). *Qualitative researching* (2nd ed.). London: Sage.
- Mason, R. H., & Goudzwaard, M. B. (1976). Performance of conglomerate firms: a portfolio approach. *The Journal of Finance*, 31 (1), 39-48.
- Mastenbroek, N. M., Jaarsma, A. C., Scherpbier, A. A., van Beukelen, P., & Demerouti, E. (2014). The role of personal resources in explaining well-being and performance: A study among young veterinary professionals. *European Journal Of Work & Organizational Psychology*, 23(2), 190-202.
- Mathieu, J. E., & Zajac, D. M. (1990). A review and meta-analysis of the antecedents, correlates, and consequences of organizational commitment. *Psychological Bulletin*, 108(2), 171-194.
- Matsuo, M. (1983). Mergers and Acquisitions under Japanese Law. *Antitrust Law Journal*, 52(4), 1011.
- Matteson, M. T, & Ivancevich, J. M. (1990). Merger and acquisition stress: Fear and uncertainty at mid-career. *Prevention in Human Services*, 8(1), 139-158.

- Matusiak, L. W. (1967). Overcoming Obstacles to Merger. *Journal of Accountancy*, 124(3), 58–63.
- Matzler, K., & Renzl, B. (2006). The Relationship between Interpersonal Trust, Employee Satisfaction, and Employee Loyalty. *Total Quality Management & Business Excellence*, 17(10), 1261–1271.
- Maydeu-Olivares, A. (2017). Maximum likelihood estimation of structural equation models for continuous data: Standard errors and goodness of fit. *Structural Equation Modeling: A Multidisciplinary Journal*, 24(3), 383-394.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20, 709–734.
- Mayer, R.C. & Davis, J. H. (1999). The effect of performance appraisal system on trust for management: a field quasi-experiment. *Journal of Applied Psychology*, 84 (1), 123-136.
- McArdle, J. (2012). Exploratory data mining using CART in the behavioural sciences. In H. Cooper (Ed.), *APA Handbook of Research Methods in Psychology: Vol. 3. Data Analysis and Research Publication*, 405-421.
- McAteer, D. (2010). Philosophical Pluralism: Navigating the sea of diversity in psychotherapeutic and counselling psychology practice. In M. Milton (Ed.), *Therapy and beyond* (pp.5–19). Oxford: Wiley.
- McEntire, M. H., & Bentley, J. C. (1996). When rivals become partners: acculturation in a newly-merged organization. *International Journal Of Organizational Analysis (1993 - 2002)*, 4(2), 135.
- McLagan, B. (1965). Why Mergers Go Wrong. *Management Review*, 54(1), 30.

- Meek, V. L. (1988). Organizational Culture: Origins and Weaknesses. *Organization Studies*, 9(4), 453–473.
- Meglio, O., & Risberg, A. (2011). The (mis)measurement of M&A performance—A systematic narrative literature review. *Scandinavian Journal Of Management*, 27(4), 418-433.
- Mehta, M., & Hirschheim, R. (2007). Strategic Alignment In Mergers And Acquisitions: Theorizing IS Integration Decision making. *Journal of the Association for Information Systems*, 8(3), 143–174.
- Melewar, T. C., Saunders, J., & Balmer, J. M. T. (2001). Cause, effect and benefits of a standardised corporate visual identity system of UK companies operating in Malaysia. *European Journal of Marketing*, 35(3–4), 414–427.
- Melnik, A., & Pollatschek, M. A. (1973). Debt capacity, diversification and conglomerate mergers. *Journal of Finance*, 28(5), 1263-1273.
- Mensah, R. & Kosi, I. (2016). Organizational commitment and turnover intentions for clinical laboratory scientists in Ghana. *European Journal of Business and Management*, 8(2), 2222-1905
- Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education*. Revised and Expanded from " Case Study Research in Education.". Jossey-Bass Publishers, 350 Sansome St, San Francisco, CA 94104.
- Messenger, R. & Mandell, L. (1972). A modal search technique for predictive nominal scale multivariate analysis. *Journal of the American Statistical Association*, 67, 768–772.
- Meyer, C. B. (2001). Allocation processes in mergers and acquisitions: An organizational justice perspective. *British Journal Of Management*, 12(1), 47-66.

- Meyer, C. B. (2006). Destructive Dynamics of Middle Management Intervention in Postmerger Processes. *Journal Of Applied Behavioural Science*, 42(4), 397-419.
- Meyer, C. B. (2008). Value Leakages in Mergers and Acquisitions: Why they occur and how they can be addressed. *Long Range Planning*, 41(2), 197–224.
- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61.
- Meyer, J. P., Srinivas, E. S., Lal, J. B., & Topolnytsky, L. (2007). Employee commitment and support for an organizational change: Test of the three-component model in two cultures. *Journal of Occupational & Organizational Psychology*, 80(2), 185–211.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal Of Vocational Behaviour*, 61(1), 20-52.
- Michel, A., & Shaked, I. (1972). Does business diversification affect performance?. *Financial Management*, 13 (4), 18-25.
- Michela, J. L., & Vena, J. (2012). A Dependence-Regulation Account of Psychological Distancing in Response to Major Organizational Change. *Journal Of Change Management*, 12(1), 77-94.
- Mignonac, K., Herrbach, O., Archimi, C. S., & Manville, C. (2018). Navigating ambivalence: Perceived organizational prestige–support discrepancy and its relation to employee cynicism and silence. *Journal of Management Studies*, 55(5), 837–872.
- Mikkelson, W. H., & Ruback, R. S. (1985). Takeovers and managerial compensation. A discussion. *Journal of Accounting & Economics*, 7(1 /2/3), 233–238.

- Miller, K. D. (1993). Industry and Country Effects on Managers' Perceptions of Environmental Uncertainties. *Journal of International Business Studies*, 24(4), 693–714.
- Miller, R. (2000). How Culture Affects Mergers and Acquisitions. *Industrial Management*, 42(5), 22.
- Miller, R.R.(1990). Do mergers and acquisitions hurt R&D?. *Research Technology Management*, 33(2), 11-15.
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *The Academy Of Management Review*, 12(1), 133-143.
- Mills, C. & Keil, F. (2005). The development of cynicism, *Psychological Science*, 16 (5), 385-390.
- Minbaeva, D. B., & Muratbekova-Touron, M. (2011). Experience of Canadian and Chinese acquisitions in Kazakhstan. *International Journal Of Human Resource Management*, 22(14), 2946-2964.
- Mirc, N. (2012). Connecting the micro- and macro-level: Proposition of a research design to study post-acquisition synergies through a social network approach. *Scandinavian Journal Of Management*, 28(2), 121-135.
- Mirvis, P. H. (1985). Negotiations after the sale: The roots and ramifications of conflict in an acquisition. *Journal of Occupational Behaviour*, 6(1), 65–84.
- Mlicki, P. & Ellemers, N. (1996). Being different or being better? National stereotypes and identifications of Polish and Dutch students. *Eur. J. Soc. Psychol.* 26, 97–114.

- Mobbs, D., Hagan, C. C., Dalgleish, T., Silston, B., & Prévost, C. (2015). The ecology of human fear: survival optimization and the nervous system. *Frontiers In Neuroscience, 9*, 955.
- Moeller, S., Schlingemann, F. P. & Stulz, R. (2005). Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. *Journal of Finance, 60* (2), 757-782.
- Mohammed, S. (2008). 2007: a story of two halves. In Booz & Co (2008), *International Mergers and Acquisitions. Creating value in an increasingly complex corporate environment*. Birmingham, UK: Financier Worldwide.
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Medicine, 6*(7), 1–6.
- Monahan, J., Steadman, H. J., Silver, E., Appelbaum, P. S., Robbins, P. C., Mulvey, E. P., ... Banks, S. (2001). *Rethinking risk assessment: The MacArthur study of mental disorder and violence*. Oxford, England: Oxford University Press.
- Monat, A., Averill, J. R., & Lazarus, R. S. (1972). Anticipatory stress and coping reactions under various conditions of uncertainty. *Journal of personality and social psychology, 24*(2), 237.
- Monin, P., Noorderhaven, N., Vaara, E., & Kroon, D. (2013). Giving sense to and making sense of justice in postmerger integration. *Academy Of Management Journal, 56*(1), 256-284.

- Montani, F., Odoardi, C., & Battistelli, A. (2014). Individual and contextual determinants of innovative work behaviour: Proactive goal generation matters. *Journal of Occupational & Organizational Psychology*, 87(4), 645–670.
- Moorman, R. H. (1991). Relationship between organizational justice and organizational citizenship behaviours : Do fairness perceptions influence employee citizenship? *Journal of Applied Psychology*, 76(6), 845–855.
- Morck, R., Shleifer, A. & Vishny, R. W. (1988). Characteristics of of targets of hostile and friendly takeovers. In A. J. Auerbach (Ed.), *Corporate Takeovers: Causes and Consequences* (pp. 101-136). University of Chicago Press.
- Morosini, P., Shane, S., & Singh, H. (1998). National Cultural Distance and Cross-Border Acquisition Performance. *Journal Of International Business Studies*, 29(1), 137-158.
- Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of management Review*, 22(1), 226-256.
- Mottola, G. R., Bachman, B. A., Gaertner, S. L. & Dovidio, J. F. (1997). How groups merge: the effects of merger integration patterns on anticipated commitment to the merged organization, *Journal of Applied Social Psychology*, 27 (15), 1335-1358.
- Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behaviour*, 14(2), 224-247.
- Mtar, M. (2010). Institutional, industry and power effects on integration in cross-border acquisitions. *Organization Studies*, 31(8), 1099-1127.
- Mueller, D. C. (1969). A Theory of Conglomerate Mergers. *Quarterly Journal of Economics*, 83(4), 643–659.

- Mullen, B., Brown, R., & Smith, C. (1992). Ingroup bias as a function of salience, relevance, and status: An integration. *European Journal of Social Psychology*, 22(2), 103–122.
- Mullin, B.-A., & Hogg, M. A. (1998). Dimensions of subjective uncertainty in social identification and minimal intergroup discrimination. *British Journal of Social Psychology*, 37(3), 345–365.
- Mun, C. K.-C. (2005). Contagion and impulse response of international markets around 9-11 terrorist attacks. *Global Finance Journal*, 16, 48-68.
- Muncey, T. (2005). Doing autoethnography. *International Journal of Qualitative Methods*., 4(3), Article 5.
- Murphy, F. C., Nimmo-Smith, I., & Lawrence, A. D. (2003). Functional neuroanatomy of emotions: A meta-analysis. *Cognitive, Affective & Behavioural Neuroscience*, 3(3), 207-233.
- Murray, S. L., Derrick, J. L., Leder, S., & Holmes, J. G. (2008). Balancing connectedness and self-protection goals in close relationships: a levels-of-processing perspective on risk regulation. *Journal Of Personality And Social Psychology*, 94(3), 429-459.
- Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: the risk regulation system in relationships. *Psychological Bulletin*, 132(5), 641-666.
- Murthy, S. K. (1998). Automatic construction of decision trees from data: a multi-disciplinary survey. *Data Mining and Knowledge Discovery*, 2, 345-389.
- Myeong-Gu, S. (2001). Managing merger and acquisition processes: an integrative framework. *Academy Of Management Proceedings & Membership Directory*, F1-F6.
- Myers, M. (1997). Interpretive research in IS. In J. Mingers & F. Stowell (Eds.), *Information systems: An emerging discipline* (pp. 239-266). Maidenhead: McGraw-Hill.

- Myung, I. J. (2000). The importance of complexity in model selection. *Journal of Mathematical Psychology*, 44, 190-204.
- Nachtigall, C., Kroehne, U., Funke, F., & Steyer, R. (2003). Pros and cons of structural equation modeling. *Methods Psychological Research Online*, 8(2), 1-22.
- Nadiri, H., & Tanova, C. (2010). An investigation of the role of justice in turnover intentions, job satisfaction, and organizational citizenship behavior in hospitality industry. *International journal of hospitality management*, 29(1), 33-41.
- Nahavandi, A., & Malekzadeh, A. R. (1988). Acculturation in mergers and acquisitions. *Academy Of Management Review*, 13(1), 79-90.
- Napier, N. K. (1989). Mergers and acquisitions, human resource issues and outcomes: a review and suggested typology. *Journal Of Management Studies*, 26(3), 271-289.
- Narver, J. C. (1967). Marketing and the Controversy over Conglomerate Mergers. *Journal of Marketing*, 31(3), 6–10.
- Nelson, A., Cooper, C. L., & Jackson, P. R. (1995). Uncertainty amidst change: The impact of privatization on employee job satisfaction and well-being. *Journal of Occupational and Organizational psychology*, 68(1), 57-71.
- Nemanich, L. A., & Vera, D. (2009). Transformational leadership and ambidexterity in the context of an acquisition. *Leadership Quarterly*, 20(1), 19-33.
- Neubert, M. J., & Cady, S. H. (2001). Program commitment: A multi-study longitudinal field investigation of its impact and antecedents. *Personnel Psychology*, 54, 421-448.
- Neumann, S. A. & Waldstein, S. R. (2001). Similar patterns of cardiovascular response during emotional activation as a function of affective valence and arousal and gender. *Journal of Psychosomatic Research*, 50, 245-253.

- Newman, J. M., & Krzystofiak, F. J. (1993). Changes in Employee Attitudes after an Acquisition: A Longitudinal Analysis. *Group & Organization Management*, 18(4), 390–410.
- Newton, L. (1988). Charting shark-infested waters: ethical dimensions of the hostile takeover. *Journal of Business Ethics*, 7(1/2), 81-87.
- Nguyen, H., & Kleiner, B. H. (2003). The effective management of mergers. *Leadership & Organization Development Journal*, 24(8), 447–454.
- Ni, L. & Wang, Q. (2011): Anxiety and Uncertainty Management in an Intercultural Setting: The Impact on Organization–Public Relationships, *Journal of Public Relations Research*, 23(3), 269-301
- Nicodemus, K. K., Liu, W., Chase, G. A., Tsai, Y. Y., & Fallin, M. D. (2005, December). Comparison of type I error for multiple test corrections in large single-nucleotide polymorphism studies using principal components versus haplotype blocking algorithms. In *BMC genetics* (Vol. 6, No. S1, p. S78). BioMed Central.
- Nikandrou, I., & Papalexandris, N. (2007). The impact of M&A experience on strategic HRM practices and organisational effectiveness: evidence from Greek firms. *Human Resource Management Journal*, 17(2), 155-177.
- Nikolaou, I., Vakola, M., & Bourantas, D. (2011). The role of silence on employees' attitudes "the day after" a merger. *Personnel Review*, 40(6), 723-741.
- Nisar, S., Boateng, A., Wu, J., & Leung, M. (2012). Understanding the motives for SMEs entry choice of international entry mode. *Marketing Intelligence & Planning*, 30(7), 717–739.

- Norbäck, P.-J., & Persson, L. (2008). Globalization and profitability of cross-border mergers and acquisitions. *Economic Theory*, 35(2), 241–266.
- Norris, N. (1997). Error, bias and validity in qualitative research. *Educational Action Research*, 5(1), 172-176.
- Novianti, P. W., Roes, K. C., & van der Tweel, I. (2014). Estimation of between-trial variance in sequential meta-analyses: a simulation study. *Contemporary Clinical Trials*, 37(1), 129-138.
- Nygård, C., Eskelinen, L., Suvanto, S., & Tuomi, K. (1991). Associations between functional capacity and work ability among elderly municipal employees. *Scandinavian Journal Of Work, Environment & Health*, 17(Suppl 1), 122-127.
- O'Brien, A. P. (1988). Factory size, economies of scale and the great merger wave of 1898-1902. *Journal of Economic History*, 48 (3), 639-649.
- O'Driscoll, M. P., & Beehr, T. A. (1994). Supervisor behaviours , role stressors and uncertainty as predictors of personal outcomes for subordinates. *Journal of Organizational Behaviour*, 15(2), 141–155.
- Oakes, P., & Turner, J. C. (1986). Distinctiveness and the salience of social category memberships: is there an automatic perceptual bias toward novelty? *European Journal of Social Psychology*, 16(4), 325–344.
- Oancea, C. & Kamau-Mitchell, C. (2015). CEO overconfidence in mergers and acquisitions: A revision of the conceptual framework. In D. Tipuric, I. Vrdoljak & M. Darabos (Eds.). *Dynamics of Organizational Change: Beyond Identity and Reputation*. Pearson Education: UK

- Oancea, C. & Neundlinger, K. (2017). *Negotiation of social standing in merged organizations: a perspective on intergroup dialectics and collective acting*. Paper presented at the 8th International Symposium on Process Organization Studies.
- OECD Information Technology Outlook (2002). Retrieved from [OECD Information Technology Outlook \(2002\). Retrieved from https://www.oecd.org/sti/ieconomy/1933354.pdf](https://www.oecd.org/sti/ieconomy/1933354.pdf)
- Olcott, G. (2008). The politics of institutionalization: the impact of foreign ownership and control on Japanese organizations. *International Journal of Human Resource Management, 19*(9), 1569–1587.
- Oldham, J. E. (1923). The Problem of Railroad Consolidations. *Harvard Business Review, 1*(2), 139–153.
- Onwuegbuzie, A., & Leech, N. (2005). Taking the “Q” out of research: Teaching research methodology courses without the divide between quantitative and qualitative paradigms. *Quantity and Quality, 39*, 267-296.
- Operario, D., Adler, N. E., & Williams, D. R. (2004). Subjective social status: Reliability and predictive utility for global health. *Psychology & health, 19*(2), 237-246.
- Orbell, J., Dawes, R. and Schwartz-Shea, P. (1994). Trust, social categories, and individuals: The case of gender, *Motivation and Emotion, 18*(2), 109-128.
- Oreg, S. (2003). Resistance to change: developing an individual differences measure. *Journal of Applied Psychology, 88* (4), 680-693.
- Ovtchinnikov, A. V. (2013). Merger waves following industry deregulation. *Journal of Corporate Finance, 21*, 51–76.

- Özler, D. E. & Atalay, C. G. (2011). A research to determine the relationship between organizational cynicism and burnout levels of employees in health sector. *Business and Management Review*, 1(4), 26-38.
- Pablo, A. L. (1994). Determinants of Acquisition Integration Level: A Decision-Making Perspective. *Academy of Management Journal*, 37(4), 803–836.
- Palaganas, E. C., Sanchez, M. C., Molintas, V. P., & Caricativo, R. D. (2017). Reflexivity in qualitative research: A journey of learning. *Qualitative Report*, 22(2).
- Palaniappan, R., Sundaraj, K., & Sundaraj, S. (2014). A comparative study of the svm and k-nn machine learning algorithms for the diagnosis of respiratory pathologies using pulmonary acoustic signals. *BMC Bioinformatics*, 15(1), 1–16.
- Palle, K. R. (2005). *WTO Text & Cases*. New Delhi, India: Excel Books.
- Papadakis, V. M. (2005). The role of broader context and the communication program in merger and acquisition implementation success. *Management Decision*, 43(2), 236-255.
- Parker, D. & Saal, D. (2003). *International handbook of privatization*. Cheltenham, UK, Northampton, USA: Edward Elgar.
- Parker, R. J., & Kohlmeyer III, J. M. (2005). Organizational justice and turnover in public accounting firms: A research note. *Accounting, Organizations and Society*, 30(4), 357-369.
- Parker, S. K., & Grote, G. (2020). Automation, algorithms, and beyond: Why work design matters more than ever in a digital world. *Applied Psychology: An International Review*.

- Peck, E., Towell, D., & Gulliver, P. (2001). The meanings of 'culture' in health and social care: a case study of the combined Trust in Somerset. *Journal Of Interprofessional Care, 15*(4), 319-327.
- Pelham, B. W., & Swann, W. J. (1989). From self-conceptions to self-worth: on the sources and structure of global self-esteem. *Journal Of Personality And Social Psychology, 57*(4), 672-680.
- Penn Jr., W. S., Regan, W. J., Peters, W. S., Disch, W. K. A., Bearchell Jr., C. A., Weinhold, H., ... Markin, R. J. (1965). 15. Marketing Management. *Journal of Marketing, 29*(2), 89–92.
- Perry, M. K., & Porter, R. H. (1985). Oligopoly and the Incentive for Horizontal Merger. *American Economic Review, 75*(1), 219.
- Peters, L. H., & O'Connor, E. J. (1980). Situational Constraints and Work Outcomes: The Influences of a Frequently Overlooked Construct. *Academy of Management Review, 5*(3), 391–398.
- Piekkari, R., Vaara, E., Tienari, J., & Säntti, R. (2005). Integration or disintegration? Human resource implications of a common corporate language decision in a crossborder merger. *The International Journal Of Human Resource Management, 16*(3), 330-344.
- Pierce, J. L., Gardner, D. G., Cummings, L. L., & Dunham, R. B. (1989). Organizational-based self-esteem: Construct definition, measurement, and validation. *Academy of Management Journal, 32*, 622– 648.
- Pillay, R. (2009). Work satisfaction of professional nurses in South Africa: a comparative analysis of the public and private sectors. *Human Resources for Health, 7*, 1–10.

- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.
- Porter, L. W. & Smith, F. J. (1970). The etiology of organizational commitment. *Unpublished paper*. University of California, Iwln
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of applied psychology, 59*(5), 603.
- Posner, J., Russell, J. A., & Peterson, B. S. (2005). The circumplex model of affect: An integrative approach to affective neuroscience, cognitive development, and psychopathology. *Development and Psychopathology, 17*(3), 715–734.
- Powers, D. M. (2007). Evaluation: from precision, recall and F-factor to ROC, informedness, markedness and correlation, *Journal of Machine Learning Technologies, 2*(7), 37-63
- Pratto, F., Sidanius, J., Stallworth, L. M., & Malle, B. F. (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal Of Personality And Social Psychology, 67*(4), 741-763.
- Prentice, E. P. (1899). Railway Consolidation on the Indiana--Illinois Line. *Harvard Law Review, 12*(7), 486–493.
- Prince, R. M. (1965). Overseas Operations: How to Make an Acquisition You Can Live With. *Management Review, 54*(11), 4.
- Probst, B. (2015). The eye regards itself: Benefits and challenges of reflexivity in qualitative social work research. *Social Work Research, 39*(1), 37-48.

- Provost, F., Jensen, D. & Oates, T. (1999). Efficient Progressive Sampling. *Proceedings of the Fifth International Conference on Knowledge Discovery and Data Mining*, San Diego, CA: ACM SIGKDD, pp. 23-32.
- Pryiam, A., Gupta, R., Rathee, A. & Srivastava, S. (2013). Comparative Analysis of Decision Tree Classification Algorithms. *International Journal of Current Engineering and Technology*, 3 (2), 334-337.
- Puranam, P., & Srikanth, K. (2007). What they know vs. what they do: how acquirers leverage technology acquisitions. *Strategic Management Journal*, 28(8), 805-825.
- Puranam, P., Singh, H., & Chaudhuri, S. (2009). Integrating Acquired Capabilities: When Structural Integration Is (Un)necessary. *Organization Science*, 20(2), 313–328.
- Quah, P., & Young, S. (2005). Post-acquisition Management: A phases approach for crossborder M&As. *European Management Journal*, 23(1), 65-75.
- Quinlan, J. R. (1986). Induction of decision trees, *Machine Learning*, 1, pp. 81-106.
- Quinlan, J. R. (1993). *C4.5: Programs for Machine Learning*. Morgan Kaufmann Pub: San Mateo, CA.
- Quinlan, J. R. (1999). Simplifying decision trees. *International Journal of Human-Computer Studies*, 51(2), 497–510.
- Quinlan, J.R. (1987). Generating Production Rules from Decision Trees. *IJCAI*.
- Quon, E. C., & McGrath, J. J. (2014). Subjective socioeconomic status and adolescent health: a meta-analysis. *Health Psychology*, 33(5), 433.
- Rabelo, C. C., Feres, M., Gonçalves, C., Figueiredo, L. C., Faveri, M., Tu, Y. K., & Chambrone, L. (2015). Systemic antibiotics in the treatment of aggressive

- periodontitis. A systematic review and a Bayesian Network meta-analysis. *Journal of clinical periodontology*, 42(7), 647-657.
- Rachman, S. (2010). Betrayal: a psychological analysis. *Behaviour Research And Therapy*, 48(4), 304-311.
- Rafferty, A. E., & Griffin, M. A. (2009). Job satisfaction in organizational research. In D. A. Buchanan & A. Bryman (Eds.), *The Sage handbook of organizational research methods* (pp. 196–212). Sage Publications Ltd.
- Rafferty, A. E., & Restubog, S. D. (2010). The Impact of Change Process and Context on Change Reactions and Turnover During a Merger. *Journal Of Management*, 36(5), 1309-1338.
- Rai, R. K. (2011). Knowledge management and organizational culture: A theoretical integrative framework. *Journal of Knowledge Management*, 15(5), 779–801.
- Ramirez, A. J., Graham, J., Richards, M. A., Cull, A., Gregory, W. M., Leaning, M. S., & ... Timothy, A. R. (1995). Burnout and psychiatric disorder among cancer clinicians. *British Journal Of Cancer*, 71(6), 1263-1269.
- Randall, J., & Procter, S. (2013). When Institutional Logics Collide: Reinforcing Dominance in a Merged Government Department. *Journal Of Change Management*, 13(2), 143-158.
- Rao, V. R., Mahajan, V., & Varaiya, N. P. (1991). A Balance Model for Evaluating Firms for Acquisition. *Management Science*, 37(3), 331–349.
- Rasheed, A., Khan, S., & Ramzan, M. (2013). Antecedents and Consequences of Employee Engagement: The Case of Pakistan. *Journal of Business Studies Quarterly*, 4(4).

- Raudys, S. J. & Jain, A. K. (1991). Small Sample Size Effects in Statistical Pattern Recognition: Recommendations for Practitioners. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 13, 252-264
- Ravalier, J. M., McVicar, A., & Munn-Giddings, C. (2014). Public service stress and burnout over 12 months. *Occupational Medicine (Oxford, England)*, 64(7), 521–523.
- Ravenscraft, D., & Scherer, F. (1987). *Mergers, Sell-Offs, and Economic Efficiency*. Washington, D.C.: Brookings Institution Press.
- Ray, S. L., & McGee, D. (2006). Psychiatric nurses' perspectives of spirituality and spiritual needs during an amalgamation. *Journal Of Psychiatric And Mental Health Nursing*, 13(3), 330-336.
- Regan, A. C., & Reichel, A. (1985). 'Shark Repellents': How to Avoid Hostile Takeovers. *Long Range Planning*, 18(6), 60–67.
- Reichers, A. E., Wanous, J. P., & Austin, J. T. (1997). Understanding and managing cynicism about organizational change. *Academy of Management Executive*, 11(1), 48–59.
- Reiman, M. & Guzy, J. (2017). Psychological contract breach and employee health: The relevance of unmet obligations for mental and physical health. *Journal of Work and Organizational Psychology*, 33(1), 1-11.
- Reiss, S. (1991). Expectancy model of fear, anxiety, and panic. *Clinical Psychology Review*, 11(2), 141-153.
- Restubog, S. L. D., Zagenczyk, T. J., Bordia, P., & Tang, R. L. (2013). When employees behave badly: The roles of contract importance and workplace familism in predicting negative reactions to psychological contract breach. *Journal of Applied Social Psychology*, 43(3), 673–686.

- Reuer, J. J., Tong, T. W., & Wu, C.-W. (2012). A Signaling Theory of Acquisition Premiums: Evidence from IPO Targets. *Academy of Management Journal*, 55(3), 667–683.
- Reus, T. H. (2012). Culture's consequences for emotional attending during cross-border acquisition implementation. *Journal of World Business*, 47(3), 342-351.
- Riad, S., & Vaara, E. (2011). Varieties of national metonymy in media accounts of international mergers and acquisitions. *Journal of Management Studies*, 48(4), 737–771.
- Richardsen, A. M., Burke, R. J., & Martinussen, M. (2006). Work and health outcomes among police officers: The mediating role of police cynicism and engagement. *International Journal of Stress Management*, 13(4), 555–574.
- Richardson, L. (1994). Writing: A method of inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Handbook of Qualitative Research* (pp. 516-529). (Thousand Oaks, CA: Sage).
- Richman, J. D. (1984). Merger Decision Making: An Ethical Analysis and Recommendation. *California Management Review*, 27(1), 177–184.
- Richman, V., Santos, M. R. & Barkoulas, J. T. (2005). Short- and long-term effects of the 9/11 event: the international evidence. *International Journal of Theoretical and Applied Finance*, 8(7), 947-958.
- Riley Bowles, H., & Gelfand, M. (2010). Status and the Evaluation of Workplace Deviance. *Psychological Science*, 21(1), 49–54.
- Ringle, C. M., Wende, S., & Becker, J-M. (2015). *SmartPLS 3*. Bönningstedt: SmartPLS.
Retrieved from <http://www.smartpls.com>

- Risberg, A. (1997). Ambiguity and communication in cross-cultural acquisitions: Towards a conceptual framework. *Leadership & Organization Development Journal*, 18(5), 257–266.
- Rise, J., Sheeran, P., & Hukkelberg, S. (2010). The role of self-identity in the theory of planned behavior: A meta-analysis. *Journal of Applied Social Psychology*, 40(5), 1085–1105.
- Ro, S., Lamont, B. T., & Ellis, K. M. (2013). Managerial pay comparisons and informational justice during the M&A integration process. *Journal of Managerial Issues*, 25(4), 345–359.
- Roach, P. J. (1983). West German Acquisition and Merger Controls. *Antitrust Law Journal*, 52(4), 1007.
- Robbins, A., & Wilner, A. (2001). *Quarter life crisis: The unique challenges of life in your twenties*. New York: Tarcher/Putnam.
- Robinson, S. L. (1996). Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41, 574-599.
- Robinson, S. L., & Bennett, R. J. (1995). A typology of deviant workplace behaviours : A multidimensional scaling study. *Academy Of Management Journal*, 38(2), 555-572.
- Robinson, S. L., & Wolfe Morrison, E. (2000). The development of psychological contract breach and violation: A longitudinal study. *Journal of organizational Behavior*, 21(5), 525-546.
- Rodríguez, R. P., Sánchez, C. R., de Haro, C. O., & Maldonado, J. S. (2014). Older workers with disabilities: Job satisfaction differences in the public and private sectors in Europe. *Applied Research in Quality of Life*, 9(3), 711–731.

- Roll, R. (1986). The hubris hypothesis of corporate takeovers. *Journal of Business*, 59(2), 197-216.
- Roller L-H, Stennek, J. & Verboven F. (2006): Efficiency Gains from Mergers, in *European Merger Control: Do We Need and Efficiency Defence*, Ed. by Ilzkovitz and Meiklejohn. Edward Elgar.
- Röller, L-H., Stennek, J. & Verboven, F., (2000), Efficiency Gains from Mergers. *Working Paper Series, Research Institute of Industrial Economics*, 543. Retrieved from <https://EconPapers.repec.org/RePEc:hhs:iuiwop:0543>.
- Rose, P. S. (1995). The Distribution of Outcomes from Corporate Mergers: Evidence from Commercial Bank Acquisition Strategies. *Journal of Accounting, Auditing & Finance*, 10(2), 343–364.
- Ross, M. W., & Hafner, R. J. (1990). A comparison of the factor structure of the Crown-Crisp Experiential Index across sex and psychiatric status. *Personality And Individual Differences*, 11(7), 733-739.
- Rossi, I. & O'Higgins, E. (1980). The development of theories of culture. In I. Rossi (Ed.). *People in Culture*, pp.31–78. New York, NY: Praeger.
- Roundy, P. T. (2010). Gaining legitimacy by telling stories: the power of narratives in legitimizing mergers and acquisitions. *Journal of Organizational Culture, Communication and Conflict*, 14 (1), 89-105
- Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2, 121-139.
- Rousseau, D. M., & Schalk, R. (2000). *Psychological contracts in employment: Cross-national perspectives*. Thousand Oaks, Calif: Sage Publications.

- Rousseau, V., Salek, S., Aubé, C., & Morin, E. M. (2009). Distributive justice, procedural justice, and psychological distress: The moderating effect of coworker support and work autonomy. *Journal of Occupational Health Psychology, 14*(3), 305–317.
- Rouzies, A., & Colman, H. L. (2012). Identification processes in post-acquisition integration: The role of social interactions. *Corporate Reputation Review, 15*(3), 143-157.
- Rovenpor, J. L. (1991, November). *Chief executive officer personality and company merger and acquisition activity: A multimethod investigation. Dissertation Abstracts International.*
- Rovenpor, J. L. (1993). The Relationship between Four Personal Characteristics of Chief Executive Officers (Ceos) and Company Merger and Acquisition Activity (Maa). *Journal of Business & Psychology, 8*(1), 27–55.
- Rozen-Bakher, Z. (2018). Comparison of merger and acquisition (M&A) success in horizontal, vertical and conglomerate M&As: industry sector vs. services sector. *Service Industries Journal, 38*(7/8), 492–518.
- Ruback, R. S. (1983). An economic view of the market for corporate control. *Working Paper*, Alfred P. Sloan School of Management.
- Rubin, M., & Hewstone, M. (1998). Social Identity Theory's Self-Esteem Hypothesis: A Review and Some Suggestions for Clarification. *Personality & Social Psychology Review (Lawrence Erlbaum Associates), 2*(1), 40.
- Rule, B. G., & Nesdale, A. R. (1976). Emotional arousal and aggressive behaviour. *Psychological Bulletin, 83*(5), 851–863.
- Rumelt, R. P. (1984). Towards a strategic theory of the firm. *Competitive strategic management, 26*(3), 556-570.

- Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review*, *110*(1), 145–172.
- Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, *76*(5), 805-819.
- Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology*, *39*(6), 1161-1178.
- Sachdev, I., & Bourhis, R. Y. (1987). Status differentials and intergroup behaviour. *European Journal of Social Psychology*, *17*(3), 277–293.
- Sachs, J. (1982). Stabilization policies in the world economy: scope and skepticism. *American Economic Review*, *72* (2), 56-61.
- Safavian, S. R. & Landgrebe, D. (1991). A survey of decision tree classifier methodology, *IEEE Transactions on Systems, Man, and Cybernetics*, *21*(3), 660-674.
- Salter, M. S. & Weinhold, W. A. (1979). *Diversification through Acquisition: Strategies for Creating Economic Value*. Free Press.
- Sammut, C. & Webb, G. I. (2011). *Encyclopedia of Machine Learning*, New York: NY: Springer
- Sarala, R. M. (2010). The impact of cultural differences and acculturation factors on post-acquisition conflict. *Scandinavian Journal of Management*, *26*(1), 38–56.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal Of Organizational Behaviour*, *25*(3), 293-315.

- Schaufeli, W. B., & Taris, T. W. (2014). A critical review of the job demands-resources model: Implications for improving work and health. *Bridging occupational, organizational and public health*, 43-68.
- Schaufeli, W.B., Leiter, M.P., Maslach, C. & Jackson, S.E. (1996). Maslach Burnout Inventory – general survey”, in Maslach, C., Jackson, S.E. & Leiter, M.P. (Eds), *The Maslach Burnout Inventory (3rd ed.) – Test Manual*, Consulting Psychologists Press, Palo Alto, CA.
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping and health: Assessment and implications of generalised outcome expectancies. *Health Psychology*, 4, 219 –247.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45(2), 109-119.
- Schensul, S. L.; Schensul, J. J. & LeCompte, M.D. (1999). *Essential ethnographic methods: observations, interviews, and questionnaires* (Book 2 in Ethnographer's Toolkit). Walnut Creek, CA: AltaMira Press.
- Scherer, F. M. (1988). Corporate Takeovers: The Efficiency Arguments. *Journal of Economic Perspectives*, 2(1), 69–82.
- Schleifer, A., & Vishny, R. W. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3), 461–488.
- Schmidt, F. L., & Hunter, J. E. (2014). *Methods of meta-analysis: Correcting error and bias in research findings* (3rd ed.). Thousand Oaks, CA: Sage.
- Schmidt, S., Roesler, U., Kusserow, T., & Rau, R. (2014). Uncertainty in the workplace: Examining role ambiguity and role conflict, and their link to depression—a meta-analysis. *European Journal of Work & Organizational Psychology*, 23(1), 91–106.

- Schneider, D. S., & Vaught, B. C. (1993). A Comparison of Job Satisfaction between Public and Private Sector Managers. *Public Administration Quarterly*, 17(1), 68–83.
- Schnitzer, M. (1996). Hostile versus Friendly Takeovers. *Economica*, 63(249), 37–55.
- Schoenberg, R. (2006). Measuring the Performance of Corporate Acquisitions: An Empirical Comparison of Alternative Metrics. *British Journal of Management*, 17(4), 361–370.
- Schoennauer, A. W. (1967). Behaviour patterns of executives in business acquisitions. *Personnel Administration*, 30(1), 27–32.
- Schoorman, F. D., Mayer, R. C., & Davis, J. H. (2007). An integrative model of organizational trust: Present, past, and future. *Academy of Management Review*, 32, 344–354.
- Schraeder, M., & Self, D. R. (2003). Enhancing the success of mergers and acquisitions: an organizational culture perspective. *Management Decision*, 41(5), 511.
- Schweiger, D. M. & Goulet, P. K. (2000). Integrating mergers and acquisitions: An international research review. In S. Finkelstein & C. Cooper (Eds.), *Advances in Mergers and Acquisitions, Vol. 1*. (pp.61 – 91). Emerald Group Publishing Limited.
- Schweiger, D. M., & Denisi, A. S. (1991). Communication with employees following a merger: a longitudinal field experiment. *Academy Of Management Journal*, 34(1), 110-135.
- Schweiger, D. M., Ivancevich, J. M., & Power, F. R. (1987). Executive Actions For Managing Human Resources Before And After Acquisition. *Academy of Management Executive* (08963789), 1(2), 127–138.

- Schweizer, L. (2005). Organizational Integration of Acquired Biotechnology Companies into Pharmaceutical Companies: The Need for a Hybrid Approach. *Academy of Management Journal*, 48(6), 1051–1074.
- Scott, A. J., & Hanley, T. (2012). On becoming a pluralistic therapist: A case study of a student's reflexive journal. *Counselling Psychology Review*, 27(4), 28–40.
- Searle, R. H., & Ball, K. S. (2004). The development of trust and distrust in a merger. *Journal Of Managerial Psychology*, 19(7), 708-721.
- Searle, R., & Skinner, D. (Eds.). (2011). *Trust and human resource management*. Edward Elgar Publishing.
- Sebban, M., Nock, R., Chauchat, J. H. & Rakotomalala, R. (2000). Impact of learning set quality and size on decision tree performances. *IJCSS*, 1(1), 2000.
- Seide, S. E., Jensen, K., & Kieser, M. (2020). A comparison of Bayesian and frequentist methods in random-effects network meta-analysis of binary data. *Research synthesis methods*, 11(3), 363-378.
- Seo, M. G., & Hill, N. S. (2005). Understanding the human side of merger and acquisition: An integrative framework. *The Journal of Applied Behavioral Science*, 41(4), 422-443.
- Seroczynski, A. D., Cole, D. A., & Maxwell, S. E. (1997). Cumulative and compensatory effects of competence and incompetence on depressive symptoms in children. *Journal of Abnormal Psychology*, 106, 586–597.
- Seth, A.(1990). Value creation in aquisitions: a reexamination of performance issues. *Strategic Management Journal*, 11, 90-115.

- Seyffert, M., Lagisetty, P., Landgraf, J., Chopra, V., Pfeiffer, P. N., Conte, M. L., & Rogers, M. A. M. (2016). Internet-Delivered Cognitive Behavioral Therapy to Treat Insomnia: A Systematic Review and Meta-Analysis. *PLoS ONE*, *11*(2), 1–21.
- Shaharruddin, S. Ahmad, F. & MuhaizamMusa, M. (2016). Cynicism in Organizations: Does Organizational Justice Matter?. *International Journal of Research in Business Studies and Management*, *3*(2), 49-60.
- Shao, J. (1993). Linear model selection by cross-validation. *Journal of the American Statistical Association*, *88*(422), 486.
- Shapiro, D. L., & Kirkman, B. L. (1999). Employees' reaction to change to work teams: The influence of anticipatory injustice. *Journal of Organizational Change Management*, *12*, 51-66.
- Shatte, A. B. R., Hutchinson, D. M., & Teague, S. J. (2019). Machine learning in mental health: A scoping review of methods and applications. *Psychological Medicine*, *49*(9), 1426–1448.
- Shavlik, J. W., Dietterich, T., & Dietterich, T. G. (Eds.). (1990). *Readings in machine learning*. Morgan Kaufmann.
- Shearer, C. S., Hames, D. S., & Runge, J. B. (2001). How CEOs influence organizational culture following acquisitions. *Leadership & Organization Development Journal*, *22*(3), 105-113.
- Shepherd, H. (2011). The Cultural Context of Cognition: What the Implicit Association Test Tells Us About How Culture Works. *Sociological Forum*, *26*(1), 121–143.
- Sherwood, A. (1983). How to survive a merger. *Advanced Management Journal* (03621863), *48*(4), 10.

- Shi, W. (Stone), Sun, J., & Prescott, J. E. (2012). A temporal perspective of merger and acquisition and strategic alliance initiatives: Review and future direction. *Journal of Management*, 38(1), 164–209.
- Shimei, Y., & Yaodong, Z. (2013). Impact of psychological contract violation on interpersonal trust during mergers and acquisitions. *Social Behaviour & Personality: An International Journal*, 41(3), 487-495.
- Shore, L. M., & Martin, H. J. (1989). Job satisfaction and organizational commitment in relation to work performance and turnover intentions. *Human relations*, 42(7), 625-638.
- Shrivastava, P. (1986). Postmerger integration. *Journal Of Business Strategy*, 7(1), 65.
- Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.
- Sidanius, J., Devereux, E., & Pratto, F. (1992). A comparison of symbolic racism theory and social dominance theory as explanations for racial policy attitudes. *The Journal Of Social Psychology*, 132(3), 377-395.
- Sidanius, J., Levin, S., & Pratto, F. (1996). Consensual social dominance orientation and its correlates within the hierarchical structure of American society. *International Journal Of Intercultural Relations*, 20(3-4), 385-408.
- Sidanius, J., Pratto, F., & Rabinowitz, J. L. (1994). Gender, ethnic status, and ideological asymmetry: A social dominance interpretation. *Journal Of Cross-Cultural Psychology*, 25(2), 194-216.
- Siegel, P. H. (2000). Using peer mentors during periods of uncertainty. *Leadership & Organization Development Journal*, 21(5), 243-253.

- Silbiger, T. (1983). Acquisitions in Finland. *Antitrust Law Journal*, 52(4), 1045.
- Silverthorne, C. (2004). The impact of organizational culture and person-organization fit on organizational commitment and job satisfaction in Taiwan. *Leadership & Organization Development Journal*, 25(7), 592-599.
- Simmons, S., Mathews, S.C., Paulus, M. & Stein, M. B (2008). Intolerance of uncertainty correlates with insula activation during affective ambiguity. *Neuroscience Letters*, 430(2), 92-7.
- Simon, B. (1992). The perception of ingroup and outgroup homogeneity: Reintroducing the intergroup context. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology*, Vol. 3. (pp. 1–30). Oxford: John Wiley & Sons.
- Simon, B., & Brown, R. (1987). Perceived intragroup homogeneity in minority-majority contexts. *Journal of Personality and Social Psychology*, 53(4), 703–711.
- Simon, B., & Pettigrew, T. F. (1990). Social identity and perceived group homogeneity: Evidence for the ingroup homogeneity effect. *European Journal of Social Psychology*, 20(4), 269–286.
- Simon, S. I. (1953). Consolidated Statements and the Law. *Accounting Review*, 28(4), 505.
- Simons, H. (2009). *Case study research in practice*. London: Sage.
- Simpson, R. L. (1999). R&D in the mergers and acquisitions age. *Nursing Management*, 30(12), 14–15.
- Singh, J., Jerry J. R. & Rhoads, G. K. (1994). Behavioural and psychological consequences of boundary spanning burnout for customer service representatives, *Journal of Marketing Research*, 31 (4), 558-569.

- Singh, S. & Giri, M. (2014). Comparative Study Id3, Cart And C4.5 Decision Tree Algorithm: A Survey. *International Journal of Advanced Information Science and Technology*, 3(7), 47-52.
- Singh-Manoux, A., Marmot, M. G., & Adler, N. E. (2005). Does subjective social status predict health and change in health status better than objective status?. *Psychosomatic medicine*, 67(6), 855-861.
- Sivadas, E., & Dwyer, F. R. (2000). An examination of organizational factors influencing new product success in internal and alliance-based processes. *Journal of Marketing*, 64(1), 31–49.
- Skarlicki, D. P. (2001). Cross-Cultural Perspectives of Organizational Justice. *International Journal of Conflict Management*, 12(4), 292.
- Slangen, A. L. (2006). National cultural distance and initial foreign acquisition performance: The moderating effect of integration. *Journal Of World Business*, 41(2), 161-170.
- Slotter, E. B., Winger, L., & Soto, N. (2015). Lost without each other: The influence of group identity loss on the self-concept. *Group Dynamics: Theory, Research, and Practice*, 19(1), 15-30.
- Smircich, L. (1983). Concepts of culture and organizational analysis. *Administrative Science Quarterly*, 28(3), 339-358.
- Smith, E. R., & Semin, G. R. (2004). Socially Situated Cognition: Cognition in its Social Context. In M. P. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 36. (pp. 53–117). San Diego, CA: Elsevier Academic Press.
- Smith, K. J. & Roberts, M.S. (2002), Cost-effectiveness of newer treatment strategies for influenza, *American Journal of Medicine*, 113 (4), 300-7.

- Smith, P., da Cunha, J. V., Giangreco, A., Vasilaki, A., & Carugati, A. (2013). The threat of dis-identification for HR practices: An ethnographic study of a merger. *European Management Journal*, 31(3), 308-321.
- Smithson, J., & Lewis, S. (2000). Is job insecurity changing the psychological contract?. *Personnel Review*.
- Smollan, R. K., & Sayers, J. G. (2009). Organizational culture, change and emotions: A qualitative study. *Journal of Change Management*, 9(4), 435–457.
- Soiferman, L. K. (2010). Compare and Contrast Inductive and Deductive Research Approaches. *Online Submission*.
- Solomon, S., Greenberg, J., & Pyszczynski, T. (1991). A Terror Management Theory of Social Behavior: The Psychological Functions of Self-Esteem and Cultural Worldviews. *Advances in Experimental Social Psychology*, 24(C), 93-159.
- Somers, M. J. (1995). Organizational commitment, turnover and absenteeism: An examination of direct and interaction effects. *Journal of organizational Behavior*, 16(1), 49-58.
- Sommer Jr., A. A. (1967). Conglomerate Disclosure: Friend or Foe? *Business Lawyer*, 22(2), 317.
- Sommer, S. M., Bae, S.-H., & Luthans, F. (1996). Organizational Commitment Across Cultures: The Impact of Antecedents on Korean Employees. *Human Relations*, 49(7), 977–993.
- Song, Y., Liu, Y. (2015). Decision tree methods: applications for classification and prediction, *Shanghai Archives of Psychiatry*, 27(2), 130:135.

- Sonnenschein, N., Bekerman, Z., & Horenczyk, G. (2010). Threat and the majority identity. *Group Dynamics: Theory, Research, and Practice*, 14(1), 47–65.
- Sørensen, N. A. & Petersen, K. (2012). Corporate Capitalism or Coca-Colonisation? Economic Interests, Cultural Concerns, Tax Policies and Coca-Cola in Denmark from 1945 to the Early 1960s. *Contemporary European History*, 21 (4), 597 – 617.
- Spahr, W. E. (1932). Bank Failures in the United States. *American Economic Review*, 22, 208.
- Spears, R., Doosje, B., & Ellemers, N. (1997). Self-stereotyping in the face of threats to group status and distinctiveness: The role of group identification. *Personality And Social Psychology Bulletin*, 23(5), 538-553.
- Spears, R., Scheepers, D., Jetten, J., Doosje, B., Ellemers, N., & Postmes, T. (2004). Entitativity, Group Distinctiveness, and Social Identity: Getting and Using Social Structure. In V. Yzerbyt, C. M. Judd, & O. Corneille (Eds.), *The psychology of group perception: Perceived variability, entitativity, and essentialism*. (pp. 293–316). New York, NY: Psychology Press.
- Spicer, D. P. (2011). Changing Culture: A Case Study of a Merger Using Cognitive Mapping. *Journal Of Change Management*, 11(2), 245-264.
- Spreng, R. N., Stevens, W. D., Chamberlain, J. P., Gilmore, A. W., & Schacter, D. L. (2010). Default network activity, coupled with the frontoparietal control network, supports goal-directed cognition. *Neuroimage*, 53(1), 303–317.
- Spry, T. (2001). Performing autoethnography: An embodied methodological praxis. *Qualitative Inquiry*, 7(6), 706-732.

- Stahl, G. (2004). Getting It Together: The Leadership Challenge of Mergers and Acquisitions. *Leadership in Action*, 24(5), 3–6.
- Stahl, G. K., & Voight, A. (2004). Meta-Analyses of the Performance Implications of Cultural Differences in Mergers and Acquisitions. *Academy of Management Proceedings*, 11–15.
- Stahl, G. K., & Voight, A. (2008). Do Cultural Differences Matter in Mergers and Acquisitions? A Tentative Model and Examination. *Organization Science*, 19(1), 160–176.
- Stahl, G. K., & Voigt, A. (2008). Do Cultural Differences Matter in Mergers and Acquisitions? A Tentative Model and Examination. *Organization Science*, 19(1), 160–176.
- Stahl, G. K., Chei Hwee Chua, & Pablo, A. L. (2003). Trust Following Acquisitions: A Three-Country Comparative Study of Employee Reactions to Takeovers. *Academy of Management Proceedings*, N1–N6.
- Stahl, G. K., Maznevski, M. L., Voigt, A., & Jonsen, K. (2010). Unraveling the effects of cultural diversity in teams: A meta-analysis of research on multicultural work groups. *Journal of International Business Studies*, 41(4), 690–709.
- Stahl, M. J., & Zimmerer, T. W. (1984). Modeling Strategic Acquisition Policies: A Simulation of Executives' Acquisition Decisions. *Academy of Management Journal*, 27(2), 369–383.
- Stanley, D. J., Meyer, J. P., & Topolnytsky, L. (2005). Employee Cynicism and Resistance to Organizational Change. *Journal of Business & Psychology*, 19(4), 429–459.

- Staude, H. M. (1996). Comparative analysis of job satisfaction between public and private sector vocational evaluators. *Vocational Evaluation & Work Adjustment Bulletin*, 29(4), 125–128.
- Steers, R. M. (1975). Problems in the Measurement of Organizational Effectiveness. *Administrative Science Quarterly*, 20(4), 546-568.
- Steers, R. M. (1977). Antecedents and Outcomes of Organizational Commitment. *Administrative Science Quarterly*, 22(1), 46-56.
- Steger, M. B. & James, P. (2013). Levels of subjective globalization: ideologies, imaginaries, ontologies. *Perspectives on Global Development & Technology*, 12 (1/2), 17-40.
- Steger, M. B. (2013). *Globalization: a very short introduction* (3rd ed.). Oxford, OX: Oxford University Press.
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25, 173–180.
- Stein, J. C. (1988). Takeover Threats and Managerial Myopia. *Journal of Political Economy*, 96(1), 61.
- Stephan, W. G., Stephan, C. W., & Gudykunst, W. B. (1999). Anxiety in intergroup relations: A comparison of anxiety/uncertainty management theory and integrated threat theory. *International Journal of Intercultural Relations*, 23(4), 613-628.
- Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly*, 63(3), 224–237 .
- Stewart, W. F., Ricci, J. A., Chee, E., Hahn, S. R., & Morganstein, D. (2003). Cost of lost productive work time among US workers with depression. *Jama*, 289(23), 3135-3144.

- Stigler, G. J. (1950). Monopoly and oligopoly by merger. *American Economic Review*, 40 (2), 23-34.
- Stillman, R. (1983). Examining Antitrust Policy Towards Horizontal Mergers. *Journal of Financial Economics*, 11(1–4), 225–240.
- Stovel, K., & Savage, M. (2006). Mergers and Mobility: Organizational Growth and the Origins of Career Migration at Lloyds Bank. *American Journal Of Sociology*, 111(4), 1080-1121.
- Strobl, C., Malley, J. & Tutz, G. (2009). An introduction to recursive partitioning: rationale, application and characteristics of classification and regression trees bagging and random forests, *Psychol. Methods*, 14(4), 323:348.
- Styhre, A., Börjesson, S., & Wickenberg, J. (2006). Managed by the other: cultural anxieties in two Anglo-Americanized Swedish firms. *International Journal Of Human Resource Management*, 17(7), 1293-1306.
- Suarthana, J. H. & Riana, I.G.(2015). The effect of psychological contract breach and workload on intention to leave: mediating role of job stress. *Procedia - Social and Behavioural Sciences*, 219, 717 – 723
- Subramanian, J., & Simon, R. (2013). Overfitting in prediction models - is it a problem only in high dimensions? *Contemporary Clinical Trials*, 36(2), 636–641.
- Suddendorf, T., & Corballis, M. C. (2007). The evolution of foresight: What is mental time travel, and is it unique to humans?. *Behavioural And Brain Sciences*, 30(3), 299-313.
- Swann, J. (2003). Socially moderated consequences of trustful and distrustful behaviour. *Australian Journal Of Psychology*, 5563.

- Sweeney, P. D., & McFarlin, D. B. (1993). Workers' evaluations of the "ends" and the "means": An examination of four models of distributive and procedural justice. *Organizational Behaviour and Human Decision Processes*, 55(1), 23–40.
- Syrjälä, J., Takala, T., & Sintonen, T. (2009). Narratives as a tool to study personnel wellbeing in corporate mergers. *Qualitative Research*, 9(3), 263–284.
- Szmigiera, M. (2019, November 21). Largest merger and acquisition transactions worldwide as of January 2019. *Statista*. Retrieved from <https://www.statista.com/statistics/277430/largest-global-mergers-and-aquisitions-based-on-transaction-volum/>
- Szpunar, K. K., Spreng, R. N., & Schacter, D. L. (2014). A taxonomy of prospection: introducing an organizational framework for future-oriented cognition. *Proceedings Of The National Academy Of Sciences Of The United States Of America*, 111(52), 18414–18421.
- Tajfel, H. & Turner, J. (1986). The social identity theory of intergroup behaviour. In: Worchel, S. & Austin, W. G. (Eds.) *Psychology of Intergroup Relations*, Nelson Hall: Chicago.
- Tajfel, H. (1969). Cognitive Aspects of Prejudice. *Journal Of Social Issues*, 25(4), 79-97.
- Tajfel, H. (1972). Social categorization (English translation of "La categorisation sociale"). In S. Moscovici (Ed.), *Introduction a la psychologie sociale*, vol. 1: 272-302. Paris: Larousse.
- Tajfel, H. (1981). *Human groups and social categories*, Cambridge Unviversity Press, Cambridge

- Tajfel, H. (1982). Instrumentality, identity and social comparisons. In Tajfel, H. (Eds.), *Social identity and intergroup relations*, pp 483-507. Cambridge, England: Cambridge University Press.
- Tajfel, H., & Turner, J. C. (1979). An Integrative Theory of Intergroup Conflict. In W. G. Austin, & S. Worchel (Eds.). *The Social Psychology of Intergroup Relations* (pp. 33-47). Monterey, CA: Brooks/Cole .
- Tan, H. H., & Tan, M.-L. (2008). Organizational citizenship behaviour and social loafing: The role of personality, motives, and contextual factors. *The Journal of Psychology: Interdisciplinary and Applied*, 142(1), 89–108.
- Tanis, M., & Postmes, T. (2005). A social identity approach to trust: interpersonal perception, group membership and trusting behaviour. *European Journal of Social Psychology*, 35(3), 413–424.
- Tarbell, I. M. (1904). *The history of the Standard oil company*. New York: Mc Clure, Phillips & Co.
- Taris, T. W., Schreurs, P. & van Silfhout, I. J. (2001). Job stress, job strain and psychological withdrawal among Dutch university staff: towards a dual-process model for the effects of occupational stress, *Work & Stress*, 15 (4), 283-296.
- Teare, R., & Eccles, G. (1997). The Granada takeover of Forte: A managerial perspective. *Management Decision*, 35(1/2), 5.
- Teerikangas, S. (2012). Dynamics of Acquired Firm Pre-Acquisition Employee Reactions. *Journal Of Management*, 38(2), 599-639.
- Teerikangas, S., & Very, P. (2006). The Culture-Performance Relationship in M&A: From Yes/No to How. *British Management Journal*, 17(1), 31-48.

- Temkin, N. R., Holubkov, R., Machamer, J. E., Winn, H. R., & Dikmen, S. S. (1995). Classification and regression trees (CART) for prediction of function at 1 year following head trauma. *Journal of Neurosurgery*, 82, 764–771.
- Teram, E. (2010). Organizational Change Within Morally Ambiguous Contexts: A Case Study of Conflicting Postmerger Discourses. *Journal Of Applied Behavioural Science*, 46(1), 38-54.
- Terry, D. J. (2001). Intergroup relations and organizational mergers. In M.A. Hogg & D.J. Terry (Eds.). *Social Identity Processes in Organizational Contexts*, (pp 1-12). Philadelphia PA: Psychological Press.
- Terry, D. J., & Callan, V. J. (1998). In-group bias in response to an organizational merger. *Group Dynamics: Theory, Research, and Practice*, 2(2), 67-81.
- Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude–behaviour relationship: A role for group identification. *Personality and Social Psychology Bulletin*, 22(8), 776–793.
- Terry, D. J., & O'Brien, A. T. (2001). Status, legitimacy, and ingroup bias in the context of an organizational merger. *Group Processes & Intergroup Relations*, 4(3), 271-289.
- Terry, D. J., Callan, V. J., & Sartori, G. (1996). Employee adjustment to an organizational merger: Stress, coping and intergroup differences. *Stress Medicine*, 12(2), 105-122.
- Terry, D. J., Carey, C. J., & Callan, V. J. (2001). Employee adjustment to an organizational merger: An intergroup perspective. *Personality and Social Psychology Bulletin*, 27(3), 267-280.

- Terry, D. J., Hogg, M. A., & White, K. M. (1999). The theory of planned behaviour: Self-identity, social identity and group norms. *British Journal of Social Psychology, 38*(3), 225–244.
- Tesluk, P. E., Vance, R. J., & Mathieu, J. E. (1999). Examining employee involvement in the context of participative work environments. *Group & Organization Management, 24*, 271–299.
- Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: path analyses based on meta-analytic findings. *Personnel Psychology, 46*(2), 259-293.
- Thach, L., & Nyman, M. (2001). Leading in limbo land: The role of a leader during merger and acquisition transition. *Leadership & Organization Development Journal, 22*(4), 146–150.
- Thacher, T. A. (1915). The Sherman Act and the Harvester Case. *California Law Review, 3*(2), 122.
- Thanacoody, P. R., Newman, A., & Fuchs, S. (2014). Affective commitment and turnover intentions among healthcare professionals: the role of emotional exhaustion and disengagement. *International Journal of Human Resource Management, 25*(13), 1841–1857.
- Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Lawrence Erlbaum.
- Thomas, J., Harden, A., Oakley, A., Oliver, S., Sutcliffe, K., Rees, R., ... Kavanagh, J. (2004). Integrating qualitative research with trials in systematic reviews. *BMJ: British Medical Journal, 328*(7446), 1010–1012.

Thomson Reuters (2015). Mergers and acquisitions review, full year 2014. Retrieved on January 30, 2016, from

[Thomson Reuters \(2015\). Mergers and acquisitions review, full year 2014. Retrieved on](#)

[January 30, 2016, from](#)

[http://dmi.thomsonreuters.com/Content/Files/4Q2014_Global_MandA_Financial_A](http://dmi.thomsonreuters.com/Content/Files/4Q2014_Global_MandA_Financial_Advisory_Review.pdf)

[dvisory_Review.pdf](#)

Thorlund, K., Walter, S. D., Johnston, B. C., Furukawa, T. A., & Guyatt, G. H. (2011).

Pooling health-related quality of life outcomes in meta-analysis—a tutorial and review of methods for enhancing interpretability. *Research synthesis methods*, 2(3), 188-203.

Tian, A. W., Wang, Y., & Chia, T. (2018). Put my skills to use? Understanding the joint effect

of job security and skill utilization on job satisfaction between skilled migrants and Australian born workers in Australia. *Social Indicators Research*, 139(1), 259–275.

Tienari, J., Söderberg, A., Holgersson, C., & Vaara, E. (2005). Gender and National Identity

Constructions in the Cross-Border Merger Context. *Gender, Work & Organization*, 12(3), 217-241.

Tonin, F. S., Rotta, I., Mendes, A. M., & Pontarolo, R. (2017). Network meta-analysis: a

technique to gather evidence from direct and indirect comparisons. *Pharmacy Practice (Granada)*, 15(1).

Tourangeau, A. E. & Cranley, L. A. (2005). Nurse intention to remain employed:

understanding and strengthening determinants, *Nursing and Healthcare Management and Policy*, 55 (4), 497-509.

- Tran, B. X., Nguyen, L. H., Ohinmaa, A., Maher, R. M., Nong, V. M., & Latkin, C. A. (2015). Longitudinal and cross sectional assessments of health utility in adults with HIV/AIDS: a systematic review and meta-analysis. *BMC Health Services Research, 15*(1), 1–16.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management, 14*(3), 207–222.
- Trautwein, F. (1990). Merger Motives and Prescriptions. *Strategic Management Journal (John Wiley & Sons, Inc.), 11*(4), 283–295.
- Traynor, M., & Wade, B. (1993). The development of a measure of job satisfaction for use in monitoring the morale of community nurses in four trusts. *Journal of Advanced Nursing, 18*(1), 127-136.
- Triandis, H. C. (1994). *Culture and social behaviour*. New York, NY: Mcgraw-Hill Book Company.
- Trochim, W. M., & Donnelly, J. P. (2001). *Research methods knowledge base* (Vol. 2). Atomic Dog Pub.
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38*, 1–10.
- Tuomi, K., Ilmarinen, J., Seitsamo, J., Huuhtanen, P., Martikainen, R., Nygård, CH. & Klockars M.(1997). Summary of the Finnish research project (1981-1992) to promote the health and work ability of aging workers. *Scandinavian Journal of Work, Environment & Health, 23* (1), 66-71.

- Turner, B. A. (1986). Sociological Aspects of Organizational Symbolism. *Organization Studies*, 7(2), 101–115.
- Turner, J. C. & Reynolds, K.J. (2011). Self-categorization theory. In P. A. M. Van Lange, A. W. Kruglanski & E. T. Higgins (Eds.) *Theories of Social Psychology* (pp. 399-417). Thousand Oaks, CA: Sage Publications
- Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.), *Social identity and intergroup relations* (pp. 15-40). Cambridge, England: Cambridge University Press.
- Turner, J. C. (1985). Social categorization and the self-concept: a social cognitive theory of group behaviour. In Lawler, E. J. (Ed.), *Advances in Group Processes*. Greenwich, CT: JAI Press, 2, 77–122
- Turner, J. C. (1987). A self-categorization theory. In Turner. J.C., Hogg, M.A., Oakes, P.J., Reicher, S.D., Wetherell, M.S. (Eds), *Rediscovering the Social Group: A Self-Categorization Theory*, pp. 42–67, Oxford: Basil Blackwell
- Turner, J. C. (1991). *Mapping social psychology series. Social influence*. Belmont, CA, US: Thomson Brooks/Cole Publishing Co.
- Turner, J. C. (2010). Social categorization and the self-concept: A social cognitive theory of group behaviour. In T. Postmes & N. R. Branscombe (Eds.), *Rediscovering social identity*.(pp. 243–272). New York, NY: Psychology Press.
- Turner, J. C., & Oakes, P. J. (1986). The significance of the social identity concept for social psychology with reference to individualism, interactionism and social influence. *British Journal of Social Psychology*, 25(3), 237-252.

- Turner, J. C., Brown, R. J., & Tajfel, H. (1979). Social comparison and group interest ingroup favouritism. *European Journal of Social Psychology*, 9(2), 187–204.
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Cambridge, MA, US: Basil Blackwell.
- Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective: Cognition and social context. *Personality And Social Psychology Bulletin*, 20(5), 454-463.
- Turner, J.C. & Reynolds, K.J. (2012). Self-categorization theory. In P. A. M. Van Lange, A. W. Kruglanski & E. T. Higgins (Eds.). *Handbook of Theories of Social Psychology* (pp. 399 – 417). London, UK: SAGE Publications Ltd.
- Turnley, W. H., & Feldman, D. C. (1998). Psychological contract violations during corporate restructuring. *Human Resource Management*, 37(1), 71.
- Tyler, T. R. (1994). Psychological models of the justice motive: Antecedents of distributive and procedural justice. *Journal of Personality and Social Psychology*, 67(5), 850–863.
- Tzafrir, S. S. (2005). The relationship between trust, HRM practices and firm performance. *The International Journal of Human Resource Management*, 16(9), 1600-1622.
- Uddin, M. & Boateng, A. (2014). *Cross-border mergers and acquisitions: UK dimensions*. New York, NY: Routledge.

- Uhlenbruck, K. & De Castro, J.O. (2000). Foreign Acquisitions in Central and Eastern Europe: Outcomes of Privatization in Transitional Economies. *Academy of Management Journal*, 43 (3), 381–402.
- Uhlenbruck, N. T. (1997). Privatization in East-Central Europe: A Mergers and Acquisition Perspective. *Journal of International Business Studies*, 28(2), 423–420.
- Uhlenbruck, N., & De Castro, J. (1998). Privatization from the Acquirer's Perspective: A Mergers and Acquisitions Based Framework. *Journal of Management Studies (Wiley-Blackwell)*, 35(5), 619–640.
- Ullah, H., A., S., C. H., A., Meerub, & Rana, S. M. (2018). Factors Influencing Job Satisfaction of Nurses in Public and Private Sector's Hospitals: A Cross Sectional Study. *Pakistan Journal of Public Health*, 8(3), 147–151.
- Ullrich, J., Wieseke, J., & Van Dick, R. (2005). Continuity and Change in Mergers and Acquisitions: A Social Identity Case Study of a German Industrial Merger. *Journal of Management Studies*, 42(8), 1549–1569.
- Ullrich, J. & van Dick, R. (2007), The Group Psychology of Mergers & Acquisitions: Lessons from the Social Identity Approach. In C. L. Cooper, S. Finkelstein (Eds.) *Advances in Mergers and Acquisitions. Advances in Mergers and Acquisitions, Volume 6* (pp.1 - 15). Emerald Group Publishing Limited.
- Ullrich, J., Wieseke, J., & Van Dick, R. (2005). Continuity and Change in Mergers and Acquisitions: A Social Identity Case Study of a German Industrial Merger. *Journal of Management Studies*, 42(8), 1549–1569.
- Underwood, P. W. (2000). Social support: The promise and reality. In B. H. Rice (Ed.), *Handbook of stress, coping and health* (pp. 367–391). Newbury Park, CA: Sage.

- University of Leeds (n.d.). Stepwise linear regression. Retrieved from <http://www.geog.leeds.ac.uk/courses/other/statistics/spss/stepwise/>
- Unoki, K. (2013). *Mergers, Acquisitions and Global Empires*. London: Routledge.
- Väänänen, A., Ahola, K., Koskinen, A., Pahkin, K., & Kouvonen, A. (2011). Organisational merger and psychiatric morbidity: a prospective study in a changing work organisation. *Journal Of Epidemiology And Community Health, 65*(8), 682-687.
- Väänänen, A., Kalimo, R., Toppinen-Tanner, S., Mutanen, P., Peiró, J. M., Kivimäki, M., & Vahtera, J. (2004b). Role clarity, fairness, and organizational climate as predictors of sickness absence: a prospective study in the private sector. *Scandinavian Journal Of Public Health, 32*(6), 426–434.
- Väänänen, A., Pahkin, K., Kalimo, R., & Buunk, B. P. (2004). Maintenance of subjective health during a merger: the role of experienced change and pre-merger social support at work in white- and blue-collar workers. *Social Science & Medicine, 58*(10), 1903.
- Vaara, E. (2000). Constructions of cultural differences in post-merger change processes: A sensemaking perspective on Finnish-Swedish cases. *M@N@Gement, 3*(3), 81-110.
- Vaara, E. (2000). Constructions of cultural differences in post-merger change processes: A sensemaking perspective on Finnish-Swedish cases. *M@n@gement, 3*(3), 81–110.
- Vaara, E. (2002). On the Discursive Construction of Success/Failure in Narratives of Post-merger Integration. *Organization Studies, 23*(2), 211–248.
- Vaara, E. (2003). Post-acquisition Integration as Sensemaking: Glimpses of Ambiguity, Confusion, Hypocrisy, and Politicization. *Journal of Management Studies (Wiley-Blackwell), 40*(4), 859–894.

- Vaara, E., & Tienari, J. (2011). On the Narrative Construction of Multinational Corporations: An Antenarrative Analysis of Legitimation and Resistance in a Cross-Border Merger. *Organization Science*, 22(2), 370–390.
- Vaara, E., Junni, P., Sarala, R. M., Ehrnrooth, M., & Koveshnikov, A. (2014). Attributional tendencies in cultural explanations of M&A performance. *Strategic Management Journal*, 35(9), 1302-1317.
- Vaara, E., Sarala, R., Stahl, G. K., & Björkman, I. (2012). The Impact of Organizational and National Cultural Differences on Social Conflict and Knowledge Transfer in International Acquisitions. *Journal Of Management Studies*, 49(1), 1-27.
- Vaara, E., Tienari, J., & Säntti, R. (2003). The international match: Metaphors as vehicles of social identity-building in cross-border mergers. *Human Relations*, 56(4), 419–452.
- Vaara, E., Tienari, J., Piekkari, R., & Säntti, R. (2005). Language and the Circuits of Power in a Merging Multinational Corporation. *Journal Of Management Studies*, 42(3), 595-623.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. (2008). Explaining the relationships between job characteristics, burnout, and engagement: The role of basic psychological need satisfaction. *Work & Stress*, 22(3), 277-294.
- Van den Steen, E. (2010). Culture Clash: The Costs and Benefits of Homogeneity. *Management Science*, 56(10), 1718–1738.
- van der Smissen, S., Schalk, R., & Freese, C. (2013). Organizational change and the psychological contract: How change influences the perceived fulfillment of obligations. *Journal of Organizational Change Management*, 26(6), 1071–1090.

- Van Dick, R., Christ, O., Stellmacher, J., Wagner, U., Ahlswede, O., Grubba, C., Hauptmeier, M., Höhfeld, C., Moltzen, K. & Tissington, P.A. (2004). Should I Stay or Should I Go? Explaining Turnover Intentions with Organizational Identification and Job Satisfaction. *British Journal of Management*, 15, 351-360.
- van Dick, R., Ullrich, J., & Tissington, P. A. (2006). Working under a black cloud: How to sustain organizational identification after a merger. *British Journal of Management*, 17(Suppl 1), S69–S79.
- van Dick, R., Wagner, U., & Lemmer, G. (2004). Research note: The winds of change-- Multiple identifications in the case of organizational mergers. *European Journal Of Work & Organizational Psychology*, 13(2), 121-138.
- van Dijk, R. & van Dick, R. (2009) Navigating Organizational Change: Change Leaders, Employee Resistance and Work-based Identities, *Journal of Change Management*, 9(2), 143-163 .
- van Knippenberg, D., & van Leeuwen, E. (2001). Organizational identity after a merger: Sense of continuity as the key to postmerger identification. In M. A. Hogg & D. J. Terry (Eds.), *Social identity processes in organizational contexts* (pp. 249-264). Sussex: Psychology Press.
- Van Knippenberg, D., Van Dick, R. & Tavares, S. (2007). Social Identity and Social Exchange: Identification, Support, and Withdrawal From the Job. *Journal of Applied Social Psychology*, 37, 457-477.
- van Knippenberg, D., van Knippenberg, B., Monden, L., & de Lima, F. (2002). Organizational identification after a merger: a social identity perspective. *The British Journal Of Social Psychology*, 41(Pt 2), 233-252.

- van Leeuwen, E. A. C., & van Knippenberg, D. (2003). Organizational Identification following a Merger: The Importance of Agreeing to Differ. In S. A. Haslam, D. van Knippenberg, M. Platow, & N. Ellemers (Eds.), *Social identity at Work: Developing Theory for Organizational Practice* (pp. 205-221). New York: Psychology Press.
- van Leeuwen, E., van Knippenberg, D., & Ellemers, N. (2003). Continuing and changing group identities: The effects of merging on social identification and ingroup bias. *Personality And Social Psychology Bulletin*, 29(6), 679-690.
- van Oudenhoven, J. P., & de Boer, T. (1995). Complementarity and Similarity of Partners in International Mergers. *Basic & Applied Social Psychology*, 17(3), 343-356.
- van Saane, N., Sluiter, J. K., Verbeek, J. H. A. M., & Frings-Dresen, M. H. W. (2003). Reliability and validity of instruments measuring job satisfaction--a systematic review. *Occupational Medicine (Oxford, England)*, 53(3), 191–200.
- van Vuuren, M., Beelen, P., & de Jong, M. T. (2010). Speaking of dominance, status difference, and identification: Making sense of a merger. *Journal Of Occupational And Organizational Psychology*, 83(3), 627-643.
- van Zomeren, M., Spears, R., Fischer, A. H., & Leach, C. W. (2004). Put Your Money Where Your Mouth Is! Explaining Collective Action Tendencies Through Group-Based Anger and Group Efficacy. *Journal of Personality and Social Psychology*, 87(5), 649–664.
- Vance, R. J., Brooks, S. M., & Tesluk, P. E. (1995, April). Organizational cynicism, cynical cultures, and organizational change efforts. Paper presented at the 10th *Annual Conference of the Society of Industrial and Organizational Psychology*, Orlando, FL.

- Vancea, M. (2013). Mergers and acquisition waves from the European Union perspective. *Annals of the University of Oradea, Economic Science Series*, 22(2), 272-283.
- Vandenberg, R. J., & Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, 3, 4–69.
- Vandenberghe, C., & Tremblay, M. (2008). The Role of Pay Satisfaction and Organizational Commitment in Turnover Intentions: A Two-Sample Study. *Journal of Business and Psychology*, 22(3), 275-286.
- Vasconcellos, G. M., & Kish, R. J. (1996). Factors affecting cross-border merger and acquisitions: The Canada-U.S. experience. *Global Finance Journal*, 7(2), 223.
- Vasilaki, A. (2011). The Relationship Between Transformational Leadership and Postacquisition Performance. *International Studies of Management & Organization*, 41(3), 42-58.
- Vazirani, N. (2015). A Literature Review on Mergers and Acquisitions Waves and Theories. *SIES Journal of Management*, 11(1), 3–9.
- Verkuyten, M., & Nekuee, S. (1999). Ingroup bias: the effect of self-stereotyping, identification and group threat. *European Journal of Social Psychology*, 29(2/3), 411–418.
- Veroniki, A. A., Jackson, D., Viechtbauer, W., Bender, R., Bowden, J., Knapp, G., ... & Salanti, G. (2016). Methods to estimate the between-study variance and its uncertainty in meta-analysis. *Research synthesis methods*, 7(1), 55-79.

- Very, P., & Schweiger, D. M. (2001). The acquisition process as a learning process: Evidence from a study of critical problems and solutions in domestic and cross-border deals. *Journal Of World Business, 36*(1), 11-31.
- Viechtbauer, W., & Cheung, M. W.-L. (2010). Outlier and influence diagnostics for meta-analysis. *Research Synthesis Methods, 1*(2), 112–125.
- Viega, J., Lubatkin, M., Calori, R., & Very, P. (2000). Measuring organizational culture clashes: A two-nation post-hoc analysis of a cultural compatibility index. *Human Relations, 53*(4), 539–557.
- Voci, A. (2006). The link between identification and in-group favouritism: Effects of threat to social identity and trust-related emotions, *British Journal of Social Psychology, 45*, 265-284.
- Vulliamy, G., & Webb, R. (2001). The social construction of school exclusion rates: Implications for evaluation methodology. *Educational Studies, 27*(3), 357–370.
- Walker, M. M. (2000). Corporate takeovers, strategic objectives and acquiring-firm shareholder wealth. *Financial Management, 29* (1), 53-66.
- Walsh, J. P. & Kosnik, R. D. (1993). Corporate raiders and their disciplinary role in the market for corporate control. *Academy of Management Journal, 36* (4), 671-700.
- Walsh, J. P. (1988). Top management turnover following mergers and acquisitions. *Strategic Management Journal, 9*(2), 173-183.
- Walsh, J. P. (1989). Doing a Deal: Merger and Acquisition : Negotiations and Their Impact upon Target Company Top Management Turnover. *Strategic Management Journal (John Wiley & Sons, Inc.), 10*(4), 307–322.

- Walsh, J. P., & Ellwood, J. W. (1991). Mergers, Acquisitions, and the Pruning of Managerial Deadwood. *Strategic Management Journal (John Wiley & Sons, Inc.)*, 12(3), 202–217.
- Walter, G. A. (1985). Culture collisions in mergers and acquisitions. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg, & J. Martin (Eds.), *Organizational culture*. (pp. 301–314). Thousand Oaks, CA: Sage Publications, Inc.
- Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 89, 132-142.
- Wang, Y., Liu, Z., & Zhang, Y. (2007). Cross-Border Mergers and Acquisitions: Innovative Capacity and National Economic Security. *Journal of Economic Policy Reform*, 10(4), 263–281.
- Wanous, J. P., Reichers, A. E., & Austin, J. T. (1994). Organizational cynicism: An initial study. *Academy of Management Best Papers Proceedings*, 269–273
- Wanous, J. P., Reichers, A. E., & Austin, J. T. (2000). Cynicism about organizational change: Measurement, antecedents, and correlates. *Group and Organization Management*, 25, 132–153.
- Warr, P., Bindl, U. K., Parker, S. K., & Inceoglu, I. (2013). Four-quadrant investigation of job-related affects and behaviours. *European Journal Of Work And Organizational Psychology*, 23(3), 342-363.
- Warren, D. E. (2003). Constructive and destructive deviance in organizations. *The Academy Of Management Review*, 28(4), 622-632.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford Press.

Watson, D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98, 219–235.

Watson, D., Wiese, D., Vaidya, J., & Tellegen, A. (1999). The two general activation systems of affect: Structural findings, evolutionary considerations, and psychobiological evidence. *Journal Of Personality And Social Psychology*, 76(5), 820-838.

Weber, R. A., & Camerer, C. F. (2003). Cultural Conflict and Merger Failure: An Experimental Approach. *Management Science*, 49(4), 400–415.

Weber, Y. & Menipaz, E. (2003). Measuring cultural fit in mergers and acquisitions. *Int. J. Business Performance Management*, 5(1), 54-72.

Weber, Y. (1996). Corporate Cultural Fit and Performance in Mergers and Acquisitions. *Human Relations*, 49(9), 1181-1203.

Weber, Y., & Schweiger, D. M. (1992). Top management culture conflict in mergers and acquisitions: A lesson from anthropology. *International Journal of Conflict Management*, 3(4), 285–302.

Weber, Y., Shenkar, O., & Raveh, A. (1996). National and Corporate Cultural Fit in Mergers/Acquisitions: An Exploratory Study. *Management Science*, 42(8), 1215-1227.

Weber, Y., Tarba, S. Y., & Reichel, A. (2011). A Model of the Influence of Culture on Integration Approaches and International Mergers and Acquisitions Performance. *International Studies of Management & Organization*, 41(3), 9–24.

Weiss, H. M., & Beal, D. J. (2005). Reflections on affective events theory. In *The effect of affect in organizational settings*. Emerald Group Publishing Limited.

- Weiss, H. M., & Cropanzano, R. (1996). Affective Events Theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews*, Vol. 18, pp. 1-74). US: Elsevier Science/JAI Press.
- Weiss, L. W. (1965). An Evaluation of Mergers in Six Industries. *Review of Economics & Statistics*, 47(2), 172.
- Weneke, U., Goldberg, D., Yalcin, I., & Üstun, B. (2000). The stability of the factor structure of the General Health Questionnaire. *Psychological Medicine*, 30(4), 823-829.
- Werner, R. O., Griffiths, L. C., & Duggan, M. A. (1983). Regulation of Monopolistic Methods. *Journal of Marketing*, 47(1), 123–125.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Weston, J. F., & Johnson, B. A. (1999). Mergers and Acquisitions in the Global Chemical Industry. *Business Economics*, 34(4), 23.
- Westover, J. H. (2010). Managing organizational change: Change agent strategies and techniques to successfully managing the dynamics of stability and change in organizations. *International Journal of Management and Innovation*, 2(1), 45-51.
- Whetten, D. A. (2006). Albert and Whetten Revisited. *Journal of Management Inquiry*, 15(3), 219–234.
- White, I. R., Barrett, J. K., Jackson, D., & Higgins, J. P. (2012). Consistency and inconsistency in network meta-analysis: model estimation using multivariate meta-regression. *Research synthesis methods*, 3(2), 111-125.

- Wicker, A. W., & Kauma, C. E. (1974). Effects of a merger of a small and a large organization on members' behaviours and experiences. *Journal Of Applied Psychology, 59*(1), 24-30.
- Wickramasinghe, V., & Karunaratne, C. (2009). People management in mergers and acquisitions in Sri Lanka: employee perceptions. *International Journal of Human Resource Management, 20*(3), 694–715.
- Wilder, D. A., & Shapiro, P. N. (1984). Role of out-group cues in determining social identity. *Journal of Personality and Social Psychology, 47*(2), 342–348.
- Willcox, T. L. (1988). The Use and Abuse of Executive Powers in Warding Off Corporate Raiders. *Journal of Business Ethics, 7*(1/2), 47–53.
- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviours . *Journal Of Management, 17*(3), 601-617.
- Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *Academy of management review, 26*(3), 377-396.
- Williamson, O. E. (1968). Economies as an Antitrust Defense: The Welfare Tradeoffs. *American Economic Review, 58*(1), 18.
- Windecker, S., Stortecky, S., Stefanini, G. G., Rutjes, A. W., Di Nisio, M., Siletta, M. G., ... & Juni, P. (2014). Revascularisation versus medical treatment in patients with stable coronary artery disease: network meta-analysis. *Bmj, 348*.
- Wittmann, C., Hunt, S., & Arnett, D. (2009). Explaining alliance success: Competences, resources, relational factors, and resource-advantage theory. *Industrial Marketing Management, 38*(7), 743-756.

- Wong, A., Cheung, K. Y. & Mun, T. (2009). The Effects of Merger and Acquisition Announcements on the Security Prices of Bidding Firms and Target Firms in Asia. *International Journal of Economics and Finance*, 1(2), 274-283.
- Worcester, D. A., & Jr. (1958). A Partial Theory of Collusion. *American Economic Review*, 48(2), 588.
- World Bank, World Development Indicators (n.d.). *Money and quasi money growth (annual %) – 2000 to 2014*[dataset].
- Wright, C. D. (1901). The National Amalgamated Association of Iron, Steel, and Tin Workers, 1892-1901. *Quarterly Journal of Economics*, 16(1), 37.
- Wright, M. (1988). City Rules Ok? Policy Community, Policy Network and Takeover Bids. *Public Administration*, 66(4), 389–410.
- Wyatt, A. R. (1965). Accounting for Business combinations: What's Next? *Accounting Review*, 40(3), 527.
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121–141.
- Yan, S., & Zhu, Y. (2013). Impact of psychological contract violation on interpersonal trust during mergers and acquisitions. *Social Behaviour And Personality*, 41(3), 487-496.
- Yang, D., Davis, D. A., & Robertson, K. R. (2012). Integrated branding with mergers and acquisitions. *Journal of Brand Management*, 19(5), 438–456.
- Yang, Q., Mudambi, R., & Meyer, K. E. (2008). Conventional and reverse knowledge flows in multinational corporations? *Journal of Management*, 34(5), 882–902.

- Yankee, G. G., & Green Jr., D. (1961). The Direct Method of Preparing Consolidated Statements. *Accounting Review*, 36(1), 129.
- Yan-yan Song, & Ying Lu . (2015). Decision tree methods: applications for classification and prediction. *Shanghai Archives of Psychiatry*, 27(2), 130–135.
- Young, E. (1989). On the naming of the rose: interests and multiple meanings as elements organizational culture. *Organization Studies*, 10, 187-206.
- Youngjin Y, Lyytinen K, Heo D. (2007) Closing the gap: towards a process model of post-merger knowledge sharing. *Information Systems Journal* [serial online]. October 2007;17(4):321-347. Available from: Business Source Premier, Ipswich, MA. Accessed June 26, 2018.
- Yu, C. Y. (2002). *Evaluating cutoff criteria of model fit indices for latent variable models with binary and continuous outcomes*. Retrieved February 27, 2020, from <http://www.statmodel.com/download/Yudissertation.pdf>
- Yuki, M., Maddux, W. W., Brewer, M. B., & Takemura, K. (2005). Cross-cultural differences in relationship-and group-based trust. *Personality and Social Psychology Bulletin*, 31(1), 48-62.
- Zaheer, A., Castañer, X., & Souder, D. (2013). Synergy sources, target autonomy, and integration in acquisitions. *Journal of Management*, 39(3), 604–632.
- Zahn, R., Lythe, K. E., Gethin, J. A., Green, S., Deakin, J. F. W., Young, A. H., & Moll, J. (2015). The role of self-blame and worthlessness in the psychopathology of major depressive disorder. *Journal of Affective Disorders*, 186, 337–341.
- Zahra, S. A. & Fescina, M. (1991). Will leveraged buyouts kill U.S. corporate research & development?. *Academy of Management Executive*, 5 (4), 7-21.

- Zakowski, S. (1995). The effects of stressor predictability of lymphocyte proliferation in humans. *Psychology and Health*, 10, 409-425.
- Zapata-Phelan, C. P., Colquitt, J. A., Scott, B. A., & Livingston, B. (2009). Procedural justice, interactional justice, and task performance: The mediating role of intrinsic motivation. *Organizational Behaviour & Human Decision Processes*, 108(1), 93–105.
- Zehr, H. (2002). *The little book of restorative justice*. Intercourse, PA: Good Books.
- Zhou, J., Shin, S. J., & Cannella, A. J. (2008). Employee self-perceived creativity after mergers and acquisitions: Interactive effects of threat-opportunity perception, access to resources, and support for creativity. *Journal Of Applied Behavioural Science*, 44(4), 397-421.
- Zhou, Z. H., Jiang, Y., Yang, Y. B., & Chen, S. F. (2002). Lung cancer cell identification based on artificial neural network ensembles. *Artificial Intelligence in Medicine*, 24(1), 25-36.
- Zinchenko, A., Kanske, P., Obermeier, C., Schröger, E., & Kotz, S. A. (2015). Emotion and goal-directed behavior: ERP evidence on cognitive and emotional conflict. *Social Cognitive And Affective Neuroscience*, 10(11), 1577–1587.
- Zollo, M. (2009). Superstitious learning with rare strategic decisions: Theory and evidence from corporate acquisitions. *Organization Science*, 20(5), 894-908.
- Zollo, M., & Reuer, J. (2010). Experience spillovers across corporate development activities. *Organization Science*, 21(6), 1195-1212.
- Zollo, M., & Singh, H. (2005). Deliberate learning in corporate acquisitions: Post-acquisition strategies and integration capability in US bank mergers. In A. Capasso, G. B. Dagnino, & A. Lanza (Eds.), *Strategic capabilities and knowledge transfer within and*

between organizations: New perspectives from acquisitions, networks, learning and evolution. (pp. 306–346). Northampton, MA: Edward Elgar Publishing.

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APPENDIX A: Checklist used for screening in the systematic literature review

Checklist for literature review screening

Title
Year
Author
Publication
Availability
Indexed
Article type
Eligibility criteria met
Research hypotheses
Methodology - data analysis
Methodology - Temporal
Methodology - Reactivity
Instruments
Independent variables
Dependent variables
Number of cases of mergers or acquisitions sampled
Sample size (number of participants)
Inclusion criteria
Sector
Findings
Comments

APPENDIX B: List of journals included in the systematic review

Academic journal	Count	Percentage
Strategic Management Journal	22	7.64%
Academy of Management Journal	16	5.56%
Journal of Management	14	4.86%
Journal of Applied Behavioural Science	12	4.17%
Journal of World Business	11	3.82%
Journal of Management Studies	10	3.47%
Human Relations	8	2.78%
Journal of Organizational Change Management	8	2.78%
British Journal of Management	7	2.43%
Organization Science	7	2.43%
The International Journal of Human Resource Management	7	2.43%
Journal of Business Research	6	2.08%
Management Decision	6	2.08%
Scandinavian Journal of Management	6	2.08%
Organization Studies	6	2.08%
European Management Journal	6	2.08%
Journal of Change Management	6	2.08%
Administrative Science Quarterly	5	1.74%
Industrial Marketing Management	5	1.74%
Management Science	4	1.39%
Leadership & Organization Development Journal	4	1.39%
Long Range Planning: International Journal of Strategic Management	4	1.39%
Employee Relations	4	1.39%
Human Resource Management Journal	4	1.39%
Human Relations	3	1.04%
Personality and Social Psychology Bulletin	3	1.04%
British Journal of Social Psychology	3	1.04%
Journal of Managerial Psychology	3	1.04%
European Journal of Work and Organizational Psychology	3	1.04%
Personnel Review	3	1.04%
Cross Cultural Management	3	1.04%
Journal of Managerial Issues	3	1.04%
Journal of Marketing	2	0.69%
International Journal of Training and Development	2	0.69%
Journal of Psychiatric and Mental Health Nursing	2	0.69%
Discourse & Society	2	0.69%

Psychologie du Travail et des Organisations	2	0.69%
European Journal of Social Psychology	2	0.69%
Managerial & Decision Economics	2	0.69%
Nonprofit Management and Leadership	2	0.69%
Journal of Occupational and Organizational Psychology	2	0.69%
Human Resource Development International	2	0.69%
Social Behaviour and Personality	2	0.69%
Journal of the Academy of Marketing Science	2	0.69%
International Journal of Organizational Analysis	2	0.69%
Journal of Business Ethics	1	0.35%
Journal of Applied Psychology	1	0.35%
Negotiation Journal	1	0.35%
Organizational Behaviour and Human Decision Processes	1	0.35%
Group & Organization Management	1	0.35%
Journal of Business and Psychology	1	0.35%
Journal of Career Development	1	0.35%
Basic and Applied Social Psychology	1	0.35%
Stress Medicine	1	0.35%
Journal of Organizational Behavior	1	0.35%
Group Dynamics: Theory, Research, and Practice	1	0.35%
Corporate Communication	1	0.35%
M@n@gement	1	0.35%
Journal of Behavioural Decision Making	1	0.35%
Journal of Interprofessional Care	1	0.35%
Organization Development Journal	1	0.35%
Metaphor and Symbol	1	0.35%
Women's Studies International Forum	1	0.35%
Personnel Psychology	1	0.35%
The Psychologist-Manager Journal	1	0.35%
Journal of Nursing Management	1	0.35%
International Journal of Stress Management	1	0.35%
Mid-American Journal of Business	1	0.35%
Social Science & Medicine	1	0.35%
Strategic Change	1	0.35%
Gender, Work and Organization	1	0.35%
Corporate Communications	1	0.35%
American Journal of Sociology	1	0.35%
Computers in Human Behavior	1	0.35%
Journal of Community & Applied Social Psychology	1	0.35%
Behaviour & Information Technology	1	0.35%
International Journal of Intercultural Relations	1	0.35%
Information Systems Journal	1	0.35%
Journal of Marketing Research	1	0.35%
Managerial & Decision Economics,	1	0.35%

South African Journal of Psychology	1	0.35%
Journal of Personality and Social Psychology	1	0.35%
Journal of Management Development	1	0.35%
The Leadership Quarterly	1	0.35%
International Journal of Information Management	1	0.35%
European Journal of Marketing	1	0.35%
Asia Pacific Journal of Management	1	0.35%
Journal of Epidemiology and Community Health	1	0.35%
Interdisciplinary Journal of Contemporary Research in Business	1	0.35%
Corporate Reputation Review	1	0.35%
Organization Science	1	0.35%
Social Psychology	1	0.35%
International entrepreneurship and management journal	1	0.35%
The Academy of Management Perspectives	1	0.35%
Work, Employment and Society	1	0.35%

Note: N/A

APPENDIX C: Employee emotions in mergers and acquisitions

<u>Activation/ pleasantness</u>	<u>Construct</u>	<u>Selected references</u>	<u>Design</u>	<u>Cases</u>	<u>Sample size</u>	<u>Analysis</u>	
HAPA	Commitment	Armstrong-Stassen & Cameron, 2003	Longitudinal	1	159	ANOVA - 3 wave	
		Shimei & Yaodong, 2013	Cross-sectional	N/A	210	CFA	
		Rafferty & Restubog, 2010	Longitudinal	1	155	Regression	
		Kovoor-Misra & Smith, 2011	Cross-sectional	1	71	Regression	
		Bartunek & Franzak, 1989	Longitudinal	1	473	CFA	
		Schweiger & Denisi, 1991	Longitudinal	2	147	MANOVA/ANOVA	
		Cartwright & Cooper, 1993	Cross-sectional	1	157	Mean scores	
		Weber, 1996	Cross-sectional	52	129	Correlation/ regression	
		Terry, Carey & Callan, 2001	Cross-sectional	1	445	ANOVA/ Slope analysis	
		Cartwright, Tytherleigh & Robertson, 2007	Longitudinal	1	336	t tests/ ANOVA	
		Klendauer & Deller, 2009	Cross-sectional	37	128	Regression	
		Joslin, Waters & Dudgeon, 2010	Cross-sectional	1	250	Regression	
		Nikolaou, Vakola & Bourantas, 2011	Cross-sectional	2	327/285	Regression	
		Michela & Vena, 2012	Cross-sectional	1	62	Regression	
		Emotional attachment	Chun & Davies, 2010	Cross-sectional	1	128	ANOVA
		Hopeful	Burlew, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
		Motivation	Clarke & Salleh, 2011	Cross-sectional	1	33	Qualitative/N/A
		Participation/ engagement	Teerikangas, 2012	Cross-sectional	8	141	Qualitative/N/A
			Wicke & Kauma, 1974	Cross-sectional	1	233	ANOVA
Bligh & Carsten, 2005	Cross-sectional		1	16	Qualitative/N/A		
HAUA	Anger	Burlew, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A	
	Anxiety	Empson, 2001	Longitudinal	3	92	Qualitative/N/A	

	Styhre, Börjesson & Wickenberg, 2006	Cross-sectional	2	28	Qualitative/N/A
	Rafferty & Restubog, 2010	Longitudinal	1	155	Regression
	Lupina-Wegener, 2013	Cross-sectional	1	6	Qualitative/N/A
	Maguire & Phillips, 2008	Cross-sectional	1	15	Qualitative/N/A
	Astrachan, 2004	Cross-sectional	1	119	MANOVA/ANOVA
	Lawlor, 2013	Cross-sectional	1	41	Qualitative/N/A
	Drori, Wrzesniewski & Ellis, 2014	Cross-sectional	1	41	Qualitative/N/A
Betrayal	Brown & Humphreys, 2003	Cross-sectional	1	75	Qualitative/N/A
	Searle & Ball, 2004	Longitudinal	1	6	Qualitative/N/A
	Teram, 2010	Cross-sectional	1	N/A	Qualitative/N/A
Burnout	Idel, Melamed, Merlob, Yahav, Hendel & Kaplan, 2003	Longitudinal	1	93	No coeff.provided: p< .001
	Armstrong-Stassen & Cameron, 2003	Longitudinal	1	159	ANOVA - 3 wave
Confusion	McEntire & Bentley, 1996	Cross-sectional	1	63	Qualitative/N/A
	Shearer, Hames & Runge, 2001	Cross-sectional	1	N/A	Qualitative/N/A
	Carter & Pavor, 2003	Cross-sectional	1	12	Qualitative/N/A
	Lundbäck & Hörst, 2005	Cross-sectional	1	65	Qualitative/N/A
Emotional distress	Idel, Melamed, Merlob, Yahav, Hendel & Kaplan, 2003	Longitudinal	1	93	No coeff.provided: p< .001
	Barratt-Pugh, Bahn & Gakere, 2013	Longitudinal	1	302	Qualitative/N/A
Fear	Kavanagh & Ashkanasy, 2006	Longitudinal	3	123	Qualitative/N/A
	Meyer, 2006	Cross-sectional	1	49	Qualitative/N/A
	Clark, Gioia, Ketchen & Thomas, 2010	Longitudinal	1	33	Qualitative/N/A
	Goddard & Palmer, 2010	Cross-sectional	1	49	Qualitative/N/A
	Junni, 2011	Cross-sectional	92	103	Regression

	Mirc, 2010	Longitudinal	1	25	Qualitative/N/A
Frustration	Greenwood, Hinings & Brown, 1994	Longitudinal	1	N/A	Qualitative/N/A
	Siegel, 2000	Cross-sectional	1	N/A	Qualitative/N/A
	Minbaeva & Muratbekova- Touron, 2011	Longitudinal	2	N/A	Qualitative/N/A
	Langley, Golden- Biddle, Reay, Denis, Hébert, Lamothe & Gervais, 2012	Longitudinal	2	18 / 21	Qualitative/N/A
	Shearer, Hames & Runge, 2001	Cross-sectional	1	N/A	Qualitative/N/A
Insecure	Bartels, Douwes, de Jong & Pruyn, 2006	Cross-sectional	1	250	Regression
	Guerrero, 2008	Longitudinal	2	56	ANOVA - 3 wave
Negative emotions	Vaara, 2000	Cross-sectional	8	208	Qualitative/N/A
	Fugate, Kinicki & Scheck, 2002	Longitudinal	1	81	ANOVA - 4 wave
	van Dick, Wagner & Lemmer, 2004	Cross-sectional	2	459	Correlation/regressi on
Psychological distress	Joslin, Waters & Dudgeon, 2010	Cross-sectional	1	250	Regression
Resentment	Lee, Kim, Kim, Kwon & Cho, 2013	Cross-sectional	1	271	CFA
	Clarke & Salleh, 2011	Cross-sectional	1	33	Qualitative/N/A
Shocked	Burlew, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
Stressed	Terry & Callan, 1998	Cross-sectional	1	1104	MANOVA/ANOVA
	Schweiger & Denisi, 1991	Longitudinal	2	147	MANOVA/ANOVA
	Amiot, Terry, Jimmieson & Callan, 2006	Longitudinal	1	220	CFA
	Cartwright & Cooper, 1993	Cross-sectional	1	157	Mean scores
	Greenwood, Hinings, Brown, 1994	Longitudinal	1	N/A	Qualitative/N/A

		Harwood & Ashleigh, 2005	Cross-sectional	1	33	Qualitative/N/A
		Dumond, 2005	Cross-sectional	14	238	Mean scores
		Cartwright, Tytherleigh & Robertson, 2007	Longitudinal	1	336	t tests/ANOVA
		Makri & Hantzi, 2012	Cross-sectional	1	140	ANOVA
	Suspicious	Burlew, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
	Tension	Maguire & Phillips, 2008	Cross-sectional	1	15	Qualitative/N/A
	Threat	Amiot, Terry & Callan, 2007	Longitudinal	1	215	ANOVA
		Zhou, Shin & Cannella, 2008	Cross-sectional	12	403	Regression
		Clark, Gioia, Ketchen & Thomas, 2010	Longitudinal	1	33	Qualitative/N/A
		van Vuuren, Beelen & de Jong, 2010	Cross-sectional	1	31	Qualitative/N/A
		Lupina-Wegener, Schneider & van Dick, 2011	Cross-sectional	1	37/ 890	Qualitative/N/A
		Jacobs, Oliver & Heracleous, 2013	Cross-sectional	1	N/A	Qualitative/N/A
	Unease	Burlew, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
	Worry	Terry & Callan, 1998	Cross-sectional	1	1104	MANOVA/ANOVA
		Kovoor-Misra & Smith, 2011	Cross-sectional	1	19	Qualitative/N/A
LAPA	Inclusion	Harwood & Ashleigh, 2005	Cross-sectional	1	33	Qualitative/N/A
		Bellou, 2007	Cross-sectional	15	255	t tests
	Job involvement	Krug & Nigh, 2002	Cross-sectional	142	284	Qualitative/N/A
	Psychological safety	Nemanich & Vera, 2009	Cross-sectional	1	453	PLS
	Satisfaction	Schweiger & Denisi, 1991	Longitudinal	2	147	MANOVA/ANOVA
		Cartwright & Cooper, 1993	Cross-sectional	1	157	Mean scores
		Peck, Towell & Gulliver, 2001	Longitudinal	1	143	t-tests
		Gulliver, Towell & Peck, 2003	Longitudinal	1	86	ANOVA/regression
		Brown & Humphreys, 2003	Cross-sectional	1	75	Qualitative/N/A

LAUA		van Dick, Wagner & Lemmer, 2004	Cross-sectional	1	459	Correlation/regression	
		Nikandrou & Papalexandris, 2007	Cross-sectional	27	135	ANOVA	
		Guerrero, 2008	Longitudinal	2	56	Regression	
		Nikolaou, Vakola & Bourantas, 2011	Cross-sectional	2	327/285	Regression	
		Colman & Lunnan, 2011	Longitudinal	2	47	Qualitative/N/A	
		Covin, Sighetler, Kolenko & Tudor, 1996	Cross-sectional	1	2845	ANOVA	
		Fischer, Greitemeyer, Omay & Frey, 2007	Cross-sectional	1	82	ANOVA	
		Wickramasinghe & Karunaratne, 2009	Cross-sectional	2	109	t-tests	
		Marmenout, 2010	Cross-sectional	1	81	SEM	
		Work-life balance	Makri & Ntalianis, 2012	Cross-sectional	1	140	Regression
		Depression	Väänänen, Ahola, Koskinen, Pahkin & Kouvonon, 2011	Longitudinal	N/A	6511	Descriptives
		Devalued	Ray & McGee, 2006	Cross-sectional	1	46	Qualitative/N/A
			Collins & Wickham, 2003	Longitudinal	4	53	Qualitative/N/A
			van Dijk & van Dick, 2009	Cross-sectional	2	23	Qualitative/N/A
			Piekkari, Vaara, Tienari & Säntti, 2005	Longitudinal	1	8	Qualitative/N/A
			Vaara, Tienari, Piekkari & Säntti, 2005	Cross-sectional	1	24	Qualitative/N/A
		Disappointment	Searle & Ball, 2004	Longitudinal	1	6	Qualitative/N/A
			Kiessling, Harvey & Moeller, 2012	Cross-sectional	92	92	Regression
Emotional exhaustion	Terry, Carey & Callan, 2001	Cross-sectional	1	445	ANOVA/Slope analysis		
	Peck, Towell & Gulliver, 2001	Longitudinal	1	143	t-tests		

	Väänänen, Pahkin, Kalimo & Buunk, 2004	Longitudinal	1	7850	Regression
	Gloomy Randall & Procter, 2013	Cross-sectional	1	20	Qualitative/N/A
	Helplessness Fried, Tiegs, Naughton & Ashforth, 1996	Longitudinal	1	91	SEM/CFA
	Hurt Burlaw, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
	Isolation Harwood & Ashleigh, 2005	Cross-sectional	1	33	Qualitative/N/A
	Langley, Golden- Biddle, Reay, Denis, Hébert, Lamothe & Gervais, 2012	Longitudinal	2	18/21	Qualitative/N/A
	Low morale Siegel, 2000	Cross-sectional	1	N/A	Qualitative/N/A
	Goddard & Palmer, 2010	Cross-sectional	1	49	Qualitative/N/A
	Nostalgic Lawlor, 2013	Cross-sectional	1	41	Qualitative/N/A
	Overload Makri & Ntalianis, 2012	Cross-sectional	1	140	Regression
	Rejection Burlaw, Pederson & Bradley, 1994	Cross-sectional	1	6	Qualitative/N/A
	Searle & Ball, 2004	Longitudinal	1	6	Qualitative/N/A
	Sadness Lawlor, 2013	Cross-sectional	1	41	Qualitative/N/A
All	Affect Bhal, Bhaskar & Ratnam, 2009	Cross-sectional	2	225	CFA
	Jetten, Duck, Terry & O'Brien, 2002	Cross-sectional	N/A	153	ANOVA
	Attitudes van Oudenhoven & de Boer, 1995	Cross-sectional	N/A	90	ANOVA
	Giessner, Viki, Otten, Terry & Täuber, 2006	Cross-sectional	1	33	ANOVA
	Jetten & Hutchinson, 2011	Cross-sectional	2	308/ 498	Boostrapping
	Babić, Savović & Domanović, 2014	Cross-sectional	30	208	Regression
	Psychological well-being Cartwright, Tytherleigh & Robertson, 2007	Longitudinal	1	336	t-tests/ANOVA

Note: N/A

APPENDIX D: Evidence of employee behaviours in mergers and acquisitions

<u>Employee behaviours in M&A</u>	<u>Selected references</u>	<u>Design</u>	<u>Cases</u>	<u>Sample size</u>	<u>Analysis</u>
Behavioural reactions	Bhal, Bhaskar & Ratnam, 2009	Cross-sectional	2	225	CFA
	Colman & Lunnan, 2011	Longitudinal	2	47	Qualitative/ N/A
	Monin, Noorderhaven, Vaara & Kroon, 2013	Longitudinal	1	302	Qualitative/ N/A
Career migration	Stovel & Savage, 2006	Longitudinal	N/A	N/A	Qualitative/ N/A
Civic virtue behaviour	Bellou, 2008	Cross-sectional	1	66	Regression
Coping	Fugate, Kinicki & Scheck, 2002	Longitudinal	1	216/138/119/81	ANOVA
	Armstrong-Stassen & Cameron, 2003	Longitudinal	1	159	Correlation
	Amiot, Terry, Jimmieson & Callan, 2006	Longitudinal	1	220	CFA
Cultural conflict	Bellou, 2008	Cross-sectional	1	66	Regression
	Sarala, 2010	Cross-sectional	100	118	Regression
	Goddard & Palmer, 2011	Cross-sectional	1	49	Qualitative/ N/A
Extra-role behavior	Lipponen, Olkkonen & Moilanen, 2004	Cross-sectional	1	189	Correlation / Regression
Ingroup favoritism	Terry, Callan & Sartori, 1996	Cross-sectional	1	445	ANOVA
	Terry & Callan, 1998	Cross-sectional	1	1104	ANOVA
	Dackert, Jackson, Brenner & Johansson, 2003	Longitudinal	1	66	ANOVA
	Amiot, Terry & Callan, 2007	Longitudinal	1	215	ANOVA

Intention to leave	Fried, Tiegs, Naughton & Ashforth, 1996	Longitudinal	1	91	CFA
	van Dick, Wagner & Lemmer, 2004	Cross-sectional	1	459	Regression
	Piekkari, Vaara, Tienari & Sääntti, 2005	Longitudinal	1	8	Qualitative/ N/A
	Marmenout, 2010	Cross-sectional	1	81	SEM
	Rafferty & Restubog, 2010	Longitudinal	1	155	SEM
	Makri & Hantzi, 2012	Cross-sectional	1	140	Path analysis
	Lee, Kim, Kim, Kwon & Cho, 2013	Cross-sectional	1	271	Regression
Intergroup differentiation	Vaara, 2000	Cross-sectional	8	200	Qualitative/ N/A
	van Knippenberg, van Knippenberg, Monden & de Lima, 2002	Cross-sectional	2	373/122	Regression
	Ailon-Souday & Kunda, 2003	Cross-sectional	1	Not reported	Qualitative/ N/A
	Brown & Humphreys, 2003	Cross-sectional	1	75	Qualitative/ N/A
	Tienari, Søderberg, Holgersson & Vaara, 2005	Cross-sectional	1	40	Qualitative/ N/A
	Langley, Golden-Biddle, Reay, Denis, Hébert, Lamothe & Gervais, 2012	Longitudinal	2	18 /21	Qualitative/ N/A
	Smith, da Cunha, Giangreco, Vasilaki & Carugat, 2013	Cross-sectional	1	Not reported	Qualitative/ N/A
	Drori, Wrzesniewski & Ellis, 2013	Cross-sectional	1	41	Qualitative/ N/A
	Lubatkin, Schweiger & Weber, 1999	Longitudinal	56	69/ 36	Correlation/ Regression
	Krug & Nigh, 2001	Cross-sectional	142	284	Qualitative/ N/A
Management turnover	Ellis, Reus & Lamont, 2009	Longitudinal	62	62	Regression

	Kiessling, Harvey & Moelle, 2012	Cross-sectional	92	92	Regression
	Butler, Perryman & Ranft, 2012	Cross-sectional	5,394	N/A	Meta-analysis
Organizational citizenship behaviour	van Dick, Wagner & Lemmer, 2004	Cross-sectional	1	459	Regression
Organizational effectiveness and performance (productivity, service quality, innovation)	Nikandrou & Papalexandris, 2007	Cross-sectional	59	N/A	t-tests
Outgroup derogation	Empson, 2001	Longitudinal	3	92	Qualitative/ N/A
	Weber & Camerer, 2003	Cross-sectional	N/A	N/A	t-tests
	Lipponen, Olkkonen & Moilanen, 2004	Cross-sectional	1	189	Correlation/ Regression
	Chua & Goh, 2009	Cross-sectional	1	28	Qualitative/ N/A
Overconfidence	Vaara, Junni, Sarala, Ehrnrooth & Koveshniko, 2014	Cross-sectional	92	92	Regression
Positive distinctiveness	Ailon-Souday & Kunda, 2003	Cross-sectional	1	Not reported	Qualitative/ N/A
Productivity	Chung, Du & Choi, 2014	Cross-sectional	1	174	SEM
	Cording, Harrison, Hoskisson & Jonsen, 2014	Cross-sectional	137	129	Regression
Resistance	van Oudenhoven & de Boer, 1995	Cross-sectional	1	90	ANOVA
	McEntire & Bentley, 1996	Cross-sectional	1	63	Qualitative/ N/A
	Empson, 2001	Longitudinal	3	92	Qualitative/ N/A
	Apfelthaler, Muller & Rehder, 2002	Cross-sectional	1	20	Qualitative/ N/A
	Quah & Young, 2005	Longitudinal	4	32	Qualitative/ N/A

	van Dijk & van Dick, 2009	Cross-sectional	2	23	Correlation
	Teram, 2010	Cross-sectional	1	Not reported	Qualitative/ N/A
	Jetten & Hutchinson, 2011	Cross-sectional	2	308 /498	Correlation
Self-interested behaviour	Meyer, 2006	Cross-sectional	1	49	Qualitative/ N/A
Social conflict	Vaara, Sarala, Stahl & Björkman, 2012	123	220		SEM
Supportive	Wicker & Kauma, 1974	Cross-sectional	1	233	ANOVA
	Shearer, Hames & Runge, 2001	Cross-sectional	1	Not reported	Qualitative/ N/A
	Giessner, Viki, Otten, Terry & Täuber, 2006	Cross-sectional	2	148 /129	ANOVA
	Nikandrou & Papalexandris, 2007	Cross-sectional	27	135	ANOVA
	Basinger & Peterson, 2008	Cross-sectional	1	20	Qualitative/ N/A
	Wittmann, Hunt & Arnett, 2009	Cross-sectional	N/A	47	PLS
	Marmenout, 2010	Cross-sectional	1	81	SEM
	Gleibs, Täuber, Viki & Giessner, 2013	Cross-sectional	2	316 /173	Regression
Vigilance	Searle & Ball, 2004	Longitudinal	1	6	Qualitative/ N/A
	Harwood & Ashleigh, 2005	Cross-sectional	1	33	Qualitative/ N/A
Withdrawal	Fried, Tiegs, Naughton & Ashforth, 1996	Longitudinal	1	91	CFA
	Choi, Holmberg, Löwstedt & Brommels, 2011	Cross-sectional	1	22	Qualitative/ N/A

APPENDIX E: Health and well being of employees going through a merger or an acquisition - October 2018 (QUESTIONNAIRE)

Q1 Title of Study: Psychology of Mergers and Acquisitions

Name of researcher: Camelia Oancea

Contact details: coance01[at]mail[dot]bbk[dot]ac[dot]uk/

My name is Camelia Oancea. I am PhD researcher in organizational psychology at Birkbeck, University of London. I am inviting you to take part in this research by clicking on the Next button, which will take you to my online survey. *The study has received ethical approval from the Department of Organizational Psychology at Birkbeck, University of London.*

This study wants to explore the well-being of employees that have recently been involved in a either a merger or an acquisition, as well as attitudes and daily behaviours at work. In particular, the primary aim is to investigate how the merger /acquisition process is affecting employee adjustment to new working routine and health at the workplace at large.

Participation in the study is completely voluntary and will not affect your relation with your employer organization. You are free to stop completing the questionnaire and withdraw at any time without giving a reason and without any consequence.

Your data will be anonymised by the research team and will be stored with a unique ID number. The information we will collect about you will be held securely, while access will be restricted to the research team (i.e. researcher, supervisor and any PhD examiners, as the case may be). Any information that might trace responses back to you will be decoupled from the research data as soon as data collection process completes. Any documents that contains

identifiable information (email address) and ID number will be permanently destroyed as soon as the data collection process completes.

The analysis of your participation in this study will be written up in a report of the study for my degree. You will not be identifiable in the write up or any publication which might ensue. Data will be reported in aggregate form and based on at least 15 responses. If you would like a summary of the results please feel free to get in touch.

This survey contains 4 sections which focus on various aspects at work, and it will take you about 20 minutes to complete. For each item, we ask you to choose the response option which best reflects how you feel and what you think. Please read the questions carefully before answering.

If you have any questions about the study you are welcome to contact me by phone (+40742942917) or email (coance01[at]mail[dot]bbk[dot]ac[dot]uk) or my supervisor, Dr. Caroline Kamau-Mitchell, Lecturer, Department of Organizational Psychology, Birkbeck, University of London, at email c[dot]kamau[at]bbk[dot]ac[dot]uk; telephone: +44 0207 631 6753.

To begin today's survey, please click next.

Q2 Title of Study: Psychology of Mergers and Acquisitions

I have been informed about the nature of this study and willingly consent to take part in it.

(1)

▼ Yes (1) ... No (2)

I understand that my participation in this study will be kept confidential and research data will be anonymised. (2)

▼ Yes (1) ... No (2)

▼ Yes (1) ... No (2)

I understand that I may withdraw from the study at any time without giving any reason for doing so. (3)

Skip To: End of Block If Title of Study: Psychology of Mergers and Acquisitions < I have been informed about the nature of this study and willingly consent to take part in it.

Q3 Which statement best describes your current employment status?

- Working (paid employee) (1)
- Working (self-employed) (2)
- Not working (temporary layoff from a job) (3)
- Not working (looking for work) (4)
- Not working (retired) (5)
- Not working (disabled) (6)
- Not working (other) (7)
- Prefer not to answer (8)

Skip To: End of Block If Which statement best describes your current employment status? = Not working (temporary layoff from a job)

Skip To: End of Block If Which statement best describes your current employment status? = Not working (looking for work)

Skip To: End of Block If Which statement best describes your current employment status? = Not working (retired)

Skip To: End of Block If Which statement best describes your current employment status? = Not working (disabled)

Skip To: End of Block If Which statement best describes your current employment status? = Not working (other)

Skip To: End of Block If Which statement best describes your current employment status? = Prefer not to answer

Q4 Within the last 12 months has your company:

- Acquired another company? (1)
- Been acquired? (2)
- Merged with another company? (3)
- None of the above (4)

Skip To: End of Block If Within the last 12 months has your company: = None of the above

Q5 Were you at the company during the time of the merger/acquisition?

- Yes (1)
- No (4)

Skip To: End of Block If Were you at the company during the time of the merger/acquisition? = No

Q6 Your age

- Under 18 (6)
- 18 - 29 (1)
- 30 - 39 (2)
- 40 - 49 (3)
- 50 - 59 (4)

- Over 60 (5)

Skip To: End of Block If Your age = Under 18

Q7 Gender

- Male (1)
 - Female (2)
-

Q8 Highest level of education

- Secondary education (1)
- Vocational training (2)
- Bachelor (3)
- Masters (4)
- PhD (5)

Q9 Marital status

- Single (1)
- Married / With partner (2)
- Widowed (3)
- Separated/divorced (4)

Q10 Children

- Yes (1)
- No (2)

Q11 Location of your employer before the merger or acquisition (country)

▼ Afghanistan (1) ... Zimbabwe (1357)

Q12 Industry of your organization before the merger or acquisition

▼ Agriculture, Forestry, Fishing (1) ... Other (17)

Q13 Size of your organization before the merger/acquisition

- 1 - 19 (1)
- 20 - 49 (2)
- 50 - 99 (3)
- 100 - 249 (4)
- 250 - 499 (5)
- 500 - 999 (6)
- Over 1000 (7)

Q14 Department you work in

Q15 Your involvement in the merger/acquisition process

Yes (1)

No (2)

Q16 Date of employment in this organization – month/year

Month (1)

▼ January (1) ... (150)

Year (2)

▼ January (1) ... (150)

Q17 Role of your organization in the acquisition/merger process

Acquirer (1)

Acquired (2)

Merged (3)

Q18 The merger/acquisition process was:

Hostile (without the endorsement of the management) (1)

Friendly (with the endorsement of the management) (2)

Q19 The merger/acquisition was:

- Horizontal (the two organizations operate in similar market sectors) (1)
- Vertical (the two organizations operate at different level in the value chain) (2)
- Conglomerate (the two organizations operate in unrelated markets) (3)

Q20 Industry of the merging partner organization:

▼ Agriculture, Forestry, Fishing (1) ... Other (17)

Q21 Size of your merging partner organization (in no. of employees)

- 1 - 19 (1)
- 20 - 49 (2)
- 50 - 99 (3)
- 100 - 249 (4)
- 250 - 499 (5)
- 500 - 999 (6)
- Over 1000 (7)

Q22 Location of your merging partner organization (country)

▼ Afghanistan (1) ... Zimbabwe (1357)

Q23 From the acquirer/merging partner perspective, and based on the options below, what do you think is the main motivation for the merger/acquisition?)

- Geographic expansion (1)
- Diversification of product mix (2)
- Rapid growth (3)
- Economies of scale (cost advantages) (4)
- Acquisition of knowledge & expertise (5)
- I don't know (6)

End of Block: Demographics

Start of Block: Block 1

Q24 The following questions refer to the merger / acquisition process and your attitudes and perceptions regarding the old and new organization and your future. Read the questions carefully and choose the answer that best applies to you.

Q25 Please indicate the degree to which the following items or areas were integrated or combined as a result of the merger/acquisition (1, “not at all”; 7, “completely”)

None at all (1)	(2)	(3)	(4)	(5)	(6)	Completely (7)
--------------------	-----	-----	-----	-----	-----	-------------------

Research and development (4)	<input type="radio"/>						
Company values in general (5)	<input type="radio"/>						

Q27 When thinking about the organization before the merger / acquisition, please indicate on a scale of 1 to 5 the extent to which you agree to the following statements

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I identify strongly with the organization (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When someone criticizes the organization, it feels like a personal insult (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel strong ties with the organization (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q28 When thinking about the new organization after the acquisition, please indicate on a scale of 1 to 5 the extent to which you agree to the following statements

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I identify strongly with the organization (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When someone criticizes the organization, it feels like a personal insult (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel strong ties with the organization (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q29 When thinking about your future in the new organization, please indicate on a scale of 1 (“Completely disagree”) to 5 (“Strongly agree”) the extent to which you agree to the following statements:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I am worried that I will lose my job (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- I feel that the future of my career is uncertain (2)
- I am concerned that I will lose important medical and financial benefits (3)
- I worry that my job status and authority will be jeopardized by the merger (4)
- It is likely that I will have a position of lower responsibility and authority in the merged organization than I held in my original company (5)
- I am concerned that upper management of the other company will discriminate against me (6)
- I expect to be demoted as a result of the merger (7)

I do not feel a strong sense of belonging to my organization (8)

Q32 When thinking about your career prospects and behaviour in the new organization, please indicate the extent to which you agree to the following:

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
I sometimes consider to take another job (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes consider searching for another job outside this organization (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I will presumably still have my present job next year (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am planning to take another job this year, if offered (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Long-term job security (5)	<input type="radio"/>						
Career development (6)	<input type="radio"/>						
Sufficient power and responsibility (7)	<input type="radio"/>						

Q35 The following section refers to the organizational climate after the merger or acquisition and how you feel towards the members of this group. Read the questions carefully and choose the answer that best reflects your feelings

Q36 Think about the new organization, and the new procedures the management team uses to make decisions about your pay, rewards, evaluations, promotions, assignments, etc. Please indicate the extent to which you agree to the following statements

	To a very small extent (1)	Little extent (2)	To some extent (3)	To a large extent (4)	To a very large extent (5)
Are you able to express your views during those procedures? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Can you influence the decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

arrived at by
those
procedures?
(2)

Are those
procedures
applied
consistently?
(3)

Are those
procedures
free of bias?
(4)

Are those
procedures
based on
accurate
information?
(5)

Are you able
to appeal the
decisions
arrived at by
those
procedures?
(6)

Do those
procedures
uphold ethical
and moral
standards? (7)

Q37 When thinking about the new organization and the outcomes you now receive from your job, such as pay, rewards, evaluations, promotions, assignments, etc, please indicate the extent to which you agree to the following:

	To a very small extent (1)	Little extent (2)	To some extent (3)	To a large extent (4)	To a very large extent (5)
Do those outcomes reflect the effort you have put into your work? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are those outcomes appropriate for the work you have completed? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do those outcomes reflect what you have contributed to your work? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Are those outcomes justified, given your performance? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q38 When thinking about the new organization and the acting management team, please indicate the extent to which you agree to the following:

	To a very small extent (1)	Little extent (2)	To some extent (3)	To a large extent (4)	To a very large extent (5)
Have they treated you in a polite manner? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have they treated you with dignity? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have they treated you with respect? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have they refrained from improper remarks or comments? (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q39 Referring to the acting management's communication and explanation for decision-making in general, please indicate your agreement to the following:

	To a very small extent (1)	Little extent (2)	To some extent (3)	To a large extent (4)	To a very large extent (5)
Has your supervisor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

been candid
when
communicating
with you? (1)

Has your
supervisor
explained
decision-
making
procedures
thoroughly?
(2)

Were your
supervisor's
explanations
regarding
procedures
reasonable? (3)

Has your
supervisor
communicated
details in a
timely
manner? (4)

Has your
supervisor
tailored
communication
to meet
individuals'
needs? (5)

Q40 On a scale of 1 (“strongly disagree”) to 5 (“strongly agree”), please indicate the extent to which you agree that the employees who worked in your organization before the merger/acquisition have the following characteristics

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Technical expertise (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friendly attitude (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative efficiency (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good communication skills (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional attitudes (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable and hardworking employees (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providers of quality services (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helpful and cooperative (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q41 On a scale of 1 (“strongly disagree”) to 5 (“strongly agree”), please indicate the extent to which you agree that the employees who work in your organization after the merger/acquisition have the following characteristics

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
Technical expertise (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friendly attitude (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative efficiency (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good communication skills (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional attitudes (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capable and hardworking employees (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Providers of quality services (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Helpful and cooperative (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q42 Think about the employees in the newly formed organization after the merger/ acquisition. For each statement, please tick the number that best describes how much you agree or disagree with each statement

	Strongly disagree (1)	Somewhat disagree (2)	Neither agree nor disagree (3)	Somewhat agree (4)	Strongly agree (5)
They are very capable at performing their jobs (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are known to be successful at things they try to do (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They have much knowledge about the work that needs to be done (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel very confident about their skills (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They have specialized capabilities that can increase performance (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are well qualified (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are concerned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Their actions and behaviours are not very consistent (15)	<input type="radio"/>				
I like their values (16)	<input type="radio"/>				
Sound principles seem to guide their behaviour (17)	<input type="radio"/>				

Q43 When thinking about your new organization and its employees, please indicate on a scale of 1 (not at all applicable to me) to 5 (extremely applicable to me) the statement that best describe how you feel

	None at all (1)	A little (2)	Moderately (3)	A lot (4)	Extremely applicable (5)
Someone has in it for me (1)	<input type="radio"/>				
Sometimes I feel like I'm being followed (2)	<input type="radio"/>				
I believe that I have often been sanctioned	<input type="radio"/>				

without cause
(3)

Some people
have tried to
steal my ideas
and take
credit for
them (4)

My superiors
find it more
fault with me
than they
should (5)

In this
organization,
no one really
cares much
what happens
to you (6)

In this
organization
most people
will use
somewhat
unfair means
to gain profit
or an
advantage,
rather than
lose it (7)

I often
wonder what
hidden reason
other people
from this
organization
may have for

doing
something
nice for you
(8)

In this
organization,
it is safer to
trust no one
(9)

I have often
felt that
people in the
organization
were looking
at me
critically (10)

Most people
in this
organization
make friends
because
friends are
likely to be
useful to
them (11)

Someone has
been trying to
influence my
mind (12)

I am sure I
have been
talked about
behind my
back (13)

Most people
in this
organization
inwardly
dislike
putting
themselves
out to help
other people
(14)

I tend to be
on my guard
with people
who are
somewhat
more friendly
than expected
(15)

People have
said insulting
and unkind
things about
me (16)

People often
disappoint me
(17)

In this
organization,
I have often
found people
jealous of my
good ideas
just because
they had not
thought of
them first.
(18)

Q44 This section contains questions referring to your health and well-being at work. We would like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks. Please answer all the questions by underlining the answer which you think most nearly applies to you. Please refer only on to the present and recent complaints, not those that you had in the past.

Q45 Have you been feeling perfectly well and in good health?

- Better than usual (1)
- Same as usual (2)
- Worse than usual (3)
- Much worse than usual (4)

Q46 How often have you been feeling the following:

	Not at all (1)	No more than usual (2)	Rather more than usual (3)	Much more than usual (4)
Have you been feeling in need of a good tonic? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been feeling run down and out of sorts? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been feeling that you are ill? (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you been
getting any pains
in your head? (4)

Have you been
getting a feeling
of tightness or
pressure in your
head? (5)

Have you been
having hot or
cold spells? (6)

Have you been
losing much
sleep over
worry? (7)

Have you been
having difficulty
in staying asleep
once you are off?
(8)

Have you been
feeling
constantly under
strain? (9)

Have you been
getting edgy and
bad-tempered?
(10)

Have you been
getting scared or
panicky for no
good reason?
(11)

Have you been feeling everything was getting on top of you? (12)

Have you been feeling nervous and strung-up all the time? (13)

Q47 Have you been managing to keep yourself busy and occupied?

- More so than usual (1)
- Same as usual (2)
- Rather less than usual (3)
- Much less than usual (4)

Q48 Have you been taking longer over the things you do?

- Quicker than usual (1)
- Same as usual (2)
- Longer than usual (3)
- Much longer than usual (4)

Q49 Have you been feeling on the whole you were doing things well?

- Better than usual (1)
- About the same (2)
- Less well than usual (3)
- Much less well (4)

Q50 Have you been satisfied with the way you've carried out your task?

- More satisfied (1)
- About same as usual (2)
- Less satisfied (3)
- Much less satisfied (4)

Q51 What is the extent to which you have been feeling the following:

	More so than usual (1)	Same as usual (2)	Less so than usual (3)	Much less than usual (4)
Have you been feeling that you are playing a useful part in things? (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have you been feeling capable of making decisions about things? (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Have you been
able to enjoy
your normal day-
to-day activities?

(3)

APPENDIX F: Information sheet

Name of researcher: Camelia Oancea

Contact details: coance01[at]mail[dot]bbk[dot]ac[dot]uk/

My name is Camelia Oancea. I am PhD researcher in organizational psychology at Birkbeck, University of London. I am inviting you to take part in this research by clicking on the Next button, which will take you to my online survey. *The study has received ethical approval from the Department of Organizational Psychology at Birkbeck, University of London.*

This study wants to explore the well-being of employees that have recently been involved in a either a merger or an acquisition, as well as attitudes and daily behaviours at work. In particular, the primary aim is to investigate how the merger /acquisition process is affecting employee adjustment to new working routine and health at the workplace at large.

Participation in the study is completely voluntary and will not affect your relation with your employer organization. You are free to stop completing the questionnaire and withdraw at any time without giving a reason and without any consequence.

Your data will be anonymised by the research team and will be stored with a unique ID number. The information we will collect about you will be held securely, while access will be restricted to the research team (i.e. researcher, supervisor and any PhD examiners, as the case may be). Any information that might trace responses back to you will be decoupled from the research data as soon as data collection process completes. Any documents that contains identifiable information (email address) and ID number will be permanently destroyed as soon as the data collection process completes.

The analysis of your participation in this study will be written up in a report of the study for my degree. You will not be identifiable in the write up or any publication which might ensue. Data will be reported in aggregate form and based on at least 15 responses. If you would like a summary of the results please feel free to get in touch.

This survey contains 4 sections which focus on various aspects at work, and it will take you about 20 minutes to complete. For each item, we ask you to choose the response option which best reflects how you feel and what you think. Please read the questions carefully before answering.

If you have any questions about the study you are welcome to contact me by phone (+40742942917) or email (coance01[at]mail[dot]bbk[dot]ac[dot]uk) or my supervisor, Dr. Caroline Kamau-Mitchell, Lecturer, Department of Organizational Psychology, Birkbeck, University of London, at email c[dot]kamau[at]bbk[dot]ac[dot]uk; telephone: +44 0207 631 6753.

To begin today's survey, please click next.

APPENDIX G: Organizational Psychology Ethics Form
 Proposal to Conduct Research Involving Human Participants

Before completing this form make sure you have familiarised yourself with BPS Core of Human Research Ethics

If you are conducting internet research please read the AoIR recommendations for ethical decision making before completing this form

Section A:

Name(s) of Investigator:	Camelia Oancea
Date of application:	08/05/2017
Proposed start date:	25/05/2017
Contact details: Email	
Status (e.g. Lecturer, PhD student, BSc/MSc student)	PhD student
Supervisor (name and email) (if applicable):	Dr. Caroline Kamau-Mitchell
Funding source (if applicable)	N/A
Project Title (15 words max)	Psychology of Mergers and Acquisitions
Are any committees other than this one evaluating whether your proposed research is ethical? YES/NO	
If yes, include the proposal you made to them and (if available) their decision	

Section B: Supporting Documentation

Listed below are the materials you need to include with the ethics submission.

Please place an X in each box when you have ensured that this material is included with your submission.

Note that if you are seeking ethical approval for a survey your only need to submit the questionnaire if you are using your own questions. If you are using existing, published questionnaires, you do not have to attach the questionnaire but you do need to explain which questionnaire(s) you are using (and provide references) in Section D.

Under the “Other” option you may specify (and attach) any other documents that you consider relevant to your application. For example you can include an ethics application form that has been submitted to a different committee. If you are debriefing the participants you need to include the relevant documents here. Note that debriefing is not compulsory unless you are actively misleading or deceiving the participants as to the purpose of the study.

For projects that will run over multiple years and may involve multiple data sources it is recommended to include a data management plan. This is also required if you are applying for ethical approval for a funding application or a funded project.

Materials used (e.g. questionnaire, interview schedule) (where appropriate)	Annex A
Invitation to participate in study	Annex B
Information Sheet	Annex C
Consent Form	Annex D
Other (please specify): Debriefing sheet	Annex E

Section C: Checklist

Will the participants be required to experience unpleasant stimuli or unpleasant situations? (this also include unpleasant experiences that may result from deprivation or restriction, e.g. Food, water, sleep deprivation)	YES / NO
Will any information about the nature, process or outcome of the experiment or study be withheld from participants? (if information is withheld, the participants will need to be debriefed after the data collection. In addition, a second informed consent to use the data should be obtained after debriefing the participants)	YES / NO
Will participants be actively misled or deceived as to the purpose of the study? (if the participants are actively misled or deceived, they need to be debriefed after the data collection. In addition, a second informed consent to use the data should be obtained after debriefing the participants)	YES / NO
Will participants receive any inducement or payment to take part in the study?	YES / NO
Does the research involve identifiable participants or the possibility that anonymised individuals may become identifiable?	YES / NO / DON'T KNOW
Will any participants be unable to provide informed consent? (e.g. minors, people who may lack capacity to do so, people in an unequal relationship forced to participate, etc)	YES / NO / DON'T KNOW
Might the study carry a risk of being harmful to the physical or mental well-being of the researcher in carrying out the study? (any risk above the normal risk expected in everyday life should be reported here)	YES / NO / DON'T KNOW
Might the study carry a risk of being harmful to the physical or mental well-being of participants? (any risk above the normal risk expected in everyday life should be reported here)	YES / NO / DON'T KNOW
Might the study carry a risk of being harmful to the College in any way? (e.g. reputation damage, security sensitive research such as military research or on extremist or terrorist groups, research requiring illegal/extreme/dangerous materials)	YES / NO / DON'T KNOW
Will the research involve any conflict of interest? (e.g. between your role at work and your role as a researcher? will you want to use data/colleagues that you have access/contact with in your job but as a researcher they would not normally be available to you – applicable only for the pilot study)	YES / NO / DON'T KNOW
Is there any possibility of a participant disclosing any issues of concern? (e.g. legal, emotional, psychological, health or educational.)	YES / NO / DON'T KNOW
Is there any possibility of the researcher identifying any issues of concern?	YES / NO / DON'T KNOW
Are there any other ethical concerns that you are aware of?	YES / NO

If you answered 'YES' or 'DON'T KNOW' to any of the above; provide further details here; being specific about how you will address ethical concerns in the study protocol: (you can expand the area below to use as much space as needed)

Does the research involve identifiable participants or the possibility that anonymised individuals may become identifiable?

The invitation to participate will be posted on social media channels; the questionnaires will be completed online with the guarantee that all person-identifying information will be anonymised after the data collection. A unique identifier (a randomly generated number) will be used to

track the respondent longitudinally. Respondents will be able to withdraw their data at any stage by either declining consent, which will automatically sign them out of the questionnaire, or by not clicking the link included in the invitation message.

The study will be conducted online, using the Birkbeck ITS account with Qualtrics. The data will be stored on the Qualtrics web-server. The data about participants will be stored with a unique identifier that will help me track the respondent longitudinally. Qualtrics server stores identifiable information (email information) and unique identifier for UI management. Once data collection ends and recoding is done locally in SPSS, access will no longer be available on Qualtrics, while any other documents that might be exported or copied from the Qualtrics server that links identifiable information with research data (i.e. UI) will be destroyed. Access to the Qualtrics platform will be restricted to the research team (i.e. researcher, supervisor, and PhD examiners as the case may be).

In the dissemination of my research, every effort will be made to ensure participants that the data collected cannot be traced back to them in any reports, essays, research publications and any other form of dissemination. This will be made clear to the respondents in the consent form and included in the information letter/page.

Subject organizations will also reserve the right to remain anonymous. In these instances, the organization will be given a pseudonym.

The data collected as part of this investigation will be used in the report for my degree and any other publication that might ensue. The data will only be disseminated at aggregate level and all respondent sensitive information will be kept securely throughout the entire data collection process while access will be restricted to the research team as well as to PhD examiners, as the case may be. The saving, sharing and dissemination of data will at all times be compliant with the BPS confidentiality requirements and specific arrangements with the sampled organizations.

Will the research involve any conflict of interest? (e.g. between your role at work and your role as a researcher? will you want to use data/colleagues that you have access/contact with in your job but as a researcher they would not normally be available to you

The research is expected to involve a conflict between my role at work and as a research student, but only in the pilot experiment, which is expected to be carried at my employer. In this case, in order to remove any influence that this may have on the participants and make sure their participation is voluntary, the invitation email will be sent through Qualtrics platform. Nevertheless, since I do not hold a management role in my organization and there is no power relationship involved, I expect this influence to be minimal.

Section D: Project description

(you can expand the areas below to use as much space as needed)

Description and rationale for proposed project (in accessible terms – what is the research question, how can people benefit, what are potential risks, and how are they mitigated?)

The overarching goal of the study is to determine the consequences of a merger/acquisition on the psychological health of the employees and how the cognitive, affective and behavioural factors in relation to the changing working environment alter over time. I will also look into how the role in the merger or acquisition process (of acquiring or being acquired), the integration level (horizontal, vertical or conglomerate) and mode of acquisition (friendly/hostile) influences the adjustment to a superordinate organization. In order to test the effects of the merger on the employees, and their malleability, I will use a 3x2x2 repeated measure design.

Description of participants (How will participants be selected? What are the inclusion/exclusion criteria? How many? How will they be identified and recruited?)

The naturalistic experiment necessary for the project will involve the administration of validated psychological questionnaires (ANNEX A) to employees working in companies going through either a merger or an acquisition. In order to gain access to the sample the recruitment will take place via invitations (ANNEX B) posted on social media channels (Linkedin, Facebook, Twitter) on the researcher page or on dedicated groups selected as relevant. In the latter case, I will seek informed consent from group owners or relevant stakeholder before posting the invitation to participate in the study to group members. In case of the pilot study, the research was conducted solely with the explicit authorization of the organization going through a merger or an acquisition. The permission letter to conduct pilot study in a recruited organization currently in the early acquisition stages is attached to this ethics form.

The recruitment of participants will be made via open invitation posted on social media channels. Participants will be recruited from all companies involved in a merger or an acquisition that took place within a maximum period of 1 year to date. All employees who have been or are presently going through a merger or an acquisition will be invited to participate. The effect of length of service as an employee in the organization will be examined statistically post-hoc, i.e. once all data are in. I have elected not to filter out employees a priori because of theoretical reasons against assuming that length of service is a barrier to organizational identity, e.g. self-categorization theory. For the selection of the social media groups or channels to post my invitation to the study, I will use three criteria:

1. Deal activity intensity over the past year by industry. The social media groups with professionals working in industry sectors that recorded the highest M&A activity over the past year will be selected and approached for permission to post invitation to the study (eg. Healthcare, Mining, Retail, Food etc.).
 2. Specific mergers or acquisition cases that took place over the past year. The social media groups of employees and alumni of the organizations that were involved in a merger or an acquisition will be approached through group owners for posting the invitation on group pages
 3. Additionally, in order to maximize exposure of the study on social media to users, but also to make sure the sample is fairly stratified, I will also approach professionals groups with the highest number of members (eg. Marketing & communication, Accountants, Engineers, etc.)
-

Description of Methods (What are the procedures used for data collection? What will the participants be asked to do? Where will the study be conducted? How do you intend to analyse the data?)

The study will involve primarily a web-based survey methodology, wherein the participants will be able to respond at their own convenience and from their personal computers or company computers at the workplace. Once invited to participate in the survey, the participants access the indicated web page where they are required to enter their email address and gain access to the questionnaires. This technique allows data gathering to be made with limited direct contact between researcher and sample. The same procedure will be followed in all three test phases.

Participating in the study involves sampled employees answering structured questions related to their workplace environment after the merger or the acquisition, and to their adjustment to new work routines, colleagues and status. The invitation to participate will be posted on social media channels (i.e. LinkedIn, Facebook, Twitter); the questionnaires can be completed online with the guarantee that no person-identifying information will be disclosed and all personal data will be anonymized. As soon as data collection completes, all research data will be coded and made anonymous while any identifiable information and research data will be decoupled. A unique identifier will be used to track the respondent longitudinally. All invitation messages sent in all the three test phases will contain the link that will automatically redirect and log participants in to the questionnaire.

For the investigation of the constructs of interests I am using instruments that have been developed and validated in previous similar studies with good validity and reliability coefficients:

Scales	Reference
Scale of post-merger integration	Cording et al., 2008
Cultural differences	Vaara et al., 2014
Organizational identification	Van Knippenberg et al., 2002
Perceived uncertainty	Mottola et al, 1997
Psychological distancing (Cynicism scale)	MBI-GS - Schaufeli et al., 1996
Affective commitment	ACS - Allen & Meyer, 1990
Turnover intentions	Taris et al., 2001
Retaliatory behaviour	Hui & Law, 1999; Blader et al., 2001
Psychological contract	Rousseau, 1990; Robinson, 1996
Organizational justice	Colquitt, 2011
Ingroup bias	Amiot et al., 2007
Trustworthiness	Mayer & Davis, 1999
Paranoia scale	Fenigstein & Vanable, 1992 (adapted for organizational setting)
General Health Questionnaire	Goldberg, 1979

What arrangements are to be made to protect participants' anonymity?

The survey platform used in this research, namely Qualtrics, provides a system of linking unique identifiers with email addresses of participants. Once data collection is completed and recoded

locally in SPSS, access to Qualtrics and to the functionality that links personal information with research data will be removed.

Furthermore any document exported or copied from the platform that contains the personal and research data will be permanently deleted. Throughout the longitudinal study, personal information will be available to the researcher, and PhD examiners, thus allowing retrieval of the unique identifier to specific participants in case the invitation that contained the UI failed to be sent safely.

What arrangements are to be made to ensure that the data you collect is held securely and confidentially? (both electronic and hard copies)

The invitation to participate will be posted on social media channels; the questionnaires will be completed online with the guarantee that all person-identifying information will be anonymised after the data collection. A unique identifier (a randomly generated number) will be used to track the respondent longitudinally. Respondents will be able to withdraw their data at any stage by either declining consent, which will automatically sign them out of the questionnaire, or by not clicking the link included in the invitation message.

The study will be conducted online, using the Birkbeck ITS account with Qualtrics. The data will be stored on the Qualtrics web-server. The data about participants will be stored with a unique identifier that will help me track the respondent longitudinally. Qualtrics server stores identifiable information (email information) and unique identifier for UI management. Once data collection ends and recoding is done locally in SPSS, access will no longer be available on Qualtrics, while any other documents that might be exported or copied from the Qualtrics server that links identifiable information with research data (i.e. UI) will be destroyed. Access to the Qualtrics platform will be restricted to the research team (i.e. researcher, supervisor, and PhD examiners as the case may be).

In the dissemination of my research, every effort will be made to ensure participants that the data collected cannot be traced back to them in any reports, essays, research publications and any other form of dissemination. This will be made clear to the respondents in the consent form and included in the information letter/page.

Subject organizations will also reserve the right to remain anonymous. In these instances, the organization will be given a pseudonym.

The data collected as part of this investigation will be used in the report for my degree and any other publication that might ensue. The data will only be disseminated at aggregate level and all respondent sensitive information will be kept securely throughout the entire data collection process while access will be restricted to the research team as well as to PhD examiners, as the case may be. The saving, sharing and dissemination of data will at all times be compliant with the BPS confidentiality requirements and specific arrangements with the sampled organizations.

What arrangements are to be made to obtain the free and informed consent of the participants?

The invitation message to participate in the study will include a free consent information (ANNEX C). Before participants give their free consent in the dedicated form (ANNEX C), the information will also be available to the participants on the main information page displayed once they click on the link to the study (ANNEX D). This is also where I will explain to respondents what their participation to my study will involve. Once the link is accessed, the participant will view the main information/invitation page and then access the consent form (ANNEX C) where they will have to give her or his formal consent to the fact that he or she has been informed about the nature of the study, that the data he or she provides will be confidential and that he or she can withdraw from the study at any time. The consent will be saved on Qualtrics web-server. Additionally, the main information/invitation page (ANNEX D) will also include information on their right to withdraw from the research at any time without penalty and without providing reason and that all information

they give will be treated with the utmost confidentiality and that their anonymity will be respected at all times.

In order to discourage faking from respondents and effectively study the cognitive, affective and behavioural reactions of employees to the organizational change, the full scope of this study will be disclosed to participants after they complete the questionnaire. In the debriefing letter displayed to participants at the end of the longitudinal study I will describe the goal of the research, and the main dependent variables measured. The debriefing information will be sent to all who participated in the study including those who dropped throughout the test rounds. The debriefing sheet is attached to this form.

If you are conducting internet research, please explain how you have addressed the following issues: a. Does your internet research involve human participation?

The research involves human participation through online surveys posted on social media.

However, in order to answer the research questions of this study, the internet medium will only be used for the recruitment of the sample. The internet or people's use or access to internet will not be within the scope of this investigation.

b. Does your internet research take place in a private or public internet space?

The invitation to take part in the research will take place in both public and private internet spaces. The invitation will be posted on designated groups on LinkedIn, while on Facebook and Twitter, the invitation will be posted to all connections. In order to address the ethical tension of private/public perception of the communities they joined online, I have sought the agreement from the group owners before posting the invitation. The invitation is posted only on those groups and communities where the owners have expressed their consent.

c. Is it appropriate to obtain informed consent from those whose data you are using?

Since the purpose of this study is not to capture or analyse conversations or interactions in either public or private internet space, the informed consent is sought only for participating in the survey. Additionally, informed consent is also sought from group owners, as the case may be (eg. LinkedIn), to obtain permission to recruit participants from that specific community.

d. Is it appropriate to anonymise or attribute your internet data?

The observation of users' internet behaviour is outside the scope of this research, meaning that no identifiable data will be collected for this purpose. On the other hand, in order to allow for a rigorous longitudinal investigation of the selected constructs for this study, users will, at their own choice to participate or not, express their free and informed consent to share their details.

(Please see the AoIR recommendations for a definition of internet research and more details on these issues)

Section E: Declarations

Please confirm each of the statements below by placing an 'X' in the appropriate space

I certify that to the best of my knowledge the information given above, together with accompanying information, is complete and correct.	x
I accept the responsibility for the conduct of the procedures set out in the attached application.	x
I have attempted to identify all risks related to the research that may arise in conducting the project.	x
I understand that no research work involving human participants or data can commence until ethical approval has been given.	x

Suggested Classification of project by the applicant (please highlight):

~~SENSITIVE /~~
~~EXTREMELY SENSITIVE /~~
~~ROUTINE~~

Signed by the applicant:		Date	
		10.05.2017	

If you have answered with “Yes” or “Don’t know” to any of the questions in Section C, your project should be classified as either “Sensitive” or “Extremely Sensitive”. However note that your project may be “Sensitive” or “Extremely Sensitive” even if you have responded with “No” to all section C questions.

Section F: Classification

FOR USE BY SUPERVISORS OR THE DEPARTMENTAL RESEARCH OFFICER

Classification of project (please highlight):

~~SENSITIVE /~~
~~EXTREMELY SENSITIVE /~~
~~ROUTINE~~

Signed by the Supervisor (if applicable)		Date	
Signed by the Departmental Research Ethics Officer		Date	23/05/2017