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**INSTITUTIONAL TRANSPLANT
AND AMERICAN CORPORATE GOVERNANCE:
THE CASE OF FERODYN**

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by

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Abstract

This paper examines the relationship between employment relations and American corporate governance using the case of Ferodyn*. In response to difficult industry conditions and sagging performance, American-owned Landis* Steel Corporation and Japanese-owned Daiichi* Steel Corporation jointly financed and built Ferodyn, a state-of-the-art high quality steel finishing facility. Although the joint venture was extremely successful in terms of quality, productivity and industrial relations, it came under severe stress from both external and internal pressures. Ferodyn's success was moderated by the market in that it was never able to extract a price premium for the quality of steel it produced. At the same time, pressures in the form of corporate governance and the parent / subsidiary relationship were substantial. Institutional investor demands for improvements in short run shareholder value ultimately resulted in the sale of Landis to Maxi-metal*, a global steel conglomerate, committed to a strategy of minimising costs. In this case, the organ transplant provides a useful metaphor: Ferodyn was like a strong and healthy 'organ transplant' in a weak and ailing corporate 'body.' So long as there were buffers in place to protect it from rejection by its host, Ferodyn could prosper, giving rise to exceptionally high labour standards and quality of life for its employees. In effect, the American system of corporate governance and the nature of power relations in the corporation created antigens that weakened both Landis's ability to support the joint venture and Ferodyn's ability to survive in an alien and hostile corporate, industry and macro-economic environment.

* Ferodyn, Landis, Daiichi and Maxi-metal are fictitious names.

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Institutional Transplant and American Corporate Governance: the Case of Ferodyn

Introduction

Throughout the 1990s and into the new millennium, privatisation, concentration and globalisation have generated rapid technological change and intensifying competition in both the public and private sectors. Customers have learned to exercise their 'choice' more aggressively and shareholders (both private and public) have become increasingly impatient for a quick and profitable return on their investments. In response to these pressures, firms have been forced to re-examine and improve their systems of corporate governance; while at the same time restructuring outdated organisational and production systems and structures. Alternative models of corporate governance are under hot debate (i.e. 'stakeholder' versus 'shareholder' systems); the contribution of work organisation to performance has been an important focus, and the notion 'partnership' has emerged as a popular approach to employment relations.

This paper examines the relationship between employment relations and corporate governance in the Anglo-American context using the case of Ferodyn, a highly successful joint venture between American-owned Landis Steel Corporation and Japanese-owned Daiichi Steel Corporation.¹ In this case, steel of the highest quality in the world was produced using state-of-the-art technology and a participative system of work organisation and employment relations. However, it soon came under severe external and internal stresses, the responses to which have the potential to undermine the foundations for Ferodyn's performance effectiveness. The question I want to address is whether or not it is possible to successfully 'transplant' a cooperative work system into a 'hostile' host environment, where market forces guide competitive relationships, historical legacy is one of managerial authority and control, and corporate governance forces managers to prioritise shareholder interests above all others.

1. Governance of the Corporate Enterprise

The American *corporation* is essentially an ‘empty legal shell,’ whose value is derived from the claims it has against its underlying economic entity, the *firm*.² Primarily a financing device, the corporation’s distinctive features include limited liability, legal identity and perpetual existence.³ In exchange for an equity investment, corporate stock is issued to investors or ‘shareholders,’ who are entitled to what is left from the firm’s income stream after the contractual claims of employees, creditors and other stakeholders have been met. Because shareholders are the last to receive anything in the event of insolvency, they assume the risk of failure; but they also gain in proportion to the company’s success. Although in a literal sense, shareholders do not own the company or its assets, their ownership of common voting stock provides certain ownership rights as residual claimants. In particular, shareholders can dispose of their shares in the stock market.

Managers control the day-to-day decisions affecting firm behaviour and performance. Because of the potential for managers to have interests that conflict with the pursuit of maximizing short-term shareholder value, there is said to be a ‘separation of ownership and control’ (Berle and Means 1932). This has given rise to laws governing relationships between ‘principals’ (shareholder / owners) and their ‘agents’ (managers).⁴ As a result, the stock market is often considered a ‘market for corporate control,’ in which rival management teams bid to persuade shareholders to sell them controlling interests by offering a premium over current share prices.

In this context, *corporate governance* can be understood as the system governing a particular organizational form, the corporation. With respect to internal organisation and governance, company law is virtually silent; corporate governance within the firm is a matter for the company itself to decide. However, the legal system provides a mechanism for the negotiation and enforcement of contracts. It therefore has an impact on the model of corporate governance that

might emerge and dominate in a particular national economic context. In the Anglo-American System, a tradition of private law, based around the enforcement of contracts, has given rise to a 'Shareholder Model' of corporate governance. In this model, shareholder interests are prioritised above all others, justified on the basis of three main arguments: (1) their investment is more valuable, (2) other stakeholders can protect their investments through contracts, (3) other stakeholders have other sources of power ex-post that protect their investments.⁵

Considering corporate governance more generally, the work system can be viewed as embedded in a corporate governance system characterised by layers of governance, from the work system to the norms and rules that operate at a national or trans-national level (See Figure 1).

Starting at the micro-level, the level of the production system, layers of corporate governance include the explicit and implicit agreements embodied in the system of relations between labour and management and corporate culture. Moving outward, the corporate governance layers that form the external environment include the structure and nature of corporate share ownership; the national legal and economic framework within which productive activities are conducted; and the trans-national legal and economic framework. Each layer of governance forms a significant part of the environment in which the other levels operate. However, within the external and internal governance system, layers are not necessarily hierarchical; not only do they interact with each other, they may also interact with, moderate or magnify external market and regulatory pressures operating on the productive system. Given the nested nature of the corporate governance system, the prevailing rules of ownership and control affect the capacity of managers, acting as shareholders' agents, to pursue various approaches in their relationship with labour.

As evident in the discussion above, the relationship between work systems and corporate governance is complex and characterised by dynamic interaction and feedback effects. Regulatory requirements and product market conditions, which are largely unavoidable, can interact with each other and with the system of corporate governance in ways that either support or constrain efforts to maintain partnership with employees. However, corporate governance is rarely a determining factor in itself; coupled with these other environmental factors, corporate governance has the potential to influence both the choice of strategy by parties to the employment relationship and their ability to achieve objectives across time.

The work system can therefore not be meaningfully separated from its broader governance system and environment. The dominant system of corporate governance in combination with the firm's market and regulatory framework have the potential to encourage or constrain more micro-level efforts by influencing the terms and conditions for, and the durability of partnership in employment relations. Although not the only factor, corporate governance has an important influence on the ability of parties to develop and maintain partnership at various organisational levels. It also plays a role in allocating the resulting costs and benefits, and hence the returns to partnership. Therefore, the ability of management to honour commitments made in exchange for employees' acceptance of the additional skill, effort and responsibility needed for effective partnership will depend upon the institutional and economic system within which these agreements are made and implemented.

Competing models of corporate governance

It is important to note that the Anglo-American 'shareholder-maximising' theory of the firm emerged out of a particular historical context during the late 1800s, as finance capital became an important resource for exploiting mass markets (Phahalad 1993, Roe 1994, Smith and Dyer 1996, Calomiris and Ramirez 1996). It gradually gained force as shareholders acquired property rights enforced by contracts and limited liability doctrines; and managers were held

accountable for using the firm's resources to maximise shareholders' interests. The rise of the shareholder model also coincided with the development of large scale manufacturing production as the major system for organising production. In this context, bureaucratic managerial systems were developed and scientific management came to dominate approaches to organizing work and production relationships. In this model, job structures were rigid and hierarchical and relationships between labour and management were adversarial. With the growth in industrial trade union representation, collective bargaining over rates of pay and terms of employment characterized the relationship between labour and management.

In the 1980s, concern over competitiveness led to interest in German, Japanese, Italian and Swedish systems of corporate governance and production. This 'new competition' was broadly based on higher quality, improved design, greater variety, more rapid product and process innovation and lower costs (Best 1990). In these systems, employment relationships were cooperative and contracting relationships with suppliers and customers were relational; and corporate governance was much more stakeholder oriented (Wever 1995, Aoki 1988).

But the rise of hostile take-overs and pressures from institutional investors produced a counter-reaction that strengthened the power and centrality of shareholders, particularly in the American case. In the 1980s, hostile takeovers came to be regarded as a mechanism both for raising shareholder value and enhancing the efficiency of the corporate system as a whole (Jensen 1989). Two main effects were attributed to hostile bids: Firstly, the threat of an unwelcome bid served to improve the performance of incumbent managers and to align their interests more completely with those of shareholders. Secondly, hostile bids, even where they were unsuccessful, tended to induce corporate restructurings which in turn freed up productive resources to be reallocated to more efficient uses elsewhere in the economy. In order to realize these ends, the fostering of an active market for corporate control was seen to be one of the principle goals

for company law. Thus, it has been the threat of hostile takeover, particularly since the 1980s, that has focused such strong attention on shareholder interests.

During the mid-1990s, concern over the long-term effects of corporate downsizing, outsourcing, stagnant real wages, increased income inequalities, the growth in contingent work, declining union representation and the breakdown in the implicit psychological or social contract in employment relations have generated interest in approaches that take into account the rights of other stakeholder groups (Kochan and Rubinstein 2000). At the same time, growing interest in the relationship between work organisation and productive system performance has encouraged re-consideration of the role of the work system and labour management relationships in this context.

As a result, the shareholder model is effectively being challenged by a stakeholder model that views hostile takeovers as occasions for redistribution (rather than generation) of wealth. The gains made by shareholders are said to accrue not from greater efficiency in the management of assets but from income transfers made at the expense of the long-term employees, suppliers and customers of the firm. The threat of such expropriation undermines cooperation within the productive process and thereby threatens long-term competitiveness (and hence, long-term shareholder value).

There is little disagreement regarding the benefits associated with co-operation or 'partnership' in production. It allows for the full exploitation of the technical complementarities inherent to production and facilitates the sharing of knowledge necessary for the effectiveness of productive systems and their improvement.⁶ It also fuels the organisational learning processes by which new information and knowledge are created, incorporated and diffused, and by which new products, processes and organisational forms are developed.⁷ The resulting *operational and dynamic efficiencies* are crucial determinants of the ability of organisations to compete effectively, and to respond flexibly to changing circumstances and new

opportunities. These efficiencies are also important because they generate the value added by the productive system, which forms the basis for the income and employment security of its various stakeholder groups.

In the American industrial relations and management literature, most studies find that cooperative workplace techniques generate substantive productivity and quality gains for manufacturers implementing them (Appelbaum and Batt 1994; Ichniowski, Kochan, Levine, Olson, and Straus 1996; Ichniowski, Shaw, and Prennushi 1997; Black and Lynch 1998; Pfeffer 1998). Additionally, studies focusing explicitly on financial returns have found that new work systems generate results that are equal or superior to those associated with more traditional work systems (Huselid 1995, Baker 1999).

Given empirical evidence of their relative efficiency, one would expect these new workplace techniques to quickly dominate in American firms. However, radical and sustained organizational transformation has been challenging in the U.S. economic and industrial environment. Even those firms that succeed in planning and implementing cooperative work systems have found that sustaining them over the longer term is difficult. To date, studies suggest that diffusion of these practices is slower and less extensive than one would expect, and the medium and long-run survival of even the most promising new workplace techniques is far from guaranteed (Osterman 1994; Pfeffer 1996; Doeringer, EvansKlock, and Terkla 1998, Kochan and Rubinstein 2000).

2. The Organ Transplant Metaphor: The Case of Ferodyn

To understand the relationship between cooperative employment relations and the American system of corporate governance – and the systemic challenges to implementing and maintaining a stakeholder-oriented approach in this context -- the *organ transplant* serves as a useful metaphor. Since 1954, when the first successful organ

transplant was performed in the United States, the most serious problem has been the likelihood that the transplant will be rejected or destroyed as part of the human body's natural response to foreign invaders. Each person's cells contain surface molecules, called major histocompatibility antigens (MHAs). When the immune system detects foreign MHA's on a new, transplanted organ, it attempts to rid the body of (or 'reject') it. The discovery of new drugs that suppress the immune system have made transplantation from unrelated donors feasible by allowing doctors to manage the process of chronic rejection.⁸ However, it is a process that must be carefully monitored and managed for the life of the patient if both patient and transplant are to survive.

Ailing Landis Steel and hope of a transplant from Daiichi Steel

In 1982, when the American steel industry was in deep crisis, Landis Steel Corporation recorded its first economic losses in fifty years. Like many other US steel producers, its first response was to cut costs, reduce capacity, layoff people and delay capital expenditures. However, despite these efforts, Landis continued to suffer extreme financial difficulties. It was in this context that a new CEO took over and the company began to explore alternatives for corporate restructuring and for revitalizing productive operations. In 1984 and 1985, Landis sold off its non-steel assets, laid off thousands of employees and redirected production to the higher profit, high quality carbon steel segments of the market.

Ferodyn was born out of these corporate performance difficulties and the determination of its new CEO to turn the company around. During the early 1980s, Landis Steel Company announced plans to explore the possibility of constructing a cold-rolling steel processing facility. In 1983, Japanese-owned Daiichi Steel Corporation, was consulted. Daiichi had recently built a new continuous cold mill capable of producing steel coils of extraordinary dimensions, surface quality and drawability, at a speed matched by no other plant in the world; it produced in one hour what could be produced in no less than twelve days in existing American facilities. Landis decided to try to

‘transplant’ this technology into its facility in the U.S. However, poor corporate performance in a context of industry crisis translated into insufficient internal funding sources and difficulties in obtaining domestic financing. The venture therefore depended on partnership with another company.

In the spring of 1985, Landis approached Daiichi and proposed forming a joint venture using the Japanese technology employed in its continuous cold rolling facility in Japan. Initially not interested, by summer, Daiichi faced over-capacity in the Japanese domestic steel market and pressure from Japanese automobile transplants that were unable to obtain steel of requisite quality in the United States. Importing steel from Japan was both expensive and difficult; and it was exacerbating trade tensions between the two countries. Daiichi therefore became interested in a joint venture that would allow it to produce high quality steel in the United States, thereby avoiding trade restrictions and tensions. Because Daiichi had maintained a long, informal relationship with Landis, and respected Landis’s corporate commitment to the steel industry, it made sense for the two companies to collaborate.

In the end, Daiichi agreed to arrange project financing that would not appear on Landis’s balance sheet, and to accept the joint venture facility as collateral for the debt. The bulk of the initial Ferodyn cost was provided by three Japanese trading companies. In 1987, the agreement to build Ferodyn was signed; and an agreement to build a second joint venture facility on the same site was signed in 1989. The first mill was on-line by 1989 and the second was ready for production in 1991. Daiichi also became the largest shareholder of Landis, with a 13 percent stake in the firm.

The ‘transplant’ operation

The Ferodyn plant was built, literally in a cornfield, about 100 miles away from Landis’s main plant. During the implementation and development stages of operation, visionary corporate management and international union support were important in shaping the new

company. Landis's CEO and the president of the United Steelworkers of America (USWA) were avid supporters of the Ferodyn productive system. It also had the support of top plant management and local USWA union leadership.

Although the core workforce was recruited from Landis's main plant, Ferodyn's local autonomy and its location away from the parent plant, provided opportunities to divorce itself from the traditional labour market system in steel and to pursue a radically different system in the new facility. Employees were carefully selected based on cooperativeness and capacity for working in groups, flexibility, motivation and trainability. They were then trained in both technical and social skills for a year prior to start-up, part of which included training in Japan to gain experience and insight into the effective operation of a plant like Ferodyn.

The Ferodyn work system was designed to reflect the requirements of its technology. Shared responsibility, broadly defined jobs and few job classifications characterised the organisation of work. Self-directed autonomous teams were assigned control over the entire production process, with authority to make on-the-line decisions regarding production, product quality and purchasing. Instead of supervisors, engineers and other management resources were available as needed. However, during the second and third shifts each day and on weekends (16 out of the 21 shifts per week), there were no managerial or white collar personnel in the plant. Information about team and plant performance was shared and major plant- and production-related decisions were made by consensus, from the shop floor teams to the Joint Advisory Council (JAC). At all levels, bargaining unit and managerial employees were expected to offer ideas and suggestions, which carried equal weight in joint decision-making. By providing vehicles for self-expression and involvement in a wide range of business interests, the Ferodyn work system featured an open system of internal communication and an effective process of problem and conflict resolution.

On a regular basis, employees received work related technical training; training in math, chemistry and computer programming; and training in social skills including teamwork, team building and communication skills. Such broad and extensive training in technical and computer skills, coupled with training in business and social skills equipped workers with the knowledge necessary for assuming responsibility beyond the technical requirements of their jobs. It also provided transferable skills and expertise marketable in the external labour market, lowering the personal risk associated with investment in the new work system, thereby improving the likelihood of cooperative and flexible job behaviour.

Because the production process is entirely computer controlled, employees are particularly important in monitoring and managing the production process, especially in the event that problems arise. According to Ferodyn's plant president, 'the technology provides for the operation to run absolutely wonderfully' with operators and maintenance personnel working 'proactively together to avoid problems.' But when something goes wrong, 'teamwork, training and employee authority to make decisions on the line are critical.' Work is organised into three basic areas: production, craft/maintenance and entry. Within this structure, promotion ladders are flat and based on training, knowledge and skill. Each employee is expected to advance to fully qualified status, serving to reduce class distinctions and barriers by permitting and encouraging all employees to reach their maximum potential. Workers are cross-trained, multi-skilled, multi-craft workers. Although assigned a skill-based classification, operators normally perform preventive maintenance on equipment they operate; and craft maintenance workers run the equipment they maintain.

To promote employee commitment to Ferodyn's high performance work system and its objectives, bargaining unit employees are guaranteed employment security, with a bonus system based on team performance. In this context, the Ferodyn compensation system served as another important support mechanism for the work system.

Designed to reward delivery of consistent and exceptionally high quality and efficiency, the compensation system was a pay for knowledge system where workers' pay reflected their skill classification level, with quarterly bonuses that were equally shared, regardless of position. According to Ferodyn's plant president, 'If you are going to tell them they're responsible for quality, then you'd better pay them for good quality and not pay them for tons of any quality.' All workers were guaranteed a 40-hour week generating relatively high annual incomes by local and industry standards; and within the first two years of operation, the bonus system was delivering roughly a quarter of employees' total compensation.

Labour relations at Ferodyn were amicable and characterized by a high degree of trust and mutual respect, based on learning through experience that parties could be depended on to keep their promises and commitments. However, good labour relations did not automatically materialise. Both labour and management had to learn how to relate to each other differently because the core workforce came from the traditional labour relations environment of Landis's main plant. The learning process involved training and was reinforced by experience in the joint implementation of the Ferodyn work system – from the development of its mission statement and statement of values through weathering the challenges of the learning curve process following start-up. In this, the behaviour of various actors and their implicit and explicit commitment to each other and the venture provided a foundation for solving future problems. Employment security clauses helped to bolster these commitments.

Both managerial and bargaining unit employees went through stages where their commitment to stated intentions and plans was tested. For example, the Japanese had originally lobbied for turn foremen but were turned down by the American JAC, who agreed to station engineers on the floor but only as a 'resource.' During the early phases of operation, workers were allowed to learn and to make mistakes. According to Ferodyn's plant president, 'At that time, we had a number of strip breaks in the furnace that were very costly ...

but gradually people learned how to react. It just took time.’ This kind of common sense and faith, both in and between Ferodyn management and bargaining unit employees was pivotal in creating a high trust, functional work culture.

In this context, plant level employees bought-into the system and it thrived as evident in the high level of employee persistence. Quits and / or layoffs were virtually nonexistent; and during the first eight years of operation, only five to ten people from labour and management left voluntarily. This is despite shifting pressures from Landis Steel Company with changes in its CEO, company president and management philosophy during the 1990s. According to a top managerial representative at Ferodyn, the changes in management were the greatest stresses operating on the subsidiary because “it pulled us in all different directions.”

Suppressing the immune system: Buffers from internal and external stresses

One of the primary strategic approaches taken by Ferodyn decision-makers was to direct the focus of productive agents on particular jobs and to assign them the authority and autonomy to accomplish their required tasks without distraction. For production employees, the objective was to produce high quality flat rolled steel efficiently; it was not to worry about how Landis’s stock price was doing, or how its employees at the main plant felt about the Ferodyn venture. According to local management and union representatives, the “willy nilly of the world” in many instances was a distraction for production employees; and it was management’s responsibility to insulate employees from unimportant “noise.” Therefore, while management gave employees significant autonomy over production and work system decisions, there was explicit acknowledgment by all parties involved that managing Ferodyn’s external environment by top-level plant managers was critical to making employees effective at the production level.

Under the leadership of its first plant president, the Ferodyn system worked effectively. This was in part due to its managerial structure with direct internal lines of authority to the plant president and then to the corporate Chief Operating Officer. The Human Resources (HR) Manager, for example, reported directly to the plant president, who himself was an officer of Landis Steel Company, reporting directly to the president of Landis. As a result, Ferodyn's interests were represented directly to top corporate leadership. This served to protect the core operating system from pressures generated by the possible divergence of interests between Ferodyn and Landis's main plant that might subordinate Ferodyn's interests to those of the steel company as a whole.

The Ferodyn operating system was also insulated from external pressures by a supply agreement with Landis stipulating that steel supplied to Ferodyn would be sourced from Landis's main plant. Operating funds were provided by Landis based on the Landis Daiichi Steel Partnership Agreement. During the start-up phases of operation, when bugs were worked out of the system, mistakes were made and learning took place, these financial arrangements protected the new facility from competitive market pressures. They also protected the facility in the event of catastrophic breakdown of equipment or any other such unforeseen event that might impact costs. Through time, as Ferodyn broke world records for efficiency and quality, doubts about its profitability were dispelled. Still, the financial arrangement with Landis was an important buffer against external market pressures during the period of time when the new work system was most vulnerable.

The joint venture with Daiichi Steel Corporation was another buffer against external pressures, particularly those relating to short-term costs. Daiichi's objective in the venture has traditionally been oriented towards assuring the production of consistently high quality steel at high volume. This is because the specifics of the financing arrangement are such that Daiichi earns a return on its investment based on operating hours of the major production units, not cost

cutting. This arrangement has at times put the two partners at odds with each other, because Landis's profits from the joint venture are more closely linked to operating profit than are Daiichi's. Additionally, and partly because bonus payments to bargaining unit members are largely based on quality and volume, Daiichi and the union more often than not find themselves on similar sides of particular issues.

Evidence of a successful operation

After reaching steady state operating levels, the Ferodyn productive system was highly effective. It set world records for efficiency and product quality. Employee performance bonuses were high, averaging approximately \$4,000 (£2,815) per quarter (\$16,000 (£11,260) per year). The Ferodyn work system was also exemplary, attracting the attention of more than one team of researchers who identified it as a surprisingly creative work system. Employee turnover and grievances were virtually non-existent and Ferodyn employees overwhelmingly agreed that it was a good place to work. According to one bargaining unit employee, "It felt like a career, not a job. For me, it was always what I thought work should be." Similarly, a top Ferodyn manager said, "It was exciting to have the opportunity to take this ride of a lifetime where our instructions were to go out there and run this company."

Early signs of rejection

Landis's main plant has always been a dominant influence in Ferodyn's external environment; and a consistent theme in the relationship has revolved around costs. When Landis's profits sag, for example, pressure mounts to cut measurable costs wherever in the corporation they can be found -- not only at the main plant but also at Ferodyn. Pressures relating to costs began during start-up, when Landis faced financial difficulties and the Ferodyn facility was expensive. As a result, there was a lot of criticism directed at the venture, with the bargaining unit and first level management employees at Landis's main plant assigning blame to Ferodyn for Landis's performance problems. This put Ferodyn's plant president

and Chief Financial Officer as well as other Ferodyn executives and managers in the position of having to resolutely defend the plants and soften negativity from Landis's main plant in order to prevent demoralisation of Ferodyn employees. In this, Ferodyn's plant president's position as an officer of Landis reporting directly to the corporation's president gave him added clout, allowing Ferodyn employees to feel relatively confident that their interests were being represented and supported.

As 'antigens' multiply, Ferodyn's resistance diminishes

Despite early successes and Ferodyn's obvious profitability, intense competition from global low cost producers and pressure from customers to sell high quality steel at a competitive price, prevented Ferodyn from extracting a premium for its high quality products. According to the local union president, "when we started, our product was going to be so much better than the competition that it would command a premium. But that never happened. Market pressures never allowed us to extract the expected premium." Thus, since Ferodyn operated in an industry populated by low road competition; and it was a supplier firm to customers who, too, were under pressure to compete on the basis of cost and price, it was vulnerable to pressure from low road firms in both its own and its customers' markets. At the same time, since Ferodyn was a subsidiary of Landis Steel Company, it was subject to decisions made at the corporate level that may or may not have been in the best interest of the plant.

The Ferodyn work system was also vulnerable to the impact of decisions made by Landis Steel Company that would affect its ownership structure and management. Although profitable, and one of the largest American steel producers, Landis was a relatively small player in an increasingly global marketplace. On top of this, global market pressures steadily pushed steel prices down, giving rise to widely publicized complaints of dumping. As a result, despite its relative efficiency and the fact that it had recorded profits for four straight years, steel stock prices in general (and Landis's in particular) were accorded a low valuation by Wall Street. This was a continual

frustration to Landis's top managers, many of whom were terminated during the 1990s for failure to generate share value appreciation.

Failure to train new managers in the technical and social requirements of the work system served to slowly but steadily erode the Ferodyn work culture. Although the initial employee base at Ferodyn (management and labour) received such training, in-coming managers did not. As a result, they had difficulty identifying with the Ferodyn work culture and they lacked the desire to make it succeed. During this same period, there were also important changes in high level corporate and plant management and union leadership. When Landis's CEO retired in the mid 1990s, he was replaced by a much more financially oriented individual. In 1994, the president of the international USWA also retired and was replaced by a much more traditionally minded union leader. This was a blow to Ferodyn's local union which had come to depend on strong support from the international USWA as they forged a more cooperative relationship with the company in the face of persistent tensions between with the USWA local at Landis's main plant. In 1998, Ferodyn's President retired. Whereas this individual had been an executive of Landis with a direct reporting relationship to Landis's president, his replacement reported to an executive at Landis. These retirements and accompanying shifts in managerial and union personnel left the plant without strong leadership, protection and support, making it vulnerable to opposing managerial paradigms and an unsympathetic union position regarding the type of work system it embodied.

Maxi-metal enters the scene and Ferodyn's resistance deteriorates further

By the late 1990s, under pressure from a group of institutional investors, Landis's board decided it needed "to find a buyer" as pressures from shareholders to boost share prices by selling to a larger global player grew more intense. In 1998, in a quickly negotiated buyout, Maxi-metal International, a global steel conglomerate, took advantage of the structural weakness in steel stock values and Landis's anxiousness to improve them. It purchased Landis (and

Landis's share in Ferodyn), which by now was a restructured and efficient integrated steel company. The buy-out came as a surprise to many of the firm's stakeholders, including Daiichi Steel and employees at Ferodyn.

Under Maxi-metal's control, ownership and management objectives were primarily focused on cost cutting and short term performance metrics. Maxi-metal's first action following the take-over was to reduce managerial employment by almost 20 percent in Landis Steel Company, which included a reduction of one third at Ferodyn. It restructured lines of authority such that control is now centralized in Maxi-metal USA. All managerial personnel associated with the creation and implementation of Ferodyn were terminated, some quite abruptly; and many Ferodyn employee rights and responsibilities relating to production were removed (for example, Ferodyn bargaining unit employees no longer choose and order from vendors). Regular training has ceased; scheduled maintenance has been suspended and the flow of information has stopped.

Under these conditions, Ferodyn's ability to perform effectively is uncertain. According to the local union president (about a year after the buyout), "I'm worried about Maxi-metal's approach and our current customer base. The long-term question is whether we will be able to maintain the type of customer base we were built to have. They have the highest quality standards in the industry." He likened Ferodyn's situation to that of a car whose hood is welded shut. "If it is a well-built car, it can go a good long time before the engine blows out. But the question is *when*, not if, that will happen." At that time, there was already evidence of deteriorating quality.

Internal resentments were also increasing because in the face of intensifying financial difficulties and market pressures, parties assumed defensive positions. In this context, the union's employment security generated considerable resentment on the part of salaried personnel who had no comparable protection. In this context, Ferodyn

managerial and bargaining unit employees were increasingly fearful of the next stage in the process.

Employee morale among bargaining unit employees also deteriorated, as evident in a sharp drop in employee suggestions for process and product improvements and innovation. According to the local union president, absenteeism became a serious problem. “In the old system, this was an empowering place to work. You were glad to be here and to work hard. Now, people are feeling burned out, tired, over-worked and emotionally drained.” There has also been a dramatic increase in the rate of grievances. According to the local union president, whereas fewer than five grievances were filed during Ferodyn's first 6 years of operation, more than 30 were filed in the two years following the buyout. Almost all related to grievances over unilateral change.

3. Conclusions

The transplantation metaphor is useful for understanding the case of Ferodyn, where in an effort to save Landis Steel Company from market failure, partnership in employment relations was incorporated into a stakeholder model of corporate governance in a greenfield site.⁹ During the short to medium term (the first ten years), it proved to be highly successful despite severe pressure from the traditional American system of industrial relations (based on managerial control) and corporate governance (prioritising shareholder interests above all others). This success was only made possible by careful management of those pressures in a way that protected the new facility and allowed it to thrive. Over time, however, stresses increased but buffers were weakened as both Landis and Ferodyn struggled for survival in an increasingly hostile competitive and corporate environment. This is now putting the Ferodyn work system under considerable strain, threatening rejection and eroding the high labour standards and quality of life it has supported.

The hostility of the Anglo-American environment to a transplanted cooperative work system can be traced to the structuring of this environment by historical developments in the theory and practice of markets and business.¹⁰ These are rooted in the liberal conceptualisation of individuals as inherently self-interested, and the assumption that behaviour is best mediated by the market in order to ensure both individual and general economic welfare. The significance of market competition is that it liberates the creative self-interest of individuals while at the same time constraining its misuse. The market also rewards success by selecting out organisations by dint of their success and allowing them to grow to market dominance. Such arguments characterise the development of economic theory and legislative and legal practice which subsequently shifted the right to self-determination from individuals to the management of large corporations. This move was warranted by what Berk (1997) described as 'corporate liberalism', from which perspective managerial control of large firms is justified by the beneficial effect it is believed to have on economic progress. It is reinforced in employment relations, where managerial prerogative is considered the necessary means for enforcing workers' compliance with contractual promise.

In a parallel development, theories of labour management diverge from the idea of the efficacy of hierarchical control. The first stage in this process was the emergence of scientific management, by which scientific laws of production -- if properly applied by management -- were believed to both maximise productive efficiency and resolve the mutual antagonism between managers and workers. Scientific management's failure in this latter respect gave rise to the human relations school. Initially concerned with identifying the physiological and social needs of workers and using this knowledge to improve the performance of Taylorist forms of work organisation, further development in human relations led to the realisation that involving workers in the planning and execution of work as part of group activity improved their socio-psychological well-being and released their creativity. The idea that human relations is a productive factor

was incorporated into what came to be described as *human resource management* (HRM). Thus, in the evolution of theory and practice in labour management, the role of management has been redefined from authoritarian initiator, organiser and director of work to democratic ‘facilitator’ of a participatory, cooperative and self-regulating system; at the same time, workers have been re-conceptualised as full partners in co-operative production, rather than *factors of production* to be coerced into compliance with managerial interpretation of their contractual commitment. This progression in the roles of management and workers has been accompanied by a re-characterisation of the workplace from ‘pluralistic’ (where interests of the two sides are viewed as separate and potentially conflictual) to ‘unitary’ (where interests are considered to be in common).

Theoretical developments in liberal economics and production management therefore diverge in their conclusions regarding authority and power in productive enterprise. Liberal economics justifies the increasing centralisation of entrepreneurial power and authority on the grounds that it is justified by market success; and challenging it risks slowing economic progress. Management theory, on the other hand, while not challenging the authority of management, argues for an increasing decentralisation of responsibility for production. This gives rise to a fundamental conflict between the logic of markets as an efficient mechanism for allocating resources, promoting entrepreneurship and distributing income (as conceptualised by liberal economic theory) and the logic of production management as a process for effectively combining and exploiting productive forces (as conceptualised by human resource management). This contradiction has been assumed away by supposition that the market is an efficient co-ordinating mechanism (ruling out the need for human agency) and by the idea that management, properly advised by the scientific laws of production and socio-psychological laws of human behaviour, can even-handedly work in the interest all the organisation's stakeholders.

However, the contradiction between the laws of the market and the laws of production becomes more apparent when it is recognised that although stakeholders have interests in common, they also have interests that are different. More specifically, stakeholders have joint interests in the surplus that is created by the productive system but conflicting interests in how it is distributed. These differences are downplayed in liberal economic theory by the assumption that market forces secure an efficient distribution of income; they are also minimised in labour management theory by the supposition that workers respond positively when their social and psychological needs are met. Different prospects become apparent, however, when it is recognised that workers are neither wholly *economic* (relentlessly pursuing their own interest), nor wholly *social* (satisfied if their socio-psychological needs are met). Rather, they have a complex set of social, psychological and economic needs and are *reflexive* in attempting to satisfy them (Sabel 1992). This also applies to the role of human resource management, in which context the effective reconciliation of different stakeholder interests is necessary to ensure that those involved in production work effectively together in order that the inherent co-operativeness of production is fully exploited.

Workers' response, in terms of their willingness to cooperate in production, can be positive or negative, depending upon perceptions regarding fairness of the terms and conditions of employment as well as treatment by their employers. There are two stages in determining fairness in employment: (1) the formal contract (which lays out the explicit terms and conditions); and (2) more implicit commitments (which go beyond the formal contract and determine the productive effectiveness of the employment relationship). While these less formal terms have often been described as the *psychological* contract, they could perhaps be better described as the *human relations* contract, capturing the commitments made by workers and their employers to work effectively together.

The successful operation of the human relations contract requires workers to be fully committed to their employers' business in exchange for fair pay, job and income security and a good working environment. A breach of this contract risks inciting a retaliatory withdrawal from full cooperation with an adverse effect on productivity and competitive performance. Effective cooperation therefore depends on agreement on both the explicit and implicit terms of the employment relationship, together with the expectation by both sides that commitments made will be honoured. But, the ability to identify and to act on the interests of individual stakeholders is to a large extent determined by the pressure managers are under to prioritise particular interests. In the Anglo-American corporate governance system, managers are required to prioritise shareholder interests, which are likely to diverge sharply from those of other stakeholders if shareholders insist on short-term gains. The problem of satisfying particular demands also increases with organisational complexity. In single plant firms, for example, managers and workers share mutual interests in the plant's effective performance and long-term economic viability, from which their own economic and employment security is derived. This is in contrast to large multi-division, multi-plant firms, which create widening opportunities for conflicting interests across divisions and plants within the corporate body as a whole (Konzelmann Smith 1995, 1996)

In a complex economic system, therefore, the ability to honour commitments and maintain trust is not entirely in the hands of those making commitments. As a result, it is necessary to consider the environmental conditions in which relationships are formed and conducted. It is here that the transplant metaphor offers insight. In cases like Ferodyn where a cooperative work system is transplanted into the Anglo-American productive system, difficulties are rooted in the inherent conflict between the market orientation of the host productive system and the human relations orientation of the transplanted work system. At every level, from the internal (i.e., industrial relations system and corporate culture) to the external (i.e., laws governing stock markets, national and trans-national legal and

economic frameworks) governance system, the Anglo-American system is set up to reject a work system that depends upon a human resource orientation.

Within the corporation, the nature of power relations and the tendency towards centralisation of power in the hands of top management make it difficult for a subsidiary to operate as an autonomous and independent entity from its corporate parent. As a result, it is vulnerable to decisions taken in the interest of the corporation that may not be in the interest of the subsidiary. The subsidiary/parent relationship brings with it other problems. For example, while costs are easily measured, it is difficult to assess a subsidiary's contribution to corporate performance or share value. Further, because of differences in work environment and conditions across plants within the corporate enterprise, tensions are bound to mount on the sides of both managerial and bargaining unit personnel who perceive these differences as unfair, unjustified or to blame for other corporate difficulties. Another problem relates to differences in the assessment of profitability across joint venture partners. In the case of Ferodyn, Landis's focus on cost and Daiichi's focus on quality gave rise to the potential for conflicts of interest across the two parent companies. While Daiichi's concern regarding maintenance of high quality production lent considerable support to Ferodyn, when Daiichi suffered economic pressures associated with Japan's prolonged economic downturn, this support was substantially weakened.

At a macro-level, the market orientation of the Anglo-American economic system means that unavoidable market uncertainty is difficult for a firm (or subsidiary) to mediate. In the case of steel, this has caused tremendous problems for traditional American steel producers in the face of increased competition from global companies like Maxi-metal that operate with a completely different set of cost and performance metrics. In this context, the priority assigned to shareholder interests over all others -- and the unrelenting pursuit of short-term shareholder value -- provide incentives for managers to

adopt approaches (such as cost cutting and layoffs) that potentially undermine long term productive system viability.

The 'transplant' metaphor thus offers insight into the systemic failure of cooperative, stakeholder systems in the Anglo-American corporate and corporate governance environment. Power relations and managerial authority in the corporation's internal system of corporate governance; an historical legacy of adversarial union management relations; shareholder dominance in stock markets; a legal system that prioritises the interests of capital over labour; and unrestrained competition in global product markets combine as powerful antigens. Together, they serve to weaken both the corporation's ability to protect a new subsidiary transplant and the subsidiary's ability to survive mounting pressures and attacks designed to destroy it. In this very difficult environment, without the commitment of all involved coupled with continuous monitoring and careful management of the system's natural tendency to reject or destroy an alien 'transplant,' neither the transplant nor the corporate body is likely to survive.

Epilogue: Hope of a 're-transplant'?

There is some speculation that Daiichi Steel has an interest in buying Ferodyn from Maxi-metal. This would offer hope in the sense that Ferodyn would be 're-transplanted' into a more 'genetically compatible,' less hostile and more supportive corporate body. The question would be whether the attacks Ferodyn has already sustained in the rejection process have been fatal.

Notes

¹ The case study information and quotations referenced in this paper are based on in-depth interviews with top management and union representatives at Ferodyn as well as interviews with middle managers and bargaining unit employees between 1990 and 2001.

² The firm has been variously defined, as a nexus of contracts (Alchian & Demsetz 1972); a collection of physical assets that are jointly owned (Grossman & Hart 1986); and more recently as a nexus of specific investments: a combination of mutually specified assets and people (Rajan and Zingales 1997, 1998)

³ Limited liability means that those who contribute equity capital risk no more than their initial investments. Legal identity and perpetual existence mean that the corporation lasts until dissolved and has a name in which it may transact business and be sued (Easterbrook and Fischel 1991).

⁴ In contrast to the Principal-Agent Model, in the Continental European and Japanese contexts, the corporation is viewed as an institution with personality, character and aspirations of its own. It is perceived to be a social institution with public responsibilities and a public interest in how it is run and governed. Corporate objectives encompass the interests of a wide range of stakeholder groups (investors, employees, suppliers, customers and managers); however, the corporation also has a life independent of its stakeholders. It is interesting, but perhaps not surprising, to note that the separation of ownership and control is less marked in these contexts, where supporting institutions are the product of the each country's view of the corporation and its role in society.

⁵ In Continental Europe and Japan, there is a tradition of administrative law where behaviour is regulated by public codes. This gives rise to a 'Stakeholder Model' of corporate governance, where the interests of different stakeholder groups are taken into

account. Thus, the objectives of corporate governance vary, depending on the dominant model. In the Anglo-American agency model of corporate governance posits the maximization of shareholder value as its goal. By contrast, managers in Continental Europe and Japan are inclined to view the development of the company as an end in itself; hence, they are charged with sustaining the interests of all stakeholder groups without giving priority to any particular group (Kay and Silbertson 1995).

⁶ For a discussion of the concept of productive systems see Wilkinson (2002, 1998 and 1983), Tarling and Wilkinson (1987), Konzelmann Smith (1996), Birecree and Konzelmann (1997) and Birecree, Konzelmann and Wilkinson (1997), Konzelmann and Farrant (2002).

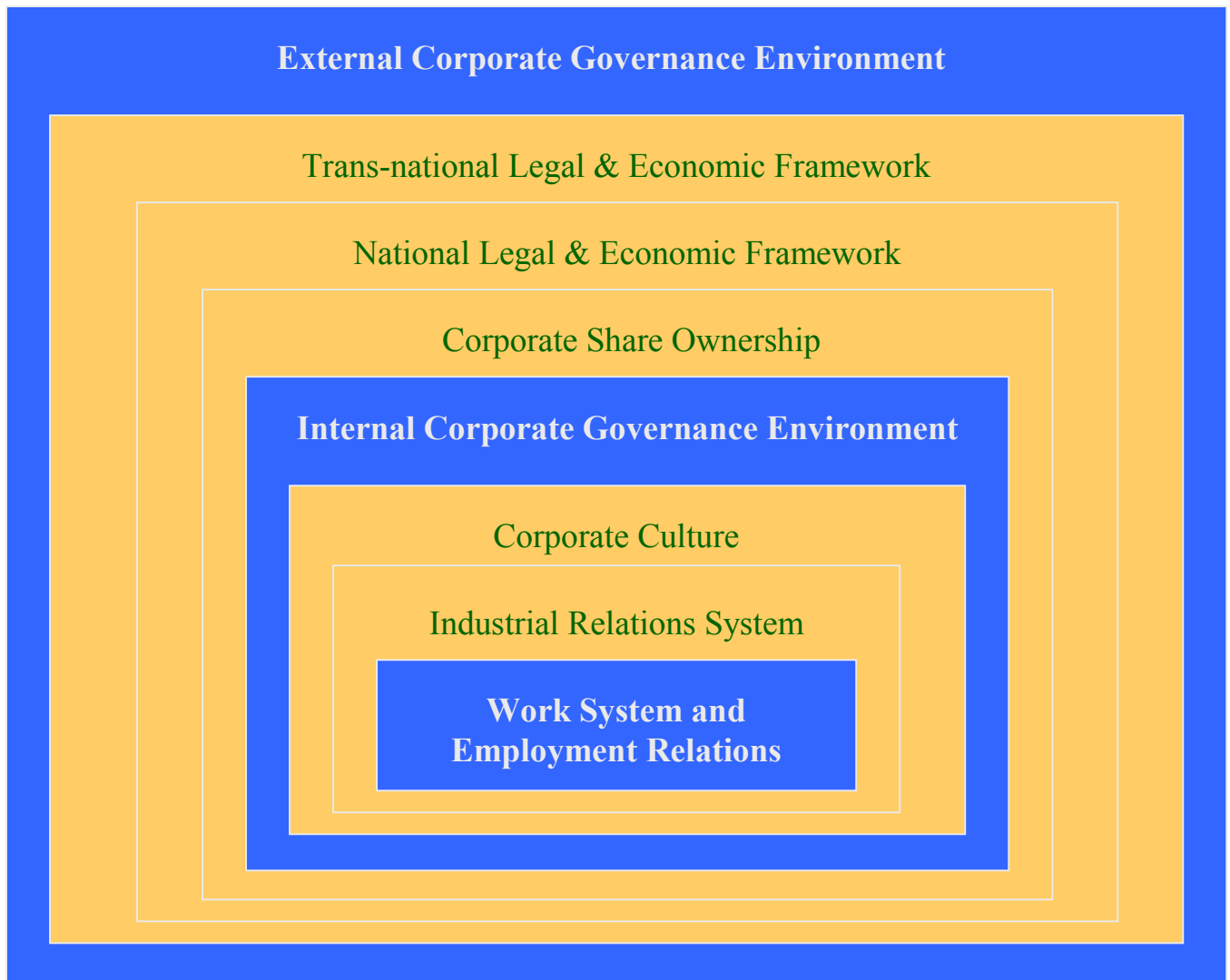
⁷ O'Sullivan 1998; Lazonick 1991.

⁸ More than half of transplanted kidneys (the organ most often transplanted) are rejected within 10 years. There are several forms of rejection: hyperacute rejection occurs in the operating room or within a few hours after surgery; acute rejection occurs 4 days to 6 months after surgery. Chronic rejection develops slowly and is the most common form. Its cause is unknown but most cases have been linked to improper management of medications designed to suppress the immune system and prevent rejection.

⁹ A 'greenfield' site is a new facility at a new location. This contrasts with a 'brownfield' site where a new facility is built at an existing, older plant location.

¹⁰ The ideas embodied in this section are further elaborated in an extremely valuable work by Wilkinson 2002a, 2002b.

FIGURE 1: THE INTERNAL AND EXTERNAL CORPORATE GOVERNANCE SYSTEM



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