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METAPHYSICS AND BIOLOGY

A CRITIQUE OF DAVID WIGGINS' ACCOUNT OF
PERSONAL IDENTITY

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ABSTRACT

Over his philosophical career, David Wiggins has produced a body of work that, though varied and wide-ranging, stands as a coherent and carefully integrated whole. Its parts cannot be studied in isolation, and a central aim of this thesis is to examine how three vital elements of his systematic metaphysics interconnect: his *conceptualist-realism*, his *sortal theory* ‘**D**’, and his account of personal identity – his *human being theory*.

Yet critics murder to dissect, and Wiggins’ project is often unfairly decomposed into its parts. Thus, this study aims both to introduce his thoughts without neglecting the relations between them, and to rectify the various misinterpretations of them by – among others – Paul Snowdon, Eric Olson and Lynne Rudder Baker.

In clarifying and exploring these connections another sunken, yet central, vein is revealed. It is argued that Wiggins’ metaphysics bears on, and is borne upon, by various discussions in the *philosophy of biology*. This is a connection that he himself adverts to, but which commentators have rarely investigated. Attending to it, one finds in his analyses of *natural substances* a novel form of biological anti-reductionism, which stands as a productive alternative to *emergentism*.

Closer attention to his construal of substances – specifically *organisms* – also reveals a worry. At the core of Wiggins’ account of personal identity is the consilience he sees between the concept of a person and the concept of a natural substance (a *human being*). It is argued below that organ transplantation disturbs the Aristotelian distinction between natural *substance* and biological *artefact*, and thus tests the heart-string of his human being theory.

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INTRODUCTION

In an autobiographical aside in *Identity, Truth and Value*, David Wiggins tells us that his earliest intellectual impulse was not towards philosophy, but to painting.¹ And on more than one occasion while writing this thesis I have wondered – perhaps somewhat wistfully – whether his thoughts would have been better captured in that less restrictive medium. For whatever his written work is – beautifully crafted, subtle, ingenious – nobody would ever say it is easy to read.

Wiggins himself laments the fact that his texts can be found obscure;² and a cursory glance at the numerous reviews of his books, *Sameness and Substance* and *Sameness and Substance Renewed*, suggests the view is widely held.³ His prose is elegant, but it is a baroque elegance: dense, and rich, with intricate and finely wrought digressions, and sentences that are, as Adrian Moore remarks, almost beyond parody in length.⁴ There is an added – and not unimportant – difficulty for younger scholars approaching his work, following as it does a trajectory marked out more than forty years ago in his *Identity and Spatio-Temporal Continuity*;⁵ the trends in Anglophone philosophy have changed, and each new rendering of his theory is laden with references to older debates, while simultaneously incorporating responses to more recent ones.⁶

Yet the difficulties found in Wiggins' work are also indicators of its strength; the precision that makes him so hard to pin down⁷ is a symptom of the meticulous care that has gone into the construction of his theory. Thus we find the view, voiced by Peter Strawson,⁸ and echoed elsewhere,⁹ that patience with Wiggins will be rewarded; his work in philosophy is so delicately shaped and extensively tested that its insights are both powerful and sustainable. Additionally, his forest of articles and books are valuable as *historical* markers: having been developed over so many decades they allow one to get a clear sense of the fluctuations of a particular moment in Anglophone philosophy. Every

¹ Wiggins 1996: 222

² Wiggins 2012

³ '[One] has to struggle with convoluted sentences and a certain elusiveness of argumentative structure' (Lowe 2003: 816), '[It is] set down in a rather haphazard organization of main text, subsidiary text, footnotes, and further notes' (Baldwin 1982: 270) '*Sameness and Substance* is a difficult book; Wiggins' avowed effort to be understood will be lost on those who are not prepared to follow the intricacy of his response to criticism and to look for the relevance of papers written since 1967 and listed in the preface.' (Cartwright 1982: 597) See also Noonan 1981.

⁴ Moore 1996: 165

⁵ See Lowe 2003: 816 (and Cartwright 1982: 597)

⁶ Bakhurst (in his 2005) offers a short review of some of the changes.

⁷ Moore 1996: 165

⁸ Strawson 1981: 603

⁹ E.g. Noonan 1981: 261, Cartwright 1982: 597, Lowe 2003: 816, Snowdon 2009: 254

sentence carries marks of a myriad of past debates, in the form of footnotes, parenthetical comments, and appendices.

Complex, confusing, rich and revealing: it is because of these features that his work merits closer attention, and one aim of this dissertation is to offer an introduction to it – albeit a partial one. Some aspects of the reading that follows may seem surprising (the phenomenological rendering of his conceptualist-realism, for instance) while others will exhibit certain inadequacies; that my survey *is* partial may well worry those like David Bakhurst who emphasize the systemic nature of Wiggins' philosophy.¹⁰ The focus here is on Wiggins' metaphysics, specifically his theory of individuation, his conceptualist-realism, and his account of personal identity. His essentialism will be mentioned, but not analysed in depth.¹¹ His work in moral theory, formal logic, semantics, aesthetics, and ancient philosophy will be discussed only briefly.¹² It is an unfortunate consequence of space constraints that real and significant links between the various areas of his work will be neglected.

Yet, where some are neglected, other connections will be unearthed. The aim of the second half of this study is to trace the subterranean strands that link Wiggins' metaphysics to discussions in biology and the philosophy of biology. These links are equally real, and equally significant. It is no accident that in the short preface to *Identity and Spatio-Temporal Continuity*, Wiggins writes compellingly about the centrality of biology to metaphysical investigation:

It gradually became evident to me in constructing this work that for the future of metaphysics no single part of the philosophy of science was in more urgent need of development than the philosophy of biology.¹³

It is a forceful pronouncement – one completely ignored by Wiggins' various critics and commentators. This is an oversight, which the present work attempts to address. It is argued below that a considerable amount of overlap exists between Wiggins' metaphysical themes, and issues of biological individuality and anti-reductionism. How these biological issues bear on his 'human being theory' and the 'personal identity debate' more generally, is examined in detail in the following chapters.

¹⁰ Bakhurst 2005. See also Lovibond and Williams 1996: *Preface*

¹¹ For a closer study of this I recommend Nick Jones' 'Individuation to Essentialism' (*forthcoming*)

¹² And, sadly, a language barrier prevents proper engagement with those works he has produced in French.

¹³ Wiggins 1967: vii

Before embarking on this project, however, some scene-setting is required, and in the remainder of this introduction a brief overview will be given of the so-called ‘personal identity’ debate, and the ambit of ‘philosophy of biology’ will be drawn, alongside a prospectus of the thesis as a whole, and a short literature review.

Personal identity

Questions about *what we are*, and *what it takes for us to persist*, are found in various forms, in multifarious philosophical traditions, from Buddhist perspectives on the self (or the lack thereof),¹⁴ to conceptions of personhood in Yoruba thought.¹⁵ On the whole, the present work examines these questions as they appear in Anglophone philosophy. More specifically, the ‘personal identity debate’ is taken here, to refer to the body of discourse that has its historical roots in John Locke’s discussion in his *Essay Concerning Human Understanding*.¹⁶ At times, the following analysis moves beyond this local setting (the discussion of Balinese conceptions of ‘person’ in §2.3.a. is an example), but in general, talk of ‘personal identity’ is organized in relation to that text. Artificial as this limit is, explicit reference to Locke is taken as a good indication of engagement in particular attitudes towards these questions.

Locke’s well-known treatment appears in chapter 27 of Book II of his *Essay*: it is there that he claims we are fundamentally *persons*, where a person is ‘a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places’.¹⁷ This definition is the core of his account of ‘personal identity’ – it allows him to state what it takes for persons at earlier and later times to be identical and, consequently, to say what constitutes a person’s persistence over time. For Locke, an earlier individual is the same person as a later individual if they are linked by the same *continued consciousness*, a psychological connection evidenced by experiential memory.

It is along these lines that Locke responds to the array of puzzle cases, which have come to characterize the personal identity literature: stories of character transmigration (the ‘prince and the cobbler’ narrative),¹⁸ of physical disassembly and

¹⁴ See Ganeri’s 2012 for an interesting attempt to nurture dialogue between the questions as they feature in the Buddhist and Anglophone spheres.

¹⁵ E.g. Adeofe 2004

¹⁶ Locke 1690/1975

¹⁷ Ibid: II, xxvii, §9

¹⁸ Ibid: II, xxvii, §15

reassembly (as in Christological accounts of bodily resurrection),¹⁹ and – more prosaically, but no less importantly – of memory-loss (exemplified in Locke’s examinations of the ‘drunkard’).²⁰ In recent years there have been some notable (and notably peculiar) additions to the canon – tales of teletransportation²¹ and fission²² abound. Perhaps the most notorious of these additions is Sydney Shoemaker’s ‘brain transplantation’ narrative²³ in which Shoemaker describes the misfortunes of the sorry patient, Brown, who has his brain accidentally transferred into another patient’s body. Asking whether or not Brown survives the transplantation, Shoemaker finds in Locke an affirmative answer. Neo-Lockeans²⁴ contend that Brown *does* survive, since his consciousness continues (so that the recipient of the brain donation can remember the past life of the donor, displays his personality, thoughts, and so forth). This ‘thought experiment’ is the main focus of the discussion in chapter 4.

There are, of course, those who reject the Lockean analysis,²⁵ and neo-Lockeans, or ‘psychological theorists’, are often contrasted with ‘biological theorists’ or ‘animalists’.²⁶ Animalists – like Eric Olson – deny that we are fundamentally persons. They hold instead that we are fundamentally ‘human animals’, and that our persistence conditions are those of the human animals that we are.²⁷ Whether or not we survive depends, *not* on a psychological relation, but on the continuation of *biological life*. Thus, for example, the animalist denies the patient survives the transplantation (or at least, denies they go with their cerebrum).²⁸ Brain transplantation does not constitute the

¹⁹ This is discussed in depth in chapter 4.

²⁰ Locke 1690/1975: II, xxvii, §21 and §23

²¹ E.g. Parfit 1984

²² E.g. Shoemaker 2004a

²³ Shoemaker 1963: 23–24

²⁴ There have been considerable refinements to the Lockean position in recent years. Neo-Lockean revisions – like Shoemaker’s (e.g. 1963, 2004a), and Parfit’s (e.g. 1971, 1984) – attempt to re-describe the psychological relation without putting Locke’s (problematic) emphasis on memory-links. For discussions of the problems in Locke, see e.g. Reid 1785 (Essay III, especially chapters 3 and 4) (for a more recent survey, Noonan 1989). Neo-Lockeans also typically endorse some form of materialism; consciousness is inextricably tied to some material substrate – i.e. the human brain.

²⁵ One reason is its failure to match the everyday intuitions we have about e.g. foetuses – which we believe we once were.

²⁶ A distinction found in e.g. Noonan 1998, and Olson 1997

²⁷ For a classic statement of this position see Olson’s 1997. Besides Olson, the term ‘animalism’ has been used to describe the view of W.R. Carter (1989), Michael Ayers (1991), Trenton Merricks (2001a), Paul Snowdon (1990), and Rory Madden (draft).

²⁸ A distinction is drawn – and should be mentioned here – between *brain transplants* and *cerebrum transplants*. As Olson points out, the cerebrum is ‘the organ that is most directly responsible for higher mental capacities’ (Olson 1997: 9). Thus the transposition of the cerebrum would cover the transfer of psychological features like experiential memory. The cerebrum, however, does not include the *brain stem*; ‘the organ that is chiefly responsible for directing your life sustaining functions’ (1997: 140) (e.g. respiratory, digestive, metabolic processes). For the sake of the arguments to follow, the focus here is on brain transplantation, where both cerebrum and brain stem are supposed to be transposed (for reasons which will become evident in chapters 3 and 4).

transferral of Brown into another body any more than transplants of his liver or kidney would.

There are those, however, who do not fit so easily into this binary between ‘biological’ and ‘psychological’ theorists – and David Wiggins is one. His considered view is that we are both fundamentally persons *and* fundamentally animals (or ‘human beings’),²⁹ and that the terms ‘person’ and ‘human being’ are ‘conceptually concordant’. Our understanding of one concept intimately involves our understanding of the other. In claiming this, his position can be read as ‘psychological’ in a much older sense of that word. Following the derivation of the term it can be attributed with a meaning relevantly different from Locke’s. Aristotle’s notion of *psuche* or *psyche* is that of the form of the living human being (*empsychon*), which encapsulates both its biological *and* cognitive nature. In many ways, some of which are laid out below, Wiggins’ account rehabilitates some of the insights of this Aristotelian picture. Exposition of his original and innovative application of Aristotle to questions of personal identity is another central aim of this dissertation.

Philosophy of biology

While ‘person’ stands as a somewhat slippery term, everyone seems to have a ready grasp of what an animal is and where the spatio-temporal boundaries of such things lie.³⁰ This, at least, is the consensus among those who discuss personal identity – animals are easy to track. This consensus, however, is not found beyond the confines of the personal identity debate; turning to philosophy of biology one finds these thoughts achieve a more controversial status.

A wide array of topics is now³¹ addressed under the heading of ‘philosophy of biology’; conceptual puzzles within biological science are subjected to philosophical analysis, and biological claims are brought to bear on traditional philosophical

²⁹ Wiggins 2001: 193. The difference between ‘human being’ and ‘human animal’ is set out in chapter 2.

³⁰ Wiggins 2001: 193

³¹ Philosophers of biology often say that their field is a relatively young sub-discipline of philosophy. In their influential introductions to the subject both Michael Ruse and David Hull claim that philosophical analyses of biological concepts are scarce in the early half of the twentieth century (Ruse 1973 and Hull 1974), and – as Alexander Rosenberg notes – any thoughts about biology by philosophers were included primarily as ‘an afterthought to discussions of physics’. (Rosenberg 1985: 6–7) The quotation above, from Wiggins’ *ISTC*, attests to a growing demand for philosophical development in that area – but what Ruse, Hull and Rosenberg’s surveys occlude is the important, though sidelined, research that *was* produced prior to 1960. (For an overview of these issues see Nicholson and Gawne 2013). One figure that escapes their articulation of the subject is J.H. Woodger – and an ancillary aim in chapter 3 is to emphasize the influence Woodger’s work has had over Wiggins (in line with Nicholson and Gawne 2013).

questions.³² The concepts of biological *fitness* and *function* are the subject of considerable debate,³³ as is the status of so-called ‘natural kinds’.³⁴ The focus here is particularly upon discussions of *biological individuality*, and *metaphysical anti-reductionism*.

Biological individuality is the first, clearest point of contact between debates in ‘personal identity’ and philosophy of biology. Both Wiggins and animalists of Olson’s ilk rely on there being some suitably precise scientific method for picking out – ‘individuating’ – humans. That there is such a method is exactly what those philosophers working within the field of ‘biological individuality’ find to be contentious.³⁵ While organisms, like humans, register clearly at the phenomenal level, the organismic divisions of the natural world are not obviously borne out at the more precise levels of biological theory. Phenomenal individuation, which seems to function relatively well with higher vertebrates – is ineffectual when it comes to individuating e.g. fungi and slime moulds.³⁶ Functional integration, which has been a popular model for determining organismal boundaries since Kant, has been criticized for its vagueness, and for relying too heavily on our everyday assumptions about functional boundaries.³⁷ *Genetic* definitions are similarly confounded by colonial creatures and by clonal units.³⁸

A variety of alternative accounts – phenomenal, genetic, functional, and immunological (and more) – are on offer, but what is relevant here is that Wiggins’ project (and the animalists’) relies on there being a workable theory of organismic individuation, by which the human organisms of everyday experience can be picked out, and tracked.³⁹ Whether or not there is such a theory is examined in §3.1.

There is another relevant point of contact between the philosophers of biology and the personal identity theorists: both are interested in the existence, or ‘reality’, of *organisms*. Wiggins, like Aristotle, holds that organisms – humans not least – exemplify the category of substance (the same is true for animalists like Olson),⁴⁰ but metaphysical (if not epistemic) reductionism is the majority view in philosophy of biology, where organisms are often taken to be ‘nothing more’ than the fundamental particles that constitute them.⁴¹ It will be proposed, in what follows, that the philosophers of biology

³² See Griffiths 2011 for a good overview

³³ See Hull and Ruse 1998 (1ff) for an introduction to these issues.

³⁴ See, e.g. Dupré 1993

³⁵ E.g. Wilson 1999, Pradeu 2010, Clarke 2012

³⁶ See Hull 1992

³⁷ Pradeu 2010

³⁸ Sterelny and Griffiths 1999: 71

³⁹ This point is made in Wilson 1999

⁴⁰ Following van Inwagen 1990 (see Olson 2007)

⁴¹ See e.g. Hull 1992

will do well to precisify their discussion of metaphysical reductionism, and inquire within which metaphysical tradition these questions about the *existence* of organisms are being asked. Here is an instance in which philosophers of biology (if not biologists themselves) will benefit, as personal identity theorists surely do, from dialogue between these two spheres.

Prospectus

Chapter 1: D

The aim of chapter 1 is largely exegetical. It starts with some methodological points that set out, in general terms, Wiggins' overall approach to philosophical investigation. He is situated within a Strawsonian 'descriptive' tradition, where metaphysical inquiry is guided by investigation of our pre-theoretical thoughts. His work is characterized by an emphasis on *elucidation*⁴² (rather than reductive analysis of our everyday thinking) and by careful examination of the way our concepts develop *reciprocally*.⁴³ Some issues with this 'descriptive' approach are voiced – most importantly, its association with *conceptualism*. Wiggins' response to these objections – realized in his 'conceptualist-realism' – is outlined.

With these methodological foundations in place, discussion is turned to Wiggins' **D** theory, which encapsulates his interrelated claims about *identity* and *individuation*. Wiggins' position is a 'sortalist' one; he claims that identity judgments can only be made once it is specified what the items under investigation *are* (this is his sortal theory of *identity*). Being able to pick out and re-identify items similarly depends on picking them out as a *sort* of thing, with a specifiable *mode of being* or *principle of activity* (this is his sortal theory of *individuation*). The exposition of **D** presented here is developed in response to Paul Snowdon's reading; it corrects some of the problems with Snowdon's treatment by putting due emphasis on the reciprocity between our concept of identity and our everyday individuating practices.

⁴² This aspect of his work is drawn out by Williams in his 2006.

⁴³ '...Indeed reciprocity – or two-way flow, as I used to call it in internal dialogue with myself – was part of a more general thought... It seemed integral to the proper understanding of Meno's dilemma... It seemed indispensable to the proper understanding of what we achieve when we come to know what a thing is. It was integral, in a way still too little-heeded or thought through by the philosophy of science, to our understanding of thing-kind words like 'horse' or 'human being'. And not only that. It was a further generalization of the reciprocity point that helped to make it possible to contemplate new possibilities in connection with questions of value.' Wiggins 1996: 228

The final section of this chapter focuses on the *natural / artefactual* distinction as it figures in Wiggins' system. Some commentators – Massimiliano Carrara, Pieter Vermaas, Michael Losonsky and Lynne Rudder Baker – claim that Wiggins understands artefacts to have an impoverished ontological status in comparison to natural items. These interpretations are found to be wanting, resulting as they do from terminological confusions. An alternative reading is suggested, whereby artefacts are construed as metaphysically distinct from (natural) substances, without being in anyway inferior.

Chapter 2: Personal identity

Chapter 2 presents an exposition and critique of Wiggins' account of personal identity. Though interpreted by some (e.g. Olson) as *neo-Lockean* and as *animalist* by others (e.g. Peter Unger), Wiggins' work resists these readings and the first section of this chapter is focussed on exactly how it straddles the 'psychological/biological' division. According to his *human being theory* we are fundamentally *both* animate beings *and* psychological ones.

The thought that sits at the heart of this neo-Aristotelian picture is that the concepts *person* and *human being* are in some way, non-accidentally concordant. As such, they assign the same underlying mode of being, or 'principle of activity'. In §2.2., Wiggins' attempts to elucidate this conceptual consilience are drawn out: the connection is seen to be formed of three interwoven strands: the *strawsonian argument*, the *semantic argument*, and the *argument from interpretation*. While Wiggins has never aspired to lay down a transcendental argument for the conceptual concordance of *person* and *human being* these elucidations show why the connection between them may be non-accidental and strong.

The aim in §2.3 is to test the strength of the connection – and it is suggested that a *genealogical* analysis of our notion of 'a person' undermines Wiggins' semantic argument. With this strand severed, the other two are weakened as well, and the conclusion reached is that the connection between *person* and *human being* is not as fast as Wiggins supposes.

Chapter 3: The biology of persons

The discussions in the first two chapters are situated, in the third, in relation to issues in the philosophy of biology. Wiggins advises us to examine our principle of activity

through *biological inquiry*, and the aim of the first section is to identify the controversy around organismic individuation and to demonstrate that, in order to bypass it, Wiggins can turn to Thomas Pradeu's *immunological-physiological account* of biological individuation.

Having shown how the parameters for a biological inquiry into the *human being principle* may be set, attention is turned to Wiggins' claim that human beings – among other organisms – exemplify the category of substance. This is contrasted with the metaphysical reductionist's claim that organisms are 'nothing but' atoms, and are in some way metaphysically *less robust* than the physical stuff that makes them up. In §3.2, the debate between reductionists and emergentists – like John Dupré – is laid out. An emergentist reading of Wiggins is assayed but ultimately rejected in favour of a neo-Aristotelian one. Where reductionists and emergentists focus on *causal* dependence, Wiggins focuses on *ontological* dependence; organisms are just as real as the stuff that makes them up because, in conceiving of them, we cannot but understand them as *genuine unities*. They are *ontologically prior* to their parts. This reading of Wiggins is presented in conjunction with an analysis of Aristotle's anti-reductionism, and an articulation of the metaphysical pluralism that sustains Wiggins' position.

Chapter 4: Brain transplantation

The fourth and final chapter revolves around Shoemaker's brain transplantation story and Wiggins' responses to this peculiar narrative. The chapter starts with a survey of his shifting attitudes towards it, and describes how, despite numerous concerns, his assessment of the story remains ambiguous. The aim is to draw on the arguments in the previous chapters to demonstrate why the narrative resists Wiggins' analysis. It is contended that it is underpinned by a *mechanistic* logic, and that it thus shifts one's metaphysical focus from *organisms* – natural substances that are prior to their parts – to 'living something-or-others' – entities whose parts can be conceived as separable from the whole. The diagnosis of Shoemaker's 'thought experiment' as mechanistic is supported by reference to Ian Hacking's analysis of transplantation, and to a speculative historical study (in §4.3.) which links the Lockean position with mechanistic *corpuscularianism*.

These thoughts are further developed by reference to the discussion in chapter 1 about the metaphysical character of *artefacts*. The notion of a 'living something-or-other' is precisified, and the brain transplantation story is seen to describe the adventures of a

biological artefact (not an organism). In concluding, the implications for Wiggins' *human being theory* are discussed, and the critique offered in chapter 2 is reiterated and reinforced.

Overview of texts

Some remarks on Wiggins' texts and the secondary literature should be entered. The primary source for this research is *Sameness and Substance Renewed* (2001) (hereafter '*S&SR*').⁴⁴ This book – which contains his metaphysical accounts of substance, identity and personhood – is a modified and expanded form of *Sameness and Substance* (1980) (*S&S*),⁴⁵ which itself is a (considerable) development of *Identity and Spatio-Temporal Continuity* (1967) (*ISTC*).⁴⁶ In *S&SR* Wiggins aimed to respond to the issues raised by the first two books (and intervening articles) – the result, as noted, is a complex and often digressive work.⁴⁷ It has been succeeded by a spate of papers, including a helpful series of responses to a forum in *Philosophy and Phenomenological Research* in 2005, and a fiery discussion with Shoemaker in *The Monist* in 2004.⁴⁸ Also of interest is the festschrift compiled for Wiggins' 60th birthday (and to mark his accession to the Wykeham chair of Logic): *Identity, Truth and Value* (1996) (*ITV*).⁴⁹ Edited by Sabina Lovibond and S.G. Williams, it includes a series of papers on Wiggins' contributions, and his replies, and his 'personal-cum-academic' memoir. More recently, and perhaps most usefully, Wiggins' 2012 Mark Sack's lecture: 'Identity, Individuation and Substance' has been published in the *European Journal of Philosophy*⁵⁰ – in this, he recognises the need to restate his metaphysical position (for a new generation), and goes some way towards achieving this. While I will be focussing primarily on *S&SR*, my reading is informed no less by *S&S*, the clearer of the two texts, and the later papers, which iron out some inconsistencies.

The reading presented herein is greatly dependent on three other texts, not authored by Wiggins. The first is Aristotle's *Metaphysics* (and, to lesser degrees, his *Physics* and *De Anima*). Throughout his academic career, Wiggins has explicitly stated the centrality of Aristotelian thought to his metaphysical and ethical positions, and an understanding of Aristotle is crucial to the interpretation assayed in chapter 3. The

⁴⁴ Wiggins 2001

⁴⁵ Wiggins 1980

⁴⁶ Wiggins 1967

⁴⁷ Wiggins 2001: ix

⁴⁸ See Wiggins 2004a and 2004b, and Shoemaker 2004a and 2004b.

⁴⁹ Lovibond and Williams 1996

⁵⁰ Wiggins 2012

second text is Peter Strawson's *Individuals: An Essay in Descriptive Metaphysics*.⁵¹ Strawson is more of a silent partner in Wiggins' project than Aristotle; he is mentioned infrequently – yet the influence of his particular 'descriptive' approach to metaphysics pervades Wiggins' work. The intellectual debt owed here is examined in depth in §1.1. There is a third text that should be included alongside these – Gottfried Leibniz's *New Essays on Human Understanding*,⁵² which exerts its influence both in relation to Wiggins' formal logic, and to his discussion of 'modes of being'. Analysis of this will be minimal – though Wiggins' distinctively Leibnizian account of identity is presented in chapter 1.

With respect to secondary literature, I have been helped by Paul Snowdon's papers: 'Persons and Personal Identity',⁵³ and 'On the Sortal Dependency of Individuation Thesis'.⁵⁴ Jonathan Lowe's discussion of Wiggins' 'conceptualist-realism' in the *Philosophy and Phenomenological Research* forum, has also been particularly instructive, as has Bakhurst's contribution to the same.⁵⁵ S.G. Williams' entry in the *Continuum Encyclopedia of British Philosophy* is noteworthy for emphasizing, appropriately, the modesty of Wiggins' philosophical approach, how he aims, not for conceptual analysis, but for the *elucidation* of central, human concepts.⁵⁶ It is unfortunate that despite the numerous reviews and articles about Wiggins' work there is still no sustained exposition of his theories other than his own – and this is another oversight that the present work hopes to address.

⁵¹ Strawson 1959

⁵² Leibniz 1765/1981

⁵³ Snowdon 1996

⁵⁴ Snowdon 2009

⁵⁵ Lowe 2005, Bakhurst 2005. Stephen Yablo's review of *Se&SR* for the *TLS* (2002) is also commendable for its clarity and brevity.

⁵⁶ Williams 2006

‘D’

There are inevitable difficulties in trying to compass succinctly that which has taken Wiggins’ himself three substantial books and innumerable articles to set out. Nevertheless, the aim of this first chapter is exposition and exegesis of his thesis ‘D’. The following overview involves a fair amount of glossing, liberal use of (typically lengthy) quotations, and a rather staccato presentation – but it should at least outline some of the rich concepts of substance, sortals, individuation and identity, as they stand in Wiggins’ distinctive philosophical system.

The chapter is split into three parts. The first provides some necessary methodological background to Wiggins’ metaphysics. His project falls within the descriptivist tradition, and doing so exemplifies a particular method of inquiry that emphasizes how our ordinary everyday thoughts may be used to guide our metaphysical investigations. There is a general concern with this descriptivist approach – its apparent commitment to conceptualism – and Wiggins’ response to this, his ‘conceptualist-realism’, is presented in §1.1.a.

With this methodological groundwork completed, attention is turned to Wiggins’ thesis **D**. **D** is the collection of his interrelated theories of identity and individuation, his elucidations of our everyday concept of *sameness*.⁵⁷ It is a web of claims, and the aim in the second part of this chapter is to draw out the different strands within this web, and show the points of contact between them. In doing this, and in showing how the various elements develop reciprocally, this reading resists a line of interpretation offered by Paul Snowdon that attempts to separate out Wiggins’ **D** into discrete and disconnected claims.

§1.3 delves further into the details of Wiggins’ theory. Wiggins states that our everyday thoughts about *sameness* are sortalist: *a* cannot be understood to be the same as *b* without *a* and *b* being understood to be the same *sort* of thing. Relatedly, he holds that our pre-theoretical ability to track items through time and space (i.e. our ability to judge

⁵⁷ There is a helpful, and helpfully brief, characterization of some of the thoughts contained in **D** in Wiggins 2012 (page 1). In discussing the problematic question of how best to understand our thoughts about identity and individuation, he writes:

It is contended that the key to this problem rests at the level of metaphysics and epistemology alike with a *sortalist* position. Sortalism is the position which insists that, if the question is whether *a* and *b* are the same, it has to be asked *what are they?* Any sufficiently specific answer to that question will bring with it a principle of activity or functioning and a mode of behaviour characteristic of some particular kind of thing by reference to which questions of persistence or non-persistence through change can be adjudicated.

an earlier item *a* the same as a later item *b*) involves picking them out as specific *sorts* of things, with specific principles of *activity*. But while some sortal terms have profound nomological grounding – putatively natural kinds – others, like artefactual terms, are nomologically shallow. Wiggins questions whether or not artefacts realize genuine principles of activity. The aim in this final section is to assess Wiggins' elucidation of the *substance* concept, and to examine whether he takes artefacts to be substances. Baker, Carrara, Vermaas and Losonsky deny that he does. Their readings are examined, found to be wanting, and an alternative line of interpretation developed.

§1.1. Methodological preliminaries: descriptivism and conceptualist-realism

There are particular puzzles in the Anglophone tradition about our identity over time. Cases of transplantation, fission, amnesia, and vegetative states provoke questions about our persistence conditions, and encourage us to ask *what exactly* makes us the same individuals we once were and will become. On one level the project of the personal identity theorist is to develop a theory to answer such questions.

Wiggins' method in constructing such a theory is at first blush simple and persuasive. We are, in our everyday lives, constantly confronted with identity questions, he says, and in practice we find it straightforward to answer them.⁵⁸ We have no trouble picking objects out – children, say – and observing their various exploits and adventures. There are everyday procedures we all engage in, when we single out dogs, or tea-cups, and which a child engages in when, for example, she learns that this cat is *her* cat, that it is the same cat as the kitten she was given, and so on. We already have at our disposal a way of ruling on identity; and so, he suggests, to answer the more puzzling questions – those offered up by the personal identity debate – we can turn to this pre-theoretical method of navigating the world, and ground our answers in that.⁵⁹

Methodologically, then, Wiggins' approach grows out of the *descriptive* metaphysical tradition, and here, as elsewhere, he follows in the wake of Peter Strawson. As Strawson sets it out, in his *Individuals: An Essay in Descriptive Metaphysics*, the descriptivist is a philosopher who aims to extrapolate the structure of reality by looking to our *actual thoughts* about the world. Like Aristotle and Kant, descriptivists aim to expose the structure that is latent in our 'conceptual scheme'.⁶⁰ (Such a philosopher might say, for example, that for us to function in the world in the way that we do, our conceptual scheme must capture e.g. *material continuants*.)⁶¹

Strawson contrasts the descriptivist's approach with that of the *revisionary* metaphysician. The revisionary metaphysician, or revisionist, aims to outline a *better* structure, one that is not rooted in a seemingly limited, human perspective. For the revisionist, the system that emerges from our conceptual scheme should be revised as we learn more about the physical nature of reality, through, e.g. the advances of the

⁵⁸ Wiggins 2001: 56

⁵⁹ Ibid: 2

⁶⁰ Strawson 1959: 9–11

⁶¹ It is indicative of the self-isolating tendencies of analytic philosophy that the links between this kind of Strawsonian descriptivism and the phenomenological tradition of Husserl, Hegel, Sartre and Heidegger, are not more widely discussed. This is a connection that will become clearer in the pages that follow.

sciences. On Strawson's model, Descartes and Leibniz would be revisionist in this sense, as would the process philosophy of A.N. Whitehead, the four-dimensionalism of David Lewis, and most broadly Quinean metaphysics. (Quine, writing in his *From a Logical Point of View*, exemplifies the view when he writes that 'ontological questions are on a par with questions of natural science'.⁶²) While the revisionary metaphysicians agree that the world *appears* to us to be a collection of medium-sized material continuants (chairs, tables, cats, dogs...), in *reality* – they might say – all of these things are bundles of reactions connected by physical laws. As Ernst Mach put it, in a revisionary vein, this 'is the critically purified concept of substance which scientifically ought to replace the vulgar one.'⁶³ That is, *this* is what reality is *really* like.

Wiggins then, is methodologically a descriptivist of Strawson's ilk. The metaphysical system he describes is drawn from our commonplace activities; he thinks that answers to the more complex identity questions (like 'is Brownson the same patient as Brown?') should issue from our everyday understanding of identity, substance, and individuation. We find this methodological programme succinctly put at the start of *Sameness and Substance Renewed*:

Let the philosopher elucidate *same, identical, substance, change, persist*, etc., directly and from within the same practices as those that an ordinary untheoretical human being is initiated into.⁶⁴

Yet this kind of descriptivist method is not without its difficulties. Among these is a reliance on 'conceptual invariance'. The descriptivist turns to her own conceptual scheme in order to articulate her metaphysical system; but is it obvious that there is only one 'conceptual scheme'? And if there is *more* than one, which one is 'ours'? And how could we say that it truly latches on to reality?⁶⁵ Strawson himself notes that most concepts are culture-bound and temporary, and these, surely, cannot be the basis for a metaphysical inquiry, which aims to describe reality in *non-local* terms. He, and those who follow him, must also hold that 'there is a... central core of human thinking which has

⁶² Quine 1980: 45

⁶³ Mach 1905: 148

⁶⁴ Wiggins 2001: 2

⁶⁵ In addition to these questions there is, of course, the vexed issue of the 'scheme-content' distinction. For Donald Davidson (and many who followed), the 'dualism of scheme and content, of organizing system and something waiting to be organized' is unintelligible (Davidson 1974: 189). His claim is that there is no such thing as 'uninterpreted content' (1989: 69). And, as is discussed below, this is a position with which Wiggins agrees (there is no neutral substratum, nor self-differentiating objects) – indeed, it is the force of his conceptualist-realism. Await the discussion in 1.1.a and at the end of chapter 3.

no history... there are categories and concepts which, in their most fundamental character, change not at all.⁶⁶

It is, as Susan Haack points out, somewhat unfortunate that Strawson does not tell us *which* concepts have ‘no history’,⁶⁷ and a number of philosophers have objected to his claim that central conceptual structures do not vary over different cultures (‘conceptual invariance’). By analyzing Chinese and Native American traditions, for example, Burt⁶⁸ and Mei⁶⁹ both independently argue that the human ‘conceptual scheme’ that Strawson seeks to reify is local and temporary; the grammar of subject and predicate that pervades Latin languages and Greek, and which Strawson takes to represent a central element of the human conceptual framework, is found to be absent in certain non-Latin languages (notably some Sino-Tibetan languages, and Quechua). Thus, Burt and Mei claim, such analyses cannot provide a suitable foundation for metaphysical inquiry (and we find foreshadowing of this line of critique in Whitehead’s *Concept of Nature*⁷⁰).⁷¹ In chapter 2 of this thesis, a suspicion is raised that Wiggins too, is susceptible to such objections, specifically with respect to his concept of personhood (a being in whom we recognize a mutual reciprocity).

§1.1.a. Conceptualist-realism

Let us assume for the time being the viability of the conceptual invariance thesis (as Wiggins does).⁷² The descriptivist is faced with other challenges. A related worry is its association with the much-maligned metaphysical thesis of *conceptualism*.⁷³ This is a central concern for Wiggins, and one he has addressed at length.⁷⁴

Roughly speaking, the conceptualist holds that the macroscopic order we find in the world is a product of human cognition. We look around, and see all manner of stuff;

⁶⁶ Strawson 1959: 10

⁶⁷ Haack 1978: 365

⁶⁸ Burt 1953

⁶⁹ Mei 1961. See also Hacking 1968

⁷⁰ Whitehead 1919 (see Haack 1978 for commentary)

⁷¹ Though it is outside the ambit of this paper, let us note that these critiques emphasize how analytic metaphysics can function as a site of (unconscious?) political activity; if conceptual invariance fails to hold, the descriptivist is guilty of a form of metaphysical imperialism (see Haslanger 2000, on the hidden politics of metaphysics).

⁷² See, for example, his reply to Fei Xu in his 1997a

⁷³ Indeed, it seems in recent years, that the terms ‘descriptivism’ and ‘revisionism’ are falling from the idiolect – the debates, particularly in relation to Wiggins, are articulated exclusively in terms of ‘conceptualism’ and ‘realism’. I feel it necessary, however, to recognize the historical roots of Wiggins’ position, in order to clarify exactly what it is.

⁷⁴ See e.g. Wiggins 1980: Chapter 5, 2001: chapter 5

lumps of metal and wood, and flesh and bone; and we take this stuff to constitute mountains and chairs, and dogs and cats. For the conceptualist, there are such things is *because* we conceptualize them as units.⁷⁵ I.e. the order that we find in the world is *produced*, in some way, by our conceptual scheme. The (worrying) idealist extremes of the position are illustrated, as Wiggins notes, in Leszek Kolakowski's *Towards a Marxist Humanism*:

The picture of reality sketched by everyday perception and by scientific thinking is a kind of human creation (not imitation) since both the linguistic and the scientific divisions of the world into particular objects arise from man's practical needs. In this sense the world's products must be considered artificial. In this world the sun and stars exist because man is able to make them *his* objects, differentiated in material and conceived as 'corporeal individuals'. In abstract, nothing prevents us from dissecting surrounding material into fragments constructed in a manner completely different from what we are used to. Thus, speaking more simply we could build a world where there would be no such objects as 'horse', 'leaf', 'star', and others allegedly devised by nature. Instead, there might be, for example, such objects as 'half a horse and a piece of river', 'my ear and the moon', and other similar products of a surrealist imagination.⁷⁶

Certainly, if one is a conceptualist, it is likely one will also be a descriptivist in method – because how else will the conceptualist find answers to puzzles of continuant identity, except by turning to the everyday practices and pre-theoretical schema of which those continuants are products? But is the converse also true? Is the descriptivist necessarily committed to a form of conceptualism? Briefly put, Wiggins' answer is *no*. He claims that the metaphysician *should* turn to everyday practices and their underlying conceptual frameworks; but one of the particular innovations of his project is to detach this method from Kolakowski's form of idealism. The key here is Wiggins' so-called 'conceptualist-realism', a form of realism that states that our conceptual scheme maps reality, not because it constructs it, but because it develops in reciprocity with it.

There are a number of objections that can be raised against the kind of conceptualism we find in Kolakowski's work – many of them are articulated by Wiggins

⁷⁵ Yablo has a helpful overview of this and the realist position, in his 2003.

⁷⁶ Kolakowski 1968: 47–48 (quoted in Wiggins 2001: 149)

himself:⁷⁷ Conceptualism is committed to *bare substrata*,⁷⁸ Wiggins says, and the unlovely notion of *haecceity*.⁷⁹ It is inimical to any worthwhile essentialist programme.⁸⁰ And, more fundamentally, in its idealist leanings it is profoundly at odds with the powerful and persuasive *realist* thought that the objects we find around us – people, trees, lakes, and so on – exist quite independent of how human beings conceive of them.⁸¹ Ultimately, it is this thought – that the macro-order we divine around us exists in its own right⁸² – that characterizes Wiggins’ (realist) metaphysical position.⁸³

Importantly, however, Wiggins also seeks to hold onto certain elements of the approach we find in Kolakowski’s work. For while he sees dangers in a view that veers so close to idealism, he is simultaneously impressed by the notion that reality does not separate itself out for us. We contribute something; we bring structure to the table, so to speak, the table does not simply bring structure to itself. Wiggins writes in *Se&SR*:

For someone to single out a leaf or a horse or a sun or a star, or whatever it is, that which he singles out must have the right principle of individuation for a leaf or a horse or a sun or a star... For to single out one of these things he must single *it* out. Such truisms would scarcely be worth writing down if philosophy were not driven from side to side here of the almost unnegotiable strait that divides the realist myth of the *self-differentiating object* (the object which announce itself as the very object it is to any mind, however passive or of whatever orientation) from the *substratum* myth that is the recurrent temptation of bad conceptualism. It is easy to scoff at *substratum*. It is less easy to escape the insidious idea that there can be the singling out in a place of a merely determinable space-occupier awaiting incongruent or discordant substantial determinations (individually inconsistent answers to the question of *what it is*). But no substance has been singled out at all until something makes it determinate *which* entity has been singled out; and for this to be determinate, there must be something in the singling out that makes it determinate which principle is the principle of

⁷⁷ See particularly Wiggins 1980: chapter 5 and 2001: chapter 5

⁷⁸ Underlying, property-less items – see e.g. Robinson 2014 for an overview.

⁷⁹ ‘Haecceity’ is the medieval concept of *thisness* – that metaphysical quality which makes some object the specific object that it is. See e.g. Wiggins 1980: 136–142

⁸⁰ Wiggins 2001: 146ff

⁸¹ E.g. Wiggins 1980: 131, 2001: 141

⁸² Yablo 2003: 1

⁸³ Wiggins 2001: 142

individuation for the entity and under what family of individually concordant sortal concepts it is to be subsumed.⁸⁴

There are a number of technical terms here that will be introduced in due course. At this point, however, the quotation is simply intended to give an indication of Wiggins' conceptualist sympathies, and to show how, *contra* what he sees to be the prevailing orthodoxy,⁸⁵ he takes conceptualism and realism to be, to some extent, compatible. Though he denies that the mind *constructs* reality – in the 'bad' conceptualist sense – he argues that it does still *construe* it in a certain way. This conceptualist-realism⁸⁶ is caught, neatly, in his analogy of the net (adapted from Arthur Eddington's):⁸⁷

Our claim was only that what sortal concepts we bring to bear upon experience determines what we can find there – just as the size and mesh of a net determine, not what fish are in the sea, but which ones we shall catch.⁸⁸

So, Wiggins states, our conceptual scheme is 'open to the world'.⁸⁹ To think that our pre-theoretical world-view is a 'human creation (not imitation)' ignores, so Wiggins says, how it has developed through *a reciprocal engagement* with the world we inhabit.⁹⁰ Certainly, when we pick out items in our environment, we conceive of them in specific ways, bound as we are by our human natures, with our particular perceptual abilities; but we also *interact* with reality, and interacting, discover more about it, and modulate our conception of it to match more closely with how it must *actually be*. Our expectations about objects are either met or they are not.⁹¹ This is a process we are always engaging in (one Wiggins sees to be most obvious in childhood development).⁹²

...even though horses, leaves, sun and stars are not inventions or artefacts, still, if such things as horses, leaves, sun and stars were to be singled out in

⁸⁴ Wiggins 2001: 150–151

⁸⁵ See e.g. Wiggins discussion in 2001: 140ff, see also Wiggins 2001: xii

⁸⁶ See specifically Wiggins 2001, ch. 5

⁸⁷ Eddington 1958

⁸⁸ Wiggins 2001: 152

⁸⁹ *Ibid*: 153

⁹⁰ See particularly Wiggins 2001: ch.3 (and the following section), and e.g. page 160

⁹¹ See, for example, what befell 'phlogiston' (Wiggins 2001: 80)

⁹² 'The child who is learning to find for himself the persisting substances in the world, to think the thoughts that involve them and recognize the same ones again, grasps a skill and a subject matter at one and the same time.' Wiggins 2001: 2. See also Wiggins 1997: 24 'Infants are creatures who are *en route* by exploration, trial and error, by probation, by attunement, to the full human conceptual system.'

experience at all so as to become the objects of thought, then some scheme had to be fashioned or formed, in the back and forth process between recurrent traits in nature and would-be cognitive conceptions of these traits, that made it possible for them to be picked out.⁹³

Recognition of this reciprocity, between what Quine calls the *ontological* and the *ideological*,⁹⁴ is central to Wiggins' methodological programme. It is considered in greater depth below. For now, however, it will do to have seen the general lines along which Wiggins aims to substantiate his descriptive approach. While his project is, as he admits, 'anthropocentric',⁹⁵ it is not too narrowly so, and does not fall into the snares of conceptualism.⁹⁶ Crudely put, we can attend to the conceptual scheme that underlies our everyday practices, and it will give us a guide to how reality is structured because it was brokered in response to reality, not enforced upon it, or irrelevant to it. This 'conceptualist-realism' is one of Wiggins' key contributions to contemporary metaphysics (and one which is growing in influence).⁹⁷

⁹³ Wiggins 2001: 152

⁹⁴ See Wiggins 2001: xii

⁹⁵ Wiggins 2001: 153

⁹⁶ See Lowe 2003 and 2005 for discussion

⁹⁷ Not least in the work of Helen Steward (see e.g. her 2012)

§1.2. Wiggins' 'D' thesis

Having run through these methodological preliminaries we are in a position to examine Wiggins' project more fully and, simultaneously, to assess interpretations commentators have offered of it. In this section, the discussion is structured around Paul Snowdon's remarks in his 'On the Sortal Dependency of Individuation Thesis'.⁹⁸ §1.2.a. examines, in general terms, whether or not Wiggins intends to present a *metaphysical* or a *psychological* thesis, and addresses the importance of 'connective analysis' in his account (this stands as a transition from the more methodological issues in §1.1). In §1.2.b., it is shown how Wiggins' work exemplifies this Strawsonian approach to metaphysical questions about identity and individuation. §1.2.c. represents a digression into Wiggins' response to relativism. In §1.2.d., these respective strands are drawn together, and the exposition of Wiggins' **D** will be completed.

§1.2.a. Is **D** a metaphysical or a psychological thesis?

In his paper, 'On the Sortal Dependency of Individuation Thesis', Paul Snowdon remarks on an apparent, and central, confusing element in *SC&SR*; an equivocation:

At the centre of this web [of metaphysical ideas] is a thesis which Wiggins calls the thesis of the sortal dependency of individuation (2001, 5), though at times he seems prepared to call it the sortal dependency of identity (2001, 23), and which he usually refers to as **D**.⁹⁹

The aim of Snowdon's paper is to try to disentangle this web, to determine what Wiggins' claim is, and whether we should accept it. Snowdon discerns two main theses – a theory about individuation, and a theory about identity – and assesses each in turn. Ultimately, he finds the claims about identity to be strong (subject to slight modifications), but the claims about individuation to be on shakier ground. In clarifying the terms, 'identity' and 'individuation' he relies on Wiggins' own definitions, found in the introduction to *SC&SR*:

⁹⁸ Snowdon 2009

⁹⁹ Ibid: 254

By identity I mean being the same as. By individuation I mean something done by a thinker.¹⁰⁰

For the moment this can be cashed out in a very general way: *Identity* is a metaphysical relation, the formal properties of which we can examine with logic. *Individuation*, by contrast, is a cognitive, or psychological act or process in which a thinker picks out objects in her environment.¹⁰¹

Snowdon is interested, therefore, in whether Wiggins is presenting a *metaphysical* theory (relating to identity), or a *psychological* one (relating to individuation).¹⁰² He claims that Wiggins makes claims about both, and that the – psychological – theory of individuation is deeply problematic.¹⁰³ The aim here is to show why this reading falters, and to present an alternative interpretation of Wiggins' text.

Snowdon takes the apparent equivocation of 'sortal dependency of individuation' and 'sortal dependency of identity' to be a confusion in Wiggins' work. However, given what has been said about Wiggins' method in the previous section, the subsumption of the 'sortal dependency of individuation' and the 'sortal dependency of identity' under a single title can be read as an important aspect of his account – that the identity thesis, and the individuation thesis are not, for Wiggins, separable from each other.

In §1.1, an outline was given of Wiggins' conceptualist-realism: the conceptual scheme – which underpins our everyday practices – *is*, he claims, open to the world (though it is anthropocentric to a degree). As he sees it, this fully legitimates his descriptive method, freeing it from any idealist commitments. We can turn to our conceptual scheme as a litmus in metaphysical inquiry. So whatever else we may say about Wiggins' claims of identity and individuation, they are grounded in the pre-theoretical framework that underpins our everyday practice, and they are elaborated from that distinctly human conceptual scheme.

This tenders an, albeit rather general, objection to Snowdon's separation of the metaphysical from the psychological. Because of the descriptivist method we can say that any metaphysical thesis will not be exclusively 'metaphysical' (insofar as that precludes anthropocentrism); it will be necessarily attuned to human cognition, and

¹⁰⁰ Wiggins 2012: 1

¹⁰¹ Wiggins 2001: 6

¹⁰² Snowdon 2009: 255

¹⁰³ *Ibid.*: 255

human conceptions.¹⁰⁴ We might similarly say on these grounds that a psychological thesis can stretch beyond the purely cognitive. As Wiggins puts it, in Quinean parlance, he rejects this ‘sharp division of questions of ontology from questions of ideology’.¹⁰⁵

This is a somewhat vaguely expressed concern with Snowdon’s critique, and it might be thought that it does not quite latch on to his particular use of ‘metaphysical’ and ‘psychological’. However, the worry takes more precise form when we turn to the nuances of Wiggins’ descriptivism. In Wiggins’ work it is repeatedly emphasized exactly how *complex* our pre-theoretical scheme actually is, how inextricably bound up the concept of identity is with our individuating practices, and how, in order to get a tangible grasp of identity, we need also grasp how things, continuants, are picked out and traced through time.

These things belong together – or the grasp of each requires the grasp of the other.¹⁰⁶

What we have to confront is a whole skein of connected practices. These practices are intertwined with one another. Their relations can indeed be set out in all sorts of true equivalences. But it does not follow they can be set out in a *developing sequence*... It is much more likely that the basic forms and devices have to be learned together. Just as the keystone of an arch and the adjoining bricks can be placed together, but only if somehow they are placed simultaneously or they are put into position with the help of a temporary external support, so each primitive device is learned *simultaneously and in reciprocity* with each of the others.¹⁰⁷

Indeed, this is one of the most attractive aspects of Wiggins’ account; he recognizes the complexity and interconnectedness of our use of concepts, and how subtly interlaced, and mutually dependent our thoughts actually are. This kind of systematic approach is another example of Strawson’s influence. As Strawson set it out, ‘connective analysis’¹⁰⁸ of this kind seeks to elucidate concepts by drawing out their connections and the way in

¹⁰⁴ See, e.g. Wiggins 1995: 244 (discussed in §1.3 below)

¹⁰⁵ Wiggins 2001: xii

¹⁰⁶ Ibid: 19

¹⁰⁷ Ibid: 19–20

¹⁰⁸ Strawson 1992: 21

which they imply, presuppose, and sometimes exclude one another.¹⁰⁹ Therefore the equivocation that Snowdon identifies in *SeSR* (and its prequels) is not a confusion: it is a central element of Wiggins' project. The two elements of **D** are intended to develop reciprocally; roughly, the *identity* thesis, and the *individuation* thesis are supposed to refine and modulate each other. As Wiggins construes it, they must develop in concert. (A more detailed exposition of this development is given in §1.2.b.)

Encouraged by the methodological thoughts voiced in the previous section one might wonder why Snowdon interprets Wiggins as he does. There are two points that can be made here: the first relates to the distinction between 'piecemeal' and 'systematic' philosophical methods. The second is a more particular exegetical concern about the interpretation of 'individuation'.

Firstly, in a speculative mode, one may wonder whether Snowdon's interpretation is being drawn along by a particular undertow in Anglophone metaphysics. Specifically, one may think that it represents, knowingly or not, the so-called 'piecemeal' attitude, symptomatic of the high analytic tradition.¹¹⁰ (This suggestion is returned to in §2.2) The 'piecemeal approach' is articulated perhaps most explicitly in Russell's *Mysticism and Logic*, where he writes: 'A scientific philosophy such as I wish to recommend will be piecemeal and tentative like other sciences.'

To build up systems of the world, like Heine's German professors who knit together fragments of life and made an intelligible system out of them, is not, I believe, any more feasible than the discovery of the philosopher's stone. What is feasible is the understanding of general forms, and the division of traditional problems into a number of separate and less baffling questions. 'Divide and conquer' is the maxim of success here as elsewhere.¹¹¹

This 'scientific' method, of separating out philosophical issues into 'manageable chunks' remains, as Hans-Johann Glock writes, a prominent trend in Anglophone philosophy.¹¹² And while, again, this is a gestural suggestion it seems that Snowdon's disassembly of Wiggins' interconnected theories is symptomatic of this piecemeal approach, clearly

¹⁰⁹ Joll 2010: §iii

¹¹⁰ Scott Soames identifies the 'piecemeal approach' as one of the distinctive features of analytic philosophy. Soames 2003: xiv–vi

¹¹¹ Russell 1925: 109

¹¹² Glock 2008: 165

countervailing the connective analysis that we find in Strawson and Wiggins.¹¹³ In his *Analysis and Metaphysics*, Strawson directly opposes the Russellian ‘reductive’ method;¹¹⁴ he argues against what he sees to be the ‘reductive or atomistic model’ that underlies much of the practice of analytic philosophy¹¹⁵ – that is, the dismantling form of analysis which strives towards ‘a clear grasp of complex meanings by reducing them, without remainder’, to isolated elements of meaning.¹¹⁶ He argues instead for precisely the kind of connective analysis that is so intricately woven by Wiggins, and writes:

Let us abandon the notion of perfect [atomistic] simplicity in concepts; let us abandon the notion that analysis must always be in the direction of greater simplicity. Let us imagine, instead, the model of an elaborate network, a system of connected items, concepts, such that the function of each item, each concept, could, from the philosophical point of view, be properly understood only by grasping its connections with others.¹¹⁷

Wiggins’ work has, as mentioned, been accused of obscurity – and it *is* dense, and the grain of his argument *is* sometimes hard to find. But perhaps this complexity is a necessary corollary of this kind of connective of analysis? (And, one might hazard, it might also be that this kind of philosophical approach is found to be particularly obscure in an intellectual climate shaped, as the Anglophone climate is, by the Russellian scientific ‘piecemeal’ methodology.)¹¹⁸ Whatever the case, this might well be one reason for Snowdon’s misreading.

A second reason why the interconnectedness of identity and individuation does not register in Snowdon’s treatment, is that he has a particular – and arguably divergent – reading of Wiggins’ use of ‘individuation’. In his paper, Snowdon interprets ‘individuation’ as something like the detection, by seeing, hearing, smelling (etc.), of an

¹¹³ See e.g. Glock 2008: 165 (where he also identifies Stuart Hampshire – another important influence on Wiggins (e.g. 2001: 195 n.3) – as a ‘systematic’ philosopher, rather than a piecemeal one).

¹¹⁴ Strawson 1992. For a clear articulation of Strawson’s position, see Byrne 2001

¹¹⁵ Strawson 1992: 19, 21

¹¹⁶ Ibid: 17

¹¹⁷ Ibid: 19

¹¹⁸ This, indeed, is Strawson’s own analysis of Wiggins’ project. In his critical notice of *S&S*, Strawson writes (1981: 603):

Much of the value of the book stems from its author's explicit recognition of ‘how much can be achieved in philosophy by means of elucidations which use a concept without attempting to reduce it, and, in using the concept, exhibit [its] connexions’ with other ‘established and . . . collateral’ concepts (p. 4). It is such a procedure of connective, rather than reductive, analysis which fruitfully governs his treatment of the central concepts of identity, individuation, substance, sort, natural kind and essence...

object in our environment. He calls this ‘perception-based object-directed thought’.¹¹⁹ Correspondingly, he interprets Wiggins’ ‘thesis of the sortal dependency of individuation’ as claiming that to focus on an object in this way (that is, to pick it out perceptually) depends on picking it out under a (medium-level¹²⁰) sortal.¹²¹

As noted, while Snowdon finds elements of Wiggins’ sortal dependency of identity (or his interpretation of it) persuasive, he finds the theory of sortal dependency of individuation to be problematic. His objections stem, in large part, from a series of counter-examples, which exemplify further his particular understanding of ‘individuation’:

There seem to be lots of examples where people can think of an object in ignorance of its sortal type.¹²²

...someone could point at a creature flying in the air and ask ‘what is that?’¹²³

Science fiction films provide examples where an object falls to earth, and the scientists ask ‘what is it?’¹²⁴

I hear a rustle and wonder ‘What is that?’, where the focus of the thought is the noise maker. This kind of perceptual contact does not enable me to determine what basic sort the item belongs to, but it does enable me to think about it.¹²⁵

As Snowdon understands individuation, it can, as a cognitive act, take place *before* the sortal question (‘what is it?’) can be asked:

I wake up in a darkened room in need of a drink, so want to locate my glass of water... I can, as we say, make out objects close by, and wonder of one of them whether it is my glass. Now, here my thought is not

¹¹⁹ Snowdon 2009: 264

¹²⁰ Ibid: 265

¹²¹ Ibid: 262

¹²² Ibid: 265

¹²³ Ibid: 265

¹²⁴ Ibid: 266

¹²⁵ Ibid: 266

directed onto the object by any sortal conviction. The targeting, rather, enables the sortal *question* to be raised about a particular item.¹²⁶

It is on these grounds that Snowdon argues against the so-called ‘psychological’ thesis. However, while these comments are not obviously wrong, their critical force lies in Snowdon’s reading of ‘individuation’ – and that reading contrasts with the understanding of ‘individuation’ that Wiggins articulates in *Se&SR*.¹²⁷ Wiggins writes:

The *Oxford English Dictionary* defines ‘individuate’ in terms of ‘single out’ or ‘pick out’, and this definition is well suited to the purposes of this book... To single x out is to isolate x in experience; to determine or fix upon x in particular by drawing its spatio-temporal boundaries and distinguishing it in its environment from other things of like and unlike kinds (at this, that and the other times during its life history); hence to articulate or segment reality in such a way as to discover x there.¹²⁸

For Wiggins, individuation involves picking an object out in such a way that it can be distinguished in its environment from other things of like and unlike kinds. This is at odds with the use of individuation in the example of the glass in the darkened room. In Snowdon’s scenario he does not have enough information about the particular to be able to e.g. distinguish it from other similar sized objects. Crucially, Wiggins also holds that individuation involves picking an object out in such a way that it can be *re-identified* at a later stage; this is the content of the reference to ‘spatio-temporal boundaries’ above. Contrast this with, for example, Snowdon’s case of the mysterious rustler in the bushes. One may turn one’s attention to the rustling in the hedgerow, and even, perhaps, claim to identify some single *thing* that rustles there (rather than, e.g. a nest of sparrow chicks) – but can one then claim to be able to reliably *re-identify* the ‘noise-maker’? If it ceases and begins again? It seems not. Consider too the case of the statue and the clay lump. One may turn one’s attention to the particular region in space that they jointly inhabit, but until it is decided *which* of the two things is under inspection, answers to identity questions will remain elusive (since the lump may, for example, survive squashing where the statue does not).

¹²⁶ Snowdon 2009: 266

¹²⁷ There are, of course, other, more dramatically divergent understandings of ‘individuation’ (see Lowe 2003, and Wiggins 2001: 6 n.4)

¹²⁸ Wiggins 2001: 6

It might be that Snowdon's reading diverges because he attributes too much importance to Wiggins' remark that individuation is an act 'at a time':

Wiggins explains that he wishes to advance a characterization of 'what it amounts to, practically and cognitively, for a thinker to single a thing out at a time'...¹²⁹

But while the cognitive act of singling out is undoubtedly *at a time*, Wiggins' interpretation of 'individuation' also involves the ability 'later to single out that same thing *as* the same thing'.¹³⁰ The difference here is brought out by Wiggins' comment that 'one may well refer to x ... without in our primary sense singling x out [individuating x].'¹³¹ For Snowdon, 'individuation' may be a cognitive act of isolating an object in experience; for Wiggins 'individuation' provides for the inquirer's *re-identification* of that object – it involves the ability to trace it through time. And consequently, as Wiggins writes, 'the singling something out at t cannot help but look, as I say, both backwards and forwards to times before and after t '.¹³²

This understanding of individuation as an act that allows for *re-identification* is nowhere present in Snowdon's discussion.¹³³ And, of course, failing to register this understanding of 'individuation' will mean that one fails to register the reciprocal development of theories of *identity* and *individuation*; for what part of Snowdon's analysis of individuation involves identity, or assessment of identity claims? Individuation involves being able to say whether or not an earlier item is the same as a later item.

Having got a clearer idea of what Wiggins means by 'individuation', and having understood the method by which his project is supposed to proceed, the next section deals in greater depth with his synchronised explication of our everyday individuating practices and the concept of identity.

§1.2.b. The reciprocal elucidation of identity and individuation

Consider again, Snowdon's concerns with Wiggins' project:

¹²⁹ Snowdon 2009: 261–262

¹³⁰ Wiggins 2001: 1

¹³¹ Ibid: 6

¹³² Ibid: 6

¹³³ It is worthwhile noting, in connection with this, that Wiggins claims that to single out an x distinctly in one's environment necessarily *involves* being able to re-identify it, and trace it through time. See his 1963: 189–90, and 2001: 71, 72

When Wiggins states D for the first time in a relatively full way, in Chapter 2 of *Sameness and Substance Renewed*, it is formulated as follows:

$a=b$ if and only if there exists a sortal concept f such that

(1) a and b fall under f ;

(2) to say that x falls under f or that x is an f is to say what x is (in the sense Aristotle isolated);

(3) a is the same f as b , that is coincides with b under f in the manner of coincidence required for members of f , hence congruently...

(Wiggins 2001, 56)

Taking this formulation of D as the guide to its general character as a claim, it is natural to comment on its significance as follows. D advances a claim about the necessary and sufficient conditions for the truth of *any* identity proposition or claim. As it stands, D is, strictly speaking, an unmodalized biconditional, but we can, surely, take it that Wiggins is really advancing it as a necessary truth about identity. Now one thing that stands out about D as formulated is that it says nothing about our *procedures* for establishing identities, nor does it say anything about our ability to *grasp or understand* identity propositions. Hence, if ‘individuation’ stands for something cognitive or psychological that we *do*, or maybe, *achieve*, as I claim that it in fact does, then it seems that D actually says nothing about *individuation* at all. So there is some inclination to register at least mild surprise about the name Wiggins assigns to it. Rather, I think, D says something about the conditions for the obtaining of an identity and so qualifies as what I would be inclined to call a ‘*metaphysical thesis*’ about identity.¹³⁴

¹³⁴ Snowdon 2009: 254–255

Snowdon is right that this formulation stands as a claim about the metaphysical relation of identity. And while he is tentative in describing it as the ‘sortal dependency of identity’,¹³⁵ this is precisely how it is presented in *SCS*¹³⁶ (though this appellation is unhelpfully removed in *SCSR*). He is also right that, as it stands, this formulation does not obviously claim anything about individuating practices, the *procedures*, or our *ability* to *grasp* identity propositions. Yet he is wrong to take this formulation as the guide to the general character of **D**. **D** is the collection of interrelated claims about *identity* and *individuation* (and *substance*, and *persistence*...), and this formulation represents only a partial, and incomplete stage in the project. Furthermore, while it does not explicitly state anything about individuation, it is developed in concert with analyses of those procedures, and presupposes them. My contention here is that the passage Snowdon takes to capture **D** is not, in fact, a guide to Wiggins’ overall project, and is not, by itself, intended to claim anything about individuation.

This becomes clearer when we turn to how Wiggins actually develops his project.¹³⁷ For Wiggins, the concepts of *identity* and *individuation* cannot be discussed in isolation. They are, he says like adjoining bricks at the tip of an arch; each supports the other. Thus, a necessary part of his analysis of these concepts is to show *how* they rely on each other. In the following exposition, it will be shown how he builds up these interconnected theses, and the pressures that hold them together will be identified. In very rough outline: Wiggins claims that we can develop a limited account of identity from the basic properties that are contained in our pre-theoretical grasp of it – but while such an account provides *necessary* conditions, it does not furnish a *sufficient* condition. Wiggins proposes to fill this lacuna by turning to our individuating practices. These practices reveal an underlying *sortalism* and, Wiggins states, the importance of this sortalism is that it directs us to the individual *principles of activity* that substances realize, and by which we assess persistence. Here, he claims, we find a sufficient condition for identity. Simultaneously, he recognizes that our individuating practices need to be shored up against the strict logic of the identity relation, and to this end, he deploys his **D**-principles, which set out the requirements for a substance sortal concept.¹³⁸

¹³⁵ Snowdon 2009: 254 n.1

¹³⁶ Wiggins 1980: 51

¹³⁷ In understanding this, I have had considerable help from Wiggins 2012 (which was denied Snowdon in his 2009).

¹³⁸ It should also be noted, before starting, that though it is a necessary feature of his connective analysis that neither *identity* or *individuation* (or *substance*) concepts are prior, he writes that, given that the investigation must start somewhere, he begins by turning to *identity*. (Wiggins 2001: 18–20) This expository section will do the same.

In the descriptivist spirit, Wiggins turns first to our pre-theoretical idea of *identity*.¹³⁹ It is this primitive concept, so fundamental to our conceptual scheme, which he aims to elucidate.¹⁴⁰ *Identity* is one of the core concepts that all human inquirers are supposed to possess (another demonstration of his commitment to the thesis of conceptual invariance):

The notion of sameness or identity that we are to elucidate is... a notion as primitive as predication... No reduction of the identity relation has ever succeeded.¹⁴¹

Wiggins starts his inquiry with the self-evident properties of the primitive notion: the *reflexivity* of identity ('the obvious truth where everybody begins'¹⁴²) and Leibniz's principle of the *indiscernibility of identicals* ('akin to the rock of ages'¹⁴³). These aspects of our primitive notion are the foundation for further analysis.¹⁴⁴ From the combination of these two principles he reaches – via a series of logical proofs – the *transitivity* and *symmetry* of identity, and then, following these, the *necessity*, the *absolute determinacy*, and the *permanence* of identity (the specifics of these principles are set out below, where necessary). For Wiggins, this extrapolation from the primitive notion produces identity's bare logic, its central formal properties.¹⁴⁵

Yet, as he duly notes,¹⁴⁶ this analysis provides only the *necessary* conditions – it does not clearly provide a *sufficient* condition for this relation to hold. (And – note – it is the sufficient condition that the *personal identity* theorist is interested in, needing a workable condition on which to ground her judgements of identity.) This 'deficit' Wiggins writes, 'is often overlooked because it will appear that we can safely add to Leibniz's Law the Leibnizian converse, namely the Identity of Indiscernibles.'¹⁴⁷ That is, the Identity of Indiscernibles is taken to flow from the logic of identity, and stand as a sufficient condition for it. That principle states that if the two objects under scrutiny (*x* and *y*) have all their properties in common, then *x* is *y*. However, as Wiggins rightly points out, the complete community of properties that some take to establish identity,

¹³⁹ Wiggins 2001: 2

¹⁴⁰ Ibid: 1

¹⁴¹ Ibid: 5

¹⁴² Wiggins 2012: 3

¹⁴³ Wiggins 1996: 227

¹⁴⁴ See Wiggins 2012 for a very clear presentation of these proofs.

¹⁴⁵ For issues with these proofs see e.g. Geach 1962 and Noonan 1976, and Gale 1984

¹⁴⁶ Wiggins 2012: §5

¹⁴⁷ Wiggins 2005a: 443. See also Wiggins 1967: 1, 2001: 56, 2012: 5

flows *from* it, and cannot therefore, be taken to rule for or against it.¹⁴⁸ It is a sufficient condition, but one

...whose satisfaction can appear or be verified only at the conclusion of explorations and labours conducted on the basis of a workable sufficient condition based in some thought other than the Identity of Indiscernibles.¹⁴⁹

Being the mortal beings we are, we cannot establish identity between objects by examining *all* of their properties, making sure they correspond.¹⁵⁰ Thus, Wiggins states, our use of the identity concept must appeal to *another* principle, one that can be applied by an enquirer in adjudicating persistence questions.

Here, we begin to see the effects of the connective analysis. Given that the identity of indiscernibles will not – for Wiggins – bear the weight commonly assigned to it, he directs us to a conceptual correlate to help us fix upon some ‘other’ principle. He writes that:

[T]he metaphysics of identity has no alternative but to reconstruct the thoughts that organize the epistemology of the relation and to reconstruct what thinkers actually do when they single out an object in experience, at once observing the thing’s behaviour, speculating what it does when out of view and searching for distinguishing marks (if any) by which this one may be distinguished from other members of its kind and (however fallibly) reidentified as one and the same.¹⁵¹

We must turn, that is, to our *individuating* practices – for that is what he means by the ‘epistemology of the relation’. Individuation is the cognitive act of a thinker. More precisely, for Wiggins, it is the act of *singling out* or *picking out* an object in a thinker’s environment, and picking them out as objects with spatio-temporal limits, that is, *as continuants*.¹⁵² This is the procedure by which we navigate the world around us.¹⁵³

¹⁴⁸ Wiggins 2001: 56–57

¹⁴⁹ Wiggins 2012: 6

¹⁵⁰ Stephen Williams offers a helpful gloss on Wiggins’ critical position here in his 2006 (1124).

¹⁵¹ Wiggins 2012: 7

¹⁵² ‘It will be everywhere insisted, moreover, that the singling out at time *t* of the substance *x* *must look backwards and forwards* to times before and after *t*.’ (2001: 7)

¹⁵³ Wiggins 2001: 6

What, he asks, do we do when we pick out objects? He subjects our individuating actions to closer scrutiny, and finds a question constantly recurring in these contexts. When directing attention to objects in our environment and assessing their coincidence, we find ourselves asking: *what is it?*¹⁵⁴ *What kind of thing is x?*¹⁵⁵ These questions, he suggests, give us clues as to what organizes our efforts when we identify and re-identify objects. He sees us constantly called upon to ask what the objects under investigation *are*.

[I]t seems certain... that, for each thing that satisfies a predicate such as ‘moves’, ‘runs’, or ‘white’, there must exist some known or unknown, named or nameable, kind to which the item belongs and by reference to which the ‘what is it’ question *could* be answered.¹⁵⁶

Wiggins takes the recurrence of this question to suggest that matters of sameness revolve in some fashion, on the sorts, or *sortals*, under which the objects fall (which is why ‘natural languages furnish so many locutions in the quasi-attributive form: “*a* is the same what as *b*?”’, “the same donkey, same man, same electrician, same...”¹⁵⁷).

But why, exactly, do we proceed in this manner? To answer this, and to gauge the importance of this sortalism, he refers again to the common tests and methods we use when we adjudicate identity questions:

Suppose I ask: Is *a*, the man sitting on the left at the back of the restaurant, the same person as *b*, the boy who won the drawing prize at the school I was still a pupil at early in the year 1951? To answer this sort of question is surprisingly straightforward in practice, however intricate a business it would be to spell out the full justification of the method we employ. *Roughly, though, what organizes our actual method is the idea of a particular kind of continuous path in space and time the man would have had to have followed in order to end up here in the restaurant... Once we have dispelled any doubt whether there is a path in space and time along which that*

¹⁵⁴ Wiggins 2001: 21 – ‘If somebody claims of something named or unnamed that it moves, or runs or is white, he liable to be asked the question by which Aristotle sought to define the category of substance: *What is it ...?*’ Indeed, this is a question that must always be asked (see Wiggins 1967: 1)

¹⁵⁵ Wiggins 2012: 8

¹⁵⁶ Wiggins 2001: 21

¹⁵⁷ Wiggins 2005a: 444

*schoolboy might have been traced and we have concluded that the human being who was that schoolboy coincides with the person/human being at the back of the restaurant, this identity is settled.*¹⁵⁸

And following this comes the essential point that:

The continuity or coincidence in question here is that which brought into consideration *by what it is to be a human being.*¹⁵⁹

‘In practice’, our answers to identity questions are organized by the idea of *spatio-temporal continuity*. Spatio-temporal continuity is what matters – not total agreement of properties and relations.¹⁶⁰ And crucially, the thought underpinning our practical reasoning is that spatio-temporal boundaries are different for different kinds of things: spatio-temporal continuity is not, as we find in experience, *bare continuity*,¹⁶¹ but the specific kind of continuity that relates to the sort of thing that the objects are. When we draw spatio-temporal boundaries, we look to what a thing *is* (and again: ‘Bare continuity supplies no principle, no rhyme or reason’¹⁶²).

So here, stemming from the connective, descriptive analysis, we are encouraged to incorporate a form of *sortalism* into our theory of identity. This is the point Wiggins reaches when he setting out, on page 56 of *S&SR*, the construal of **D**, as the theory of sortal dependency of identity, which Snowdon focuses on. He incorporates this sortalism because it provides a sufficient condition for identity.

Snowdon holds that the passage on page 56 is a good guide to the general character of Wiggins **D**. This reading is the foundation of his subsequent criticisms. But it is mistaken. The passage is intended only as a partial rendering of a doctrine that encompasses both epistemological and metaphysical claims. Snowdon’s mistake appears even more starkly when the precise context of the quoted passage is considered. Wiggins writes:

When **D** is clearly disassociated from **R**, that which remains is this:

¹⁵⁸ Wiggins 2001: 56–57 (my emphasis)

¹⁵⁹ Ibid: 57

¹⁶⁰ See, e.g. Wiggins 2001: 56, and 1967: 1

¹⁶¹ Wiggins 2001: xii, 2012: 8

¹⁶² Wiggins 2012: 9

D: $a = b$ if and only if... [etc.]¹⁶³

The principle is labelled **D** but Wiggins is engaged in a dialectic here; specifically, he aims to exhibit the elements of **D** that contrast with **R**. Both **D** and **R** are sortal theories of identity – in the same way that Catholicism and Anglicanism are both forms of Christianity, and certain elements need to be showcased for the distinction between the two to be drawn out. And just as a claim about deference to the Pope fails to capture the general character of Catholicism, so too does this emphasis on the metaphysics of identity fail to capture the general character of **D**.¹⁶⁴ Snowdon’s attempt to capture the general character of **D** abstracts important, but not isolable, elements of that thesis.

Wiggins’ reciprocal development of *identity* and *individuation* is analysed further in §1.2.d. – but in advance of that it will be helpful to engage in a brief digression into the possible problems facing a *sortal* theory of identity.

§1.2.c. Sortal identity and relative identity

There is an issue here: The kind of sortalism Wiggins describes is often taken to lead towards a commitment to *relative* identity. It is clearly the case that we can pick out the same object as different sorts of things – e.g. *man*, *soldier*, *greybeard*, *Greek*, *philosopher*, *official of the state*, *the chairman for day d*, *406 B.C.*, etc... And surely, we may say, it makes all the difference to claims of identity *which* of these concepts one subsumes the something under.¹⁶⁵ An individual *a* might be the same *man* as individual *b*, but not the same *official of the state* (if, say, *a* lost his title). So this relativism ushers us inexorably towards the kind of anti-realist conceptualism described above,¹⁶⁶ where identity is seen to be relative to us, and not answerable to the world.

As has been noted, Wiggins intends his treatment of *sameness* to accommodate both the insights of realism and those of conceptualism. The sortalism that emerges from our everyday practices, must be answerable to the ‘metaphysics of identity’, by which he means the logic of the relation. And prime among the formal properties of that relation is Leibniz’s principle of the indiscernibility of identicals (the ‘rock of ages’), which states that if *x* is the same thing as *y*, then *x* and *y* have all the same properties.

¹⁶³ Wiggins 2001: 56

¹⁶⁴ Many thanks to Jennifer Hornsby for helping me precisify this point.

¹⁶⁵ Wiggins 2001: 23

¹⁶⁶ See also Wiggins 2001: 140, and 1996 ‘Replies’: 227

The relativity of identity – as advanced by Peter Geach and Harold Noonan¹⁶⁷ – marks the contravention of this principle.¹⁶⁸ Consequently, the focus of the first chapter of *Sortal* is to reconcile Wiggins' sortalism with strict Leibnizian identity. While it is not necessary to go into the details of his argument here, it will be useful to outline his explanations of apparently relativistic identity claims – specifically his appeal to phase sortals, and the 'is' of constitution.

In general terms, a sortal is a sort or kind. Sortal terms take numerical modifiers – we use them to count items (e.g. 'cat' rather than 'air'). We pick individuals out 'under' sortals. *Sortal concepts* are the concepts associated with that kind. *Sortal predicates* are those expressions that stand for these concepts.¹⁶⁹ For Wiggins, a sortal predicate is an expression that gives a criterion for counting items of a kind, but *also* gives criteria of identity for members of that extension.¹⁷⁰

Importantly, Wiggins also separates out two different types of sortal. There are *phase sortals*, which an individual may fall under at one time and not another. E.g. I may, temporarily be a student and then stop being one (when I no longer pay my tuition fees). The same is true for being a girl, a boy, or a soldier, or a nurse, etc.¹⁷¹ There are, however, *substance sortals* too – putatively *human being*. In contrast to phase sortals, if an individual falls under a substance sortal, it cannot cease to do so and continue to exist. They apply to an individual x at every moment through x 's existence.¹⁷² Phase sortals are typically 'restrictions' of more general sortal terms.¹⁷³

This distinction gives Wiggins the resources to answer relativistic counter-examples to Leibnizian identity. A sortalist may say that an individual x is the same *human being* as y , but not the same *nurse* (he was once a nurse, but has since retired): the identity of a and b thus seems to turn on which sortal we subsume them under – we are drawn towards relativism. But this conclusion is only reached if we ignore the *sorts* of sortals at play. As Wiggins puts it:

¹⁶⁷ Geach 1962, 1972, 1973, Noonan 1976, 1978

¹⁶⁸ Wiggins 1996 'Replies': 227

¹⁶⁹ Wiggins' use (as described in 2001: 9, 77) is shaped by Strawson's, in his 1959 (168–9).

¹⁷⁰ See Grandy 2008 for a more precise articulation of 'sortal'.

¹⁷¹ For Wiggins' description of this distinction see Wiggins 2001: ch.1, §3, especially page 30 (also summarized in Snowdon 1990). Wiggins also occasionally talks of 'ultimate' sortals (as in his 1967: 32) – but this phrasing has been all but expunged from his recent work (though n.b. 2001: 129), and will not be discussed here.

¹⁷² Wiggins 2001: 30

¹⁷³ Ibid: 33

[One must] distinguish between sortal concepts that present-tensedly apply to an individual x at every moment throughout x 's existence, e.g. *human being*, and those that do not, e.g. *boy*, or *cabinet minister*. It is the former... that give us the privileged and... the most fundamental kind of answer to the question 'what is x ?' It is the latter, one might call them phased-sortals, which, if we are not careful about tenses, give a false impression that a can be the same f as b but the same g as b .^{174, 175}

Thus, relativism can be read – in some cases at least – to emerge from confusions of phase sortals with the substance sortals they restrict.

Wiggins has another recourse, in answering apparent relativity: the constitutive 'is'. To get a grip on this metaphysical relation, consider another case that appears to support the relativist's thesis: Having broken a jug, reduced it, by accident or malice, to a heap of fragments, you (conscientiously) cement the pieces back together ... but (mischievously) into a coffee-pot this time, and not a jug. The relativist will claim we have a case where 'the jug is the coffee pot' is true with the covering concept *same collection of material bits*, but false with the covering concept *same utensil*.¹⁷⁶ So Leibnizian identity is again called into question.

Wiggins' influential response to this example first appeared in his examination of material coincidence, in his paper 'On Being in the Same Place at the Same Time'.¹⁷⁷ There, he outlines a 'metaphysics of constitution' that distinguishes between two uses of the word 'is'. 'Is' can represent an identity relation (e.g. George Eliot *is* Mary Ann Evans) – and this is how it is usually taken. So when we state that the jug *is* the heap of fragments, and the heap of fragments *is* the coffee pot, we seem to be describing identity (which must then be relative since the coffee-pot and the jug cannot have the same properties (being different utensils)). Yet Wiggins claims that 'is' can also represent the much weaker 'constitution' relation. Notably, where identity is symmetric and reflexive the constitution relation is asymmetric and irreflexive – the heap constitutes

¹⁷⁴ Wiggins 2001: 30

¹⁷⁵ It is often to this distinction – between phase and substance sortals – that theorists turn to explain what is meant by 'fundamental'. See Snowdon 1990: 4. See also Olson 1997: 28

¹⁷⁶ '...and the jug and the coffee-pot cannot be construed as *phases* of an individual collection of matter'. (Wiggins 2001: 34, 36–43) It is possible, indeed, that Wiggins would consider this construal of the situation as some form of 'process philosophy' – to which he is also firmly opposed (see Wiggins 1982: 26) (His dubiety about process philosophy may stand as a point of controversy between him and Dupré – disturbing the allegiance encouraged in chapter 3 – but this is an issue that will not be pursued here.)

¹⁷⁷ Wiggins 1968. It is in the discussion of material coincidence that it is most influential (as we will see). See e.g. Rudder Baker 2000

the coffee-pot and the jug, but neither the coffee-pot, nor the jug constitute the heap.¹⁷⁸ Wiggins' re-description of the story then, is as follows: x and y are not identical under the sortal *utensil* (f) (since one is a coffee-pot and one a jug). But neither are they identical under the sortal *collection of fragments* (g), since neither x nor y is identical with the collection of fragments – they are merely *constituted* by that very collection.

Once again, let us allow ourselves to be persuaded by Wiggins' careful modifications. Identity is identity under a sortal, and this does not, in the end, commit him to a relativization thesis. Any apparent relativity can be explained away in the manner just outlined. Thus, the sortalism borne from our everyday individuating norms is tempered by the requirements of Leibnizian identity.¹⁷⁹

Let us now return to mapping the development of the dual theses of *identity* and *individuation*.

§1.2.d. Principles of individuation

Wiggins writes that each sortal encapsulates a particular 'mode of being' or 'nature' (in the case of living things) or a 'function' (in the case of artefacts).¹⁸⁰ This distinction between natural things and artefacts is an important one, to which we will return – but for the time being let us focus on the latter, which provides a rough outline of the general approach. For *natural things*, the nature is the *mode of being* for things of that sort:

It is the principle of activity of a kind whose members share and possess in themselves a distinctive source of development and change.¹⁸¹

Take the sortal *cat*, for example. Wiggins will say that there is a distinctive 'mode of being' for cats, a Leibnizian 'law' of activity, to which all members of that kind are subject.¹⁸² And this 'law' – or 'principle' – encapsulates, ultimately, what it is to be a cat, from typical behaviour to determinate patterns of growth and development¹⁸³ – eating habits, metabolic processes, social (or, more usually, anti-social) tendencies, and so on.¹⁸⁴

¹⁷⁸ Wiggins 2001: 36 The 'is' of *constitution* functions in the same way as the 'is' in 'The soufflé you are eating is flour, eggs and milk'.

¹⁷⁹ Wiggins 2005a: 444

¹⁸⁰ Or, as discussed below, an 'operation' (in the case of organs)

¹⁸¹ Wiggins 2012: 8

¹⁸² Wiggins draws the connection with Leibniz in his 1979: 313–315 and in his 2001: 84–85

¹⁸³ Wiggins 2001: 86

¹⁸⁴ Ibid: 84

In each cat these standard capacities are necessarily determined in specific ways, from their particular gait to the way they jump, and purr, and nap. And that specialized and refined actualization of the characteristic activity for *felis catus* is what ordinary thinkers (like us) have in mind (though imperfectly¹⁸⁵) when examining these creatures' spatio-temporal continuity. It is the continuity of this specific actualization that counts for spatio-temporal continuity.

This, then, is the special effectiveness of the 'what is it?' question:

[I]n the case of continuants it refers us back to our constantly exercised idea of the persistence and life-span of an entity.¹⁸⁶

When, in our non-philosophical lives, we adjudicate in matters of identity we do so by asking whether the objects in question are joined by a single, continuous path through space and time. To determine this we examine their particular *activity* – for which we need to know, or have some provisional idea, of what they *are*. If, in the end, they are joined in this way, we rule in favour of identity, otherwise we do not. This, Wiggins claims, is how we conceive of *sameness* when we apply it in the world – and this analysis allows us to add flesh to the logical bones bequeathed to us by Leibniz. It gives us a workable sufficient condition for identity.

As we've seen, Wiggins bolsters the Leibnizian schema of identity by referring to our basic ideas of *sameness*¹⁸⁷ – but at the same time he also extrapolates from our pre-theoretical practices a much more precise theory of individuation. As the rudimentary practices guide us towards a sufficient condition, those same everyday individuating practices are shored up against the formal metaphysics of identity. Thus, drawing out that which underpins our pre-theoretical conceptions he constructs a theory that satisfies the exigent logical requirements of that relation.¹⁸⁸

To this end, in chapters two and three of the *Sameness and Substance* books, Wiggins sets out his **D**-principles:

¹⁸⁵ Wiggins 2012: 8, and 2005a: 444: The ideas we grasp are '...ideas which are clear, as [Leibniz] would say, that is operationally effective for reliable application of a thing-kind word to a thing and yet indistinct, that is inexplicit, incomplete and open to improvement...' See also 2001: 83n.6

¹⁸⁶ Wiggins 2001: 59

¹⁸⁷ Ibid: 2

¹⁸⁸ Wiggins 2005a: 444

D-principles transcribe or transpose the formal properties of identity into universal norms to which all singling things out, all acts of recognizing the same again, all reconstructing the histories of things not continuously observed, and all judgment about identity and difference have, on pain of our losing hold altogether of reference and identity, to make themselves singly and collectively answerable.¹⁸⁹

They set the requirements that must be met if our everyday individuating acts are to correspond to the formal properties of identity. A brief overview of these principles will be sufficient here.

The first three principles set out what we have already seen. **D**(iii) incorporates **D**(i) – a statement of the basic sortal truth that *everything is something*^{190, 191} – and **D**(ii) – the refinement of this truth based on observation¹⁹² into the more ‘substantial’ sortalism that accommodates the phase/substance sortal distinction. What we end up with at **D**(iii), then, is the formal statement of the (workable) sufficient condition (corresponding to the one presented above):

D(iii): *a* is identical with *b* if and only if there is some concept *f* such that (1) *f* is a substance-concept under which an object that belongs to *f* can be singled out, traced and distinguished from other *f* entities and distinguished from other entities; (2) *a* coincides under *f* with *b*; (3) [coincides under *f*] stands for a congruence relation: i.e. all pairs $\langle x, y \rangle$ that are members of the relation satisfy the Leibnizian schema Φx if and only if Φy .¹⁹³

Then, the subsequent principles – **D**(iv)–**D**(x) – formulate exactly what it is to be a substance sortal (or rather, the associated substance concept) which can stand as an

¹⁸⁹ Wiggins 2005a: 444

¹⁹⁰ Wiggins 1967: 27

¹⁹¹ The status of **D**(i) is obscure to me. It stands as a logical truth here (and in Wiggins (2001): ‘...it seems certain...that for each thing that satisfies a predicate such as ‘moves’, ‘runs’ or ‘white’, there must exist some known or unknown, named or nameable, kind to which the item belongs...’ (2001): 21) – but if there is some proof, or argument other than the one from observation, to **D**(ii) it is not obvious to me what it is. And indeed, Wiggins deletes the passages relating to this in his later work (Compare 1980: 62–68 and 2001: 64–69).

¹⁹² Wiggins 1980: 62

¹⁹³ Wiggins 2001: 70

effective foundation for individuating acts. We need not go into all these in depth, but let us consider **D(v)** and **D(vi)**, which play significant roles in the following sections.

As it stands, the sufficient condition, formalized in **D(iii)** marks the distinction between phase and substance sortals. But as Wiggins notes, there are apparent substance sortals, which will not do the work we assign to them in this context:

There are countless predicates in English that have the appearance of sortal predicates but are purely generic (*animal, machine, artefact*) or are pure determinables for sortal determination (*space-occupier, entity, substance*).¹⁹⁴

These apply to x at every moment of x 's existence, but they are not suitable for individuation. They do not successfully answer the 'what is it?' question because they do not specify what matters turn on in regard to persistence – i.e. they do not allow us to trace spatio-temporal continuity.¹⁹⁵ Thus, we find **D(v)** which sets out the all important requirement for a principle of activity/functioning/operation:

D(v): f is a substance-concept only if f determines either a principle of *activity*, a principle of *functioning* or a principle of *operation* for members of its extension.¹⁹⁶

These principles, as mentioned, are 'principles of individuation' – principles 'by which entities of [that] particular kind may be traced or kept track of and reidentified as the same'.¹⁹⁷ If we are trying to individuate artefacts (chairs, say, or tables), we turn to their principle of *functioning*. For natural organs (hearts, livers), we turn to their principle of *operation*. And when we are trying to pick out and trace natural substances, like cats, or

¹⁹⁴ Wiggins 2001: 69

¹⁹⁵ Can we really not individuate under more generic sortals? Snowdon presses Wiggins on this. Does *animal* not encapsulate a general biological activity sufficient for saying whether a is identical with b ? No – think of the dramatic kinds of metamorphoses some organisms can survive and others cannot (compare sparrows, dogs, frogs and butterflies). One size does not fit all when it comes to animal individuation. But what about '*mammal*'? Could one re-identify some x by thinking of it as a mammal? Perhaps, but there are two reasons for doubt. Firstly, there is still striking variation among the living activities of mammals (compare dogs, dolphins and duck-billed platypi). Secondly, there is surely something important (for the descriptivist, at least) in the fact that we do not, in practice, pick things out primarily as 'mammals'. Children, certainly, seem to grasp what it is to be a dog or a cat, before understanding the more generic sortal *mammal*.

¹⁹⁶ Wiggins 2001: 72

¹⁹⁷ Ibid: 22, 27

rhododendrons, or human animals, we turn – as we’ve seen – to their distinctive principle of *activity*.

Also worthy of mention here is **D(vi)**. This principle – relevant to discussions of *fission* – states that *f* is a substance concept only if it determines a notion of coincidence (or in the case of changeable substances, a notion of continuity¹⁹⁸) that is fully *transitive*:

D(vi): If *f* is a substance concept for *a*, then *coincidence under f* is fully determinate enough to exclude this situation: *a* is traced under *f* and counts as coinciding under *f* with *b*, *a* is traced under *f* and counts as coinciding under *f* with *c*, yet *b* does not coincide under *f* with *c*.¹⁹⁹

D(vi) emphasizes another distinction between merely apparent and genuine substance sortals. It distinguishes between sortals that covers substances – changeable, persisting substances of the kind we find around us, i.e. *particulars* – and sortals that cover clones, or varieties, or strains, i.e. *universals*.²⁰⁰ Consider, for example, the amoeba that splits – neither of the products can be the same amoeba as the ‘parent’. They exemplify the same strain or clone, but no more.²⁰¹ As we will see (in chapter 4), this analysis feeds directly into Wiggins’ recent assessment of brain transplantation – as does the discussion in the next section, which focuses on the metaphysical distinction between natural things and *artefacts*.

¹⁹⁸ Wiggins 2001: 59

¹⁹⁹ Ibid: 72

²⁰⁰ Ibid: 73

²⁰¹ Wiggins 2005a: 445

§1.3. Artefacts and natural objects

Having gained a surer grip on Wiggins' general approach, attention can now be directed to the particulars of his theory. His **D** thesis is, he claims, an extrapolation of the framework that underpins our everyday practices; as such, it is avowedly *sortalist*. When we identify, and re-identify objects in our environment, they are picked out as being of *kinds*, or *sorts*, of things. And not just any 'sort' will do. For sortal terms to guide us in individuation they must pick out what an *x* actually *is* (rather than describing some phase of it). To individuate *x*, *x* must be singled out under a *substance sortal*.

But what terms stand as *substance sortal* terms? This is one of the questions that exercises Wiggins in *SE&SR*. There are a number of applicants: *bat*, *cat*, *student*, *nurse*, *human*... Many of these describe a being's *phases*, or at least, non-substance sortals. What words fulfil the requirements (the **D**-principles) necessary for being a substance sortal predicate (i.e. an expression that stands for a substance concept) by which we can assess identity judgments? Or, to ask a parallel question, borne from an older metaphysical tradition: which things are *substances*?

For Wiggins, it appears that natural things, specifically *living things* – plants, animals, and so on – are substances *par excellence*. He writes:

[They] exemplify most perfectly and completely a category of substance that is extension-involving, imports the idea of characteristic activity, and is unproblematic for individuation.²⁰²

As he sees it, the semantics of *natural kind words* are such that they clearly encapsulate a specifiable *principle of individuation* for their members (as required by **D**(v)).²⁰³ Those terms which we use to pick out natural things – cats, dogs, and so on – are semantically such that they refer to exemplars of that kind, and the specific principle of activity its members exhibit. (The scientific validity of this claim is examined in §3.3.)

There are, however, other objects in our environment that seem to lay claim to 'substancehood', and a correlative aim of Wiggins' work is to examine whether or not *artefactual* kind terms – 'table', 'car', etc. – can function as substance sortal terms as well. In §1.3.b., Wiggins' concerns with artefacts are discussed. Following this, various

²⁰² Wiggins 2001: 90

²⁰³ Ibid: 72

interpretations of Wiggins' position are outlined and critiqued, after which an alternative reading is presented.

§1.3.a. The semantics of natural kind words

Before discussing the semantics of these terms it is necessary to distinguish, if only vaguely, between natural and artefactual kinds. The line has been drawn in different ways, but a prominent view – exemplified below in Rudder Baker's analysis – is that 'natural' things are things that are *independent* of human practices. 'Artefacts', by contrast, are taken to be products of human practices, fabricated by humans ('man-made') – and artefactual kinds are marked out by us and defined in relation to the practices from which they issue and the functions they perform. For what follows, this is labelled the *standard view* (stated more precisely below).²⁰⁴

How does Wiggins take 'natural kind' words, like 'cat' and 'tree', to *refer*? His discussion in *SC&SR* begins with a critique of the nominalist essentialist account of natural kind words. An introduction of this will stand us in good stead for what follows. The nominal essentialist seeks, as Wiggins writes, 'to specify the sense of "sun" or "horse" or "tree" by a description of such things in terms of manifest properties and relations or in terms of appearance.'²⁰⁵

For example, the essentialist will group fruit together as *lemons* because of their yellow appearance, tartness of taste, thickness of skin (etc.). This is to play the role of taxonomist. And, as Wiggins points out, this way of selecting members of a kind is not *open to the world*.²⁰⁶ Accounts that describe how natural kind words refer in terms of a *nominal essence* cannot explain how our conceptions of a kind can *evolve* (as we learn new things about them) while still being conceptions of that same kind. When scientific inquiry reveals to us, e.g. that lemons have a distinctive genetic structure (if in fact they do), we will want to exclude from the kind *lemon*, fruit that are only superficially similar (like etrogs), and include bruised, unripe, and discoloured fruit that have the appropriate molecular make-up. Thus:

²⁰⁴ For a further analysis of the 'standard view' see Hilpinen 1993: 156–7

²⁰⁵ Wiggins 2001: 78

²⁰⁶ Ibid: 78, 160, 173

[A] more satisfying account [of natural kind semantics] will emphasize the contribution that the world itself makes to those conceptions.²⁰⁷

It is exactly this kind of receptivity that is supposed to be captured by Wiggins' *deictic-nomological* method,²⁰⁸ a position built firmly on the foundations laid by Saul Kripke and Hilary Putnam.²⁰⁹ As we find it in *SE&SR*, this doctrine states that the explanation of the sense of a natural kind word revolves around *exemplars* (or 'stereotypes') of that kind (thus requiring context: *deixis*) and the nomological connections that hold between them. So, Wiggins writes:

...*x* is an *f* (horse, cypress tree, orange, caddis-fly...) if and only if, given good *exemplars* of the kind that is in question, the best theoretical description that emerged from collective inquiries into the kind would group *x* alongside these exemplars.²¹⁰

That is, there are law-like principles, known or unknown,²¹¹ that hold between exemplars, and can thus collect together the extension of the kind around these representatives.²¹² These gradually evolving theoretical descriptions (Putnam's 'sameness relations') are the ones that e.g. biologists lay out as they investigate the natural world *a posteriori*.²¹³ And a particular theoretical description encapsulates the 'principle of activity' to which we turn when individuating natural substances. It encapsulates the 'determinate pattern of growth and development towards, and/or persistence in, some particular form'²¹⁴ – and thus meets the central **D**(v) requirement for substance sortal terms.

There are nuances that, for the sake of succinctness, can be passed over here,²¹⁵ the core claim is that on this model of reference, *natural kind words* seem to meet the requirements laid out by the **D**-principles. Wiggins writes:

²⁰⁷ Wiggins 2001: 78

²⁰⁸ See especially Wiggins 2001:79–80ff

²⁰⁹ Kripke 1980. And – though less directly influential for Wiggins – Putnam 1973

²¹⁰ Wiggins 2001: 79

²¹¹ Wiggins 2001: 72, and 1980: 80f

²¹² Wiggins 2001: 80

²¹³ Ibid: 86

²¹⁴ Ibid: 86

²¹⁵ Some will be discussed in chapter 3. For example, we might raise questions about how the sameness relation is supposed to be identified in the first place, since – surely – weighting different areas of similarity differently will create different measures of 'sameness'. This thought, assayed in Okasha 2002.

[The *deictic-nomological* method] contains most of the answer to the problems that we have posed about the demands of **D**(iii), **D**(iv), **D**(v) and all the other **D** principles. If there have to exist true law-like principles in nature to underwrite the existence of the multiply instantiable thing that is the reference of a natural-kind predicate if law-like principles of this kind have to exist in order for that general thing's extension to be assembled around the focus of actual specimens or for a reality-invoking kind of sense to be conferred on the term standing for the concept *f*, then they must also determine directly or indirectly the characteristic development, the typical history, the limits of any possible development or history, and the characteristic mode of activity of anything that instantiates the kind.²¹⁶

On the deictic-nomological model, natural kind words work well as substance sortal predicates because they refer us to the rich inner workings of the kind's members, and thus encapsulate the laws that constrain their persistence.

§1.3.b. Artefact words and puzzles

On the *standard view*, natural items are contrasted with *artefacts*, objects like hammers and clocks, which are dependent on human practices and intentions. Such things are also subject to our individuating practices; we track them, assert ownership of them, and so on. Yet, unlike Putnam, Wiggins appears to reject the application of the deictic-nomological method to such things on the grounds that the correlative terms lack nomological grounding.²¹⁷

Consider – as Wiggins does – the case of a clock:²¹⁸ clocks can be constituted by different materials and can work according to vastly different mechanisms (compare, e.g., a sundial, a grand-father clock, and a fob-watch). The nomological claims we can make about members of the kind *clock* are strikingly meagre in comparison to the copious and detailed biological and chemical descriptions that link members of e.g. the kind *human being*. The stereotypes lack internal or scientific resemblances, and cannot be

²¹⁶ Wiggins 2001: 84

²¹⁷ Ibid: ch.2, §2–3. In this, Wiggins' position aligns with Schwartz (see Schwartz 1978). For a good introduction to these issues, and an overview of the debate before Wiggins' arrival, see Kornblith 1980.

²¹⁸ It is this example with which Losonsky takes umbrage (in Losonsky 1990). He believes that artefacts *do, contra* Wiggins, develop in a nomologically grounded way.

grouped by reference to a common constitution; there are no hidden depths to plumb, so to speak, when asking whether x is a member of the kind *clock*.²¹⁹ Consequently – Wiggins contends – things like clocks can only be grouped under functional descriptions that are precisely *indifferent* to specific constitution and any particular mode of interaction with the environment.²²⁰ In short, he sees members of the kind *clock*, and similar ‘artefactual’ kinds, to be collected by reference to a conceptually shallow *nominal essence*. E.g. a tin-opener is any instrument made for opening soldered tins, a pen is any ink-applying writing implement.²²¹ The semantics of these kinds of kind words make no reference to law-like dispositions, or typical histories of their membership, but to a *function* – and it is to this (formalized into the ‘principle of functioning in $\mathbf{D}(v)$) that Wiggins directs us when individuating these kinds of things.

[O]rdinary artefacts are individuated by reference to a parcel of matter so organized as to subserve a certain function...²²²

On one reading then, it seems that Wiggins holds that artefact kinds are grouped by reference to nomologically shallow functional essences, and that it is by reference to the matter that subserves this function that we individuate these kinds of thing.²²³ Further, he seems to hold that the persistence conditions encapsulated by artefactual kind terms are in some sense *weaker* than those of their natural kind counterparts. For example, the kind term *clock* alludes only to a particular function, not to a particular organization, or continuity – and as a result does not rule against e.g. *disassembly*, *part-replacement*, and *pauses of indeterminate length*. This shallowness is illustrated clearly by Wiggins:

A clock may stop because it needs winding up. Such a pause does not prejudice its persistence. A clock can stop because it needs to be repaired; and again it persists, however long the lapse before the repair... The nominal essence of *clock* must involve a stipulation of some sort concerning the capacity to tell the time. But surely the

²¹⁹ And for this reason, as Wiggins points out, we are never surprised by facts about artefacts, but are constantly astonished by the intricate workings of members of natural kinds (of the order of surprise that might strike one on learning that tadpoles are frogs). Wiggins 2001: 88

²²⁰ Wiggins 2001: 87

²²¹ Ibid: 87

²²² Ibid: 91

²²³ ‘Functioning’, as Wiggins has it, is no more ‘than remotely analogous to the activity of natural things’. Wiggins 2001: 90

uninterrupted continuance for all t of the capacity at t to tell the time at t will not be stipulated. This is too strong. The only loss that could count to any appreciable degree against the persistence of the clock is a *radical and irretrievable* loss of the time-keeping function.²²⁴

This analysis appears to lead Wiggins to the thought that the *semantic* difference correlates to a *metaphysical* distinction. The nomological shallowness provokes puzzles of identity which demonstrate a contravention of **D**(vi).

One of the most notorious of these puzzles – and one repeatedly discussed by Wiggins – is the so-called ‘Theseus’s ship’ case. In this fission narrative, drawn from Plutarch’s *Lives* by Hobbes and redeployed in *ISTC* (and its sequels), we are asked to imagine a ship that has all of its parts gradually replaced with strong, new planks, screws, etc. There is nothing in the nominal essence of *ship* that precludes this (nor would we want there to be). But imagine that someone collects all the old, discarded parts – blemished, but not unusable – and builds with them another vessel, of exactly the same design as the first. Given the weakness of the conditions for artefact persistence – admitting both part replacement and disassembly and reassembly – the second vessel, made from the original parts, can *also* be seen to be the same ship as Theseus’s. Here, then, is the puzzle: both resultant vessels can be construed as identical with the original, and yet they can hardly be identical with each other. The transitivity of identity is undermined (thus the contravention of his **D**(vi)).²²⁵

In the situation described the term *ship* fails to fulfil a condition that, for Wiggins, a term will meet if it is a substance sortal term.²²⁶ The repercussions are potentially severe; we will begin to question whether *ship* can be a substance sortal concept at all. The same is true for *clock*, *pen*, *tin-opener*, and so on. The principle of functioning does not seem enough by itself to successfully pick out and trace an object through time, and the conclusion we are led towards is that these sortals are not

²²⁴ Wiggins 2001: 91–92 (And, as Wiggins notes, ‘even under this circumstance, the clock itself may be held to have survived...’) Are there biological analogues of this? The living activity of seeds trapped – and preserved – in glacial ice might, for instance, be said to undergo a pause of indeterminate length. But in these cases, at least, this kind of stasis appears to be a *facet* of the living activity – it is part of the mode of being of such things that they can survive freezing. Contrast with the artefacts that survive *in spite of* such interruptions.

²²⁵ On this, see Wiggins 2001: 93, 99, where he configures this problem as a tension between the ordinary commonsensically strict notion of identity and the commonsensically loose requirements of artefact identity. Note also, that these kinds of artefact puzzles are not applicable to all supposed artefacts. Artworks are especially interesting here, and Wiggins devotes some time to exploring the degrees of replacement and repair that, e.g. paintings can undergo (Wiggins 2001: 136–139)

²²⁶ This failure can also be formulated in terms of the **D**-principle **D**(iii) – see Wiggins 2001: 70 and 92.

sufficient for individuation. This, as Wiggins notes, correlates to the disquieting thought that the items these artefactual terms refer to are not ‘genuine entities’.²²⁷ Whether or not he himself holds this view will now be discussed.²²⁸

§1.3.c. Wiggins’ view of the *existence* of artefacts

There are two main lines of interpretation of Wiggins’ metaphysical analysis of artefacts. Massimiliano Carrara and Pieter E. Vermaas hold that Wiggins’ denies the *existence* of artefacts. Lynne Rudder Baker and Michael Losonsky claim that he considers artefacts to be, in some way, ontologically *inferior* to natural items, and not ‘genuine substances’. These readings are discussed below. An important distinction is drawn between questions about *existence* and questions about *substance*, and some significant, distinguishing marks of the Quinean and Aristotelian metaphysical traditions are outlined.

Does Wiggins deny that artefacts, like chairs and tables, actually exist? This is the view Carrara and Vermaas attribute to him in their paper ‘The fine-grained metaphysics of artifactual and biological functional kinds’.²²⁹ Examining Wiggins’ discussion of artefacts, they claim both that he denies artefacts are members of real kinds, and that this consequently leads him towards an ‘Aristotelian’ conception, whereby ‘...metaphysically there are not such things as cars and tables because, in an Aristotelian vein, cars and tables do not have their own essences or principles of activity.’²³⁰ This,

²²⁷ Wiggins 2001: 99–100

²²⁸ The focus above is on the general worries puzzles like this provoke, not on Wiggins’ specific response to this particular case. However, for the sake of completeness, a brief overview can be entered. Wiggins’ thoughts about Theseus’s ship have changed during his philosophical career. In *S&S* and *S&SR* he suggests we deploy supplementary principles to bolster artefact identity conditions. He adapts an identity condition for quantities, formulated by Helen Morris Cartwright. The – almost comically gestural (Wiggins 2001: 100) – condition concerns the addition and subtraction of matter: matter can be exchanged and replaced so long as (i) the artefact retains its capacity to perform the function for which it was designed, and (ii) it retains more than half its matter (ruling out fission). More recently, in his 2012 paper, Wiggins proposes a slightly subtler response: we can only answer this question when we have entered into serious dialogue with those who make and use the ships: ‘it would be wise for philosophy not to hold itself aloof from the uses of those who[se] ship it is. Typically, they will decide such a matter not once and for all but incrementally and in a way that the theorist needs to understand before he ventures to criticize.’ (Wiggins 2012: 15) The suggestion, then, is that answering the puzzle is a much bigger project than philosophers typically take it to be. It will be a matter of more thoroughly elucidating our thoughts about artefacts and ownership – and while no further verdict on the case will be offered here, the closer focus on the descriptive analysis of our *artefact* concept is encouraged in §4.4.

²²⁹ Carrara and Vermaas 2009

²³⁰ Ibid: 126

they describe as an ‘Aristotelian anti-realistic conception of artifacts’.²³¹ Setting it out in greater depth, they write:

[W]e cannot find regularities in behaviours and form in functionally characterized artifacts, such as clocks, and they are not subject to common laws comparable to the natural kind case. Functional descriptors thus do not refer to an inner constitution of artifacts...

The result is twofold. From an epistemological point of view the conclusion is that artifact kinds do not support induction at all. We cannot infer, for example, any truth about chairs from the observation of some instances of chairs... From an ontological point of view the result is that artifacts exist only in what Sellars (1963) calls the ‘manifest image’. People project artifact careers, but by a serious ontological inventory of the world, *artifacts do not exist*.²³²

This passage is notable in two respects. Firstly, it attributes to Wiggins a curiously extreme view. Secondly, it exhibits a peculiar overlap of metaphysical traditions; questions are being asked that are out of place in this methodological context; different strands of Western metaphysics are becoming snarled in the conceptual equivocation of ‘substance’ and ‘existent’. To draw out this latter point first, it will be helpful to turn to some recent methodological studies by Jonathan Schaffer in which he turns to the crucial, but neglected, distinction between Quinean and Aristotelian approaches to metaphysical practice.²³³ Using these studies we can read Vermaas and Carrara’s ‘anti-realism’ as a Quinean corruption of the Aristotelian position, and following this, inappropriate as applied to Wiggins’ work.

For Quine, as Schaffer sees it,²³⁴ the main task of metaphysics is to say *what exists*. (Thus, the characteristic question with which Quine starts his inquiry: *what is there?*²³⁵) In general, his answer is the understated ‘everything’, but he recognises that there is room for disagreement over cases – we might wonder whether properties exist, or meanings, or numbers – inventorying which of these things exist is the remit of metaphysics.

²³¹ Carrara and Vermaas 2009: 126

²³² Ibid: 130 (my emphasis)

²³³ E.g. Schaffer 2003, 2009, 2010

²³⁴ Schaffer 2009: 347–348

²³⁵ Quine 1963: 1

The science-led method that Quine deploys to pursue this task has already been mentioned. The only entities that we should admit to our ontology are those that are posited by our best theory,²³⁶ which for Quine is physics. The theories by which we explain the physical interactions of matter, are taken, and translated into canonical logic. Those items that the bound variables must range over to be true are the items to be included on our ontological ‘call-sheet’. (Thus the slogan: *to be is to be the value of a variable*.) One result of this kind of programme is that it produces what Schaffer calls a ‘flat ontology’. There is no order to the list of things that exist. They are either included in the list, or they are not. Schaffer writes:

[T]he Quinean and the Aristotelian tasks involve structurally distinct conceptions of the target of metaphysical inquiry. For the Quinean, the target is *flat*. The task is to solve for $E =$ the set (or class, or plurality) of entities. There is no structure to E . For any alleged entity, the flat conception offers two classificatory options: either the entity is in E or not.²³⁷

On the Quinean model, therefore, we are encouraged to ask: do artefacts exist? Counter-intuitive as it is, given the Quinean method the response might be in the negative, since entities like chairs and tables (unlike quarks, perhaps) are inessential to physical explanations. (This is the picture (or at least part of the picture²³⁸) that we find in Peter van Inwagen’s Quinean metaphysics (‘...there are’, he writes, ‘no tables or books or rocks or hands or legs...’²³⁹).

In contrast to the flat ontology of Quinean metaphysics, the Aristotelian picture is of an *ordered structure*: a graded, hierarchy of being. As Schaffer reads him, Aristotle’s attitude to the sorts of existence questions we find in Quine is trivializing;²⁴⁰ asked whether or not numbers,²⁴¹ time,²⁴² or the infinite,²⁴³ exist his answer tends to be a

²³⁶ Quine 1963: 12–13

²³⁷ Schaffer 2009: 354

²³⁸ Peculiarly, van Inwagen claims that organisms exist, and do so because they have a single biological life, which organizes them in such a way as to create unity. Here again we see a bizarre mottling of metaphysic. He claims his position is Aristotelian *and* Quinean; but being Quinean, he is reductionist about biology, and being reductionist about biology, and reducing biological life to a matter of physico-chemical reactions, he cannot also be Aristotelian in the sense (as he claims) of attributing privileged substancehood to organisms.

²³⁹ Van Inwagen 1990: 18

²⁴⁰ Schaffer 2009: 348

²⁴¹ Aristotle *Metaphysics* 1077b32–3

²⁴² See Owen 1986: 275 (via Schaffer 2009: 352)

dismissive ‘yes’. He is concerned instead, with the further issue of *how* such things exist – or, more specifically, as Schaffer has it: his focus is on *ontological dependence*.

On the Aristotelian model, of the things that we encounter some *depend on*, or – in a more medieval idiolect – are *ontologically posterior* to others.²⁴⁴ Consider, for instance, the relation between a mouth and a smile, or a quality, like ‘green’ and a blade of grass – in these cases one thing is seen to depend upon another, not perhaps *causally* but (as is discussed in §3.4), *essentially*. There are different ways that items can ontologically depend upon others²⁴⁵ – they can *inhere* in, be *posterior* to, or be *grounded* on – and some of these will be examined in the pages below. But the important point here is that while the relation of ontological dependence is apparently absent in the Quinean programme,²⁴⁶ it is the mainstay of the Aristotelian framework; it is the aim of the *Categories*, broadly speaking, to mark out lines of dependence. A core issue for Aristotle – Schaffer contends – is determining what the *primary substances* are, those things that stand under (sub-stantia) the others. *Substances* are the focus here, rather than existents.

These methodological musings may seem somewhat obscure, but the intermediary point is that Carrara and Vermaas’ ‘*Aristotelian anti-realistic conception*’, which denies the existence of artefacts, is a Quinean corruption of the Aristotelian claim (unsurprising given the current dominance of the Quinean approach in the Anglophone world).²⁴⁷ Aristotle – on Schaffer’s reading, at least – would not have been concerned with whether or not to include artefacts in his ontology. Rather, the question that troubled him, and to which it seems he found a positive answer, was: are they *ontologically posterior* to other entities? Or, *are they substances?*

Crucially, this is the level on which Wiggins engages with the puzzles of artefact identity.²⁴⁸ Nowhere does he ask whether artefacts *exist*. Rather, his interest lies in whether the worries above imperil the thought that artefacts are *substances*. Having outlined the Theseus’s ship narrative, he remarks that it seemingly drives us towards the ‘fearful outcome... anticipated in the high metaphysical tradition of substance that

²⁴³ Aristotle *Physics* 206b13–16

²⁴⁴ For an overview of Aristotle’s notions of *priority* and *posteriority* and how they relate to dependence, see Gill 1989: 3ff

²⁴⁵ See, e.g. Correia 2003: 1013

²⁴⁶ Schaffer argues that the Quineans have attempted to eschew talk of dependence, yet remain implicitly committed to it – see his 2009: §1.

²⁴⁷ Schaffer 2009: 347

²⁴⁸ It is interesting that the Aristotelian analysis of dependence is enjoying something of a revival at the moment. Philosophers like Schaffer and Fine are seen to be effecting a ‘significant reorientation’ (Koslicki 2012b: 186) in the analytic sphere, suggesting that questions in metaphysics are more profitably understood as questions about dependence.

seeks... to demote artefacts from the status of genuine entities...²⁴⁹ Clarifying this remark – he refers specifically to Aristotle, who ‘maintained that natural things are the real beings par excellence to which everything else is secondary’.²⁵⁰

§1.3.d. Wiggins’ view of the *substancehood* of artefacts

Ultimately, the Quineanism in Carrara and Vermaas’ analysis might be rephrased in terms of issues about ontological dependence (indeed, Schaffer’s contention is that such analyses presuppose these metaphysical relations).²⁵¹ But even so, would they be right to attribute any form of this Aristotelian view to Wiggins? He recognises the issues, and the possible demotion of things like clocks and computers; but does he deny their ‘genuine’ substancehood? And does this mean that he sees them to be ontologically *inferior* to natural substances? This is how both Losonsky and Rudder Baker read him. In his ‘The Nature of Artifacts’,²⁵² Losonsky writes:

David Wiggins defends the view... that ‘artificial machines’ are not ‘true substantial unities’...²⁵³

More explicitly, in her ‘The Shrinking Difference between Artifacts and Natural Objects’,²⁵⁴ Rudder Baker states:

I am not claiming that Wiggins denies that there exist artifacts, only that he distinguishes between natural and artifactual kinds in ways that may be taken to imply the ontological inferiority of artifacts.²⁵⁵

In this section, the focus will be on Rudder Baker’s analysis of Wiggins. On her reading, Wiggins holds that natural items are *genuine* substances and that artefacts are not, and are in some way ontologically *inferior* to them. Having constructed this reading she attempts to demolish it, stating that Wiggins’ grounds for distinguishing artefacts from natural

²⁴⁹ Wiggins 2001: 99–100

²⁵⁰ Ibid: 100 n.25

²⁵¹ Schaffer 2009: §1–2

²⁵² Losonsky 1990

²⁵³ Ibid: 81

²⁵⁴ Rudder Baker 2008 (this paper is a reworking of her 2004)

²⁵⁵ Ibid: n.5

things either fail completely, or fail to legislate any relevant ontological distinction between the two kinds. Her interpretation of Wiggins will be questioned and rejected.

Rudder Baker claims that Wiggins presents five possible ways of distinguishing between natural objects and artefacts, in such a way that the former can be conceived in some way ontologically ‘superior’, or more ‘genuine’ than the latter. They are:

- (1) Fs are genuine substances only if Fs have an internal principle of activity.
- (2) Fs are genuine substances only if there are laws that apply to Fs as such, or there could be a science of Fs.
- (3) Fs are genuine substances only if whether something is an F is not determined merely by an entity’s satisfying a description.
- (4) Fs are genuine substances only if Fs have an underlying intrinsic essence.
- (5) Fs are genuine substances only if the identity and persistence of Fs is independent of any intentional activity.²⁵⁶

Immediately striking is that, while (1)–(5) undoubtedly connect in some way to the condition that was found in $\mathcal{S} \leftrightarrow \mathcal{SR}$, they represent a dismantling of Wiggins’ original position.²⁵⁷ Wiggins’ view is that natural things are those that have principles of activity founded in law-like dispositions that form the basis for extension-involving sortal identification.²⁵⁸ Thus, having a principle of activity (Rudder Baker’s (1)) is intimately related to whether or not there can be a science – in the sense of an *a posteriori* investigation – of an item (2). Equally, the intrinsic essence of a substance is taken, by Wiggins, to encapsulate the principle of activity, so (1) and (4) do not seem to be separable either. It is not necessary to spell out all the connections between (1)–(5) in depth; the general point is that one might have initial concerns with another ‘piecemeal’ analysis of Wiggins’ work.

²⁵⁶ Rudder Baker 2008: 3–4

²⁵⁷ This is made explicit by Rudder Baker in her 2008: n.5: ‘All the conditions either follow from, or are part of, the basic distinction that Wiggins draws between natural objects and artifacts. There is a complex condition that natural objects allegedly satisfy and artifacts do not: “...a particular constituent x belongs to a natural kind, or is a natural thing, if and only if x has a principle of activity founded in lawlike dispositions and propensities that form the basis for extension involving sortal identification(s) which will answer truly the question “what is x?”’

²⁵⁸ Wiggins 2001: 89

One may also wonder at what point the ontological judgement ‘Fs are genuine substances only if...’ enters Rudder Baker’s reading? Wiggins is focussed on substancehood, but he talks of ‘exemplifying the category of substance’, not of being ‘genuine substances’ – and it is nowhere in her essay made explicit where this comes from. (This is returned to, below.)

These then are two preliminary concerns. They can be twinned with some equally general worries about her rejection of (1)–(5). In her paper, she claims that Wiggins’ distinction between artefacts and natural things is misguidedly grounded in one or more of (1)–(5). Her tactic is to go through each in turn and present counter-examples to show why these conditions fail to mark a genuine distinction, and why, consequently, they cannot support any ontological disparity between artefacts and natural items.²⁵⁹ A brief survey of the counter-examples suggests, again, that her analysis misinterprets Wiggins’ particular construal of notions like ‘activity’, and ‘science’, and ‘essence’. (And again, the following objections are only intended as vague indicators of a more general worry with her interpretation.)

In refuting (1), she uses ‘a heat-seeking missile’²⁶⁰ as an instance of an artefact that possesses an internal ‘principle of activity’. Yet it is by no means clear that this captures what Wiggins means by a ‘principle of activity’²⁶¹ – that is, a nomologically grounded *mode of being*, about which we may learn unknown and potentially surprising facts. Heat-seeking missiles lack nomological depth. There are related difficulties with Rudder Baker’s counter-example to (2), where she offers ‘computer science’²⁶² as a case where artefacts are the subject of scientific inquiry. Computer science, presumably, is not the kind of *a posteriori* enterprise that Wiggins is thinking of, which attempts to fill out the theoretical descriptions holding between exemplars (again, it seems unlikely that we will *discover* new facts about Amstrads, in the way that we might with natural things).

Further, in rejecting (3), Rudder Baker offers ‘gold’ as an example of a natural thing²⁶³ – but one may well question whether this is a *sortal* term, in the sense laid out above, since (like ‘water’ and ‘air’) it fails to take numerical modifiers. (Also in response to (3), she describes a situation where archaeologists believe two artefacts to be of the

²⁵⁹ Rudder Baker 2008: 4–6

²⁶⁰ Ibid: 4

²⁶¹ ‘[A] delicate self-regulating balance of serially linked enzymatic degradative and synthesizing chemical reactions [that enables an object] to renew [itself] on the molecular level at the expense of those surroundings, such renewal taking place under a law-determined variety of conditions in a determinate pattern of growth and development towards, and/or persistence in, some particular form’ Wiggins 2001: 86

²⁶² Rudder Baker 2008: 5

²⁶³ Ibid: 5

same kind, without knowing what they are (i.e. whether or not they were used in battle or in religious rituals), substantiating the thought that artefacts can be determined indexically rather than by satisfying a description. Significantly, however, picking out these archaeological finds indexically will not allow the archaeologist to pick them out as artefacts rather than, potentially, *parts* of artefacts.)

Her reading of Wiggins' analysis of 'natural kind' and 'intrinsic essence' in (4) is also problematic. She denies that natural things necessarily have an underlying intrinsic essence, and cites wings (of birds and insects) as counter-examples to the fourth claim. This however, misconstrues Wiggins' view of natural kinds and natural substances – in anticipation of the arguments in chapter 4, one prominent line of interpretation finds him rejecting the idea that organs, or body-parts register as substances. (The place of 'intrinsic essence' in his work is also discussed in more detail below.)

With these concerns raised, an intermediate point can be made. These listed counter-examples, as well as being ill-fitting, indicate that Rudder Baker has a *prior* understanding of the distinction between natural things and artefacts against which she is measuring Wiggins' putative conditions. She claims that the distinctions described in (1)–(4) fail because there are natural things and artefacts that are not accommodated by this suppressed view. It is in (5) that this prior understanding of the distinction is brought to the fore. She states that, unlike (1)–(4), the fifth *does* distinguish between artefactual and natural kinds.²⁶⁴

An artifact's being the kind of thing that it is depends on human intentions.²⁶⁵

And, elsewhere:

Artifacts are objects intentionally made to serve a given purpose; natural objects come into being without human intervention.²⁶⁶

For Rudder Baker 'artefacts' are intentionally made to serve a particular purpose.²⁶⁷ Hers is a statement of, what was called above, the '*standard view*' of the distinction between natural things and artefacts – and she goes on to claim that Wiggins must turn to (5) to undergird his artefactual/natural distinction: the independence from human intentions

²⁶⁴ Rudder Baker 2008: 6

²⁶⁵ Ibid: 6

²⁶⁶ Ibid: 1

²⁶⁷ Ibid: 1

determines the difference between artefacts and natural things. For Rudder Baker, the ontological disparity she finds in Wiggins can only be based on this fifth condition: artefacts are ontologically inferior because we made them – they depend, in some way, on the human mind.

Yet this critical method, and indeed the generalizing found in Vermaas and Carrara, fails to register the important point that Wiggins' actual condition is intended to be *stipulative*.²⁶⁸ Wiggins demonstrably avoids endorsing the *standard view* – a point he makes explicit in the texts to which Baker, Vermaas and Carrara refer. He states explicitly that his distinction does *not* map onto the distinction between fabricated objects which are the products of human minds, and natural objects which are not:

[A] particular continuant x belongs to a natural kind, or is a natural thing, if and only if x has a principle of activity founded in lawlike dispositions and propensities that form the basis for extension-involving sortal identification(s) which will answer truly the question 'what is x ? ...it is not the question of whether a thing was fabricated but rather the difference between satisfying and not satisfying this condition that makes the fundamental distinction. Loosely and because there is no other handy term, I shall continue to call objects that fail this crucial condition 'artefacts'. But this is without prejudice to the question... of the possibility (which I have no wish to prejudge) of the artificial synthesis of natural things.²⁶⁹

He specifically recognizes the possibility of artificially (intentionally) synthesized natural objects (as in the quotation above).²⁷⁰ He also accommodates artefactual readings of non-man-made objects like wasp's nests, and India rubber balls.²⁷¹ Similarly, he holds that some artefacts on the *standard view* – like works of art²⁷² – have a nomological depth beyond that of e.g. chairs, and are less 'artefactual' as a result. Rudder Baker's is a misinterpretation of the distinction Wiggins draws and her critique, which attempts to show how Wiggins' account fails to correspond to the *standard view*, misses the point.

²⁶⁸ This is clear from his 1980 (89) and his 2001 (89) though, as discussed below, he examines the standard view in his 1995.

²⁶⁹ Found in Wiggins 2001: 89

²⁷⁰ Wiggins 2001: 90 (also e.g. his 1996 'Reply to Snowdon', and his 1980, chapter 6)

²⁷¹ Ibid: 90

²⁷² Ibid: 136–139

On Baker's reading, Wiggins sees artefacts to be dependent on human minds. Further, she holds this to be the basis for a metaphysical distinction in Wiggins' work: artefacts are mind-dependent, and thus not 'genuine substances', in contrast to natural things which are consequently *ontologically superior*. And perhaps she is right to deny that mind-dependence is metaphysically relevant here²⁷³ – but this criticism does not apply to Wiggins' analysis. In the next section, this point is precisified by a closer analysis of Wiggins' discussion of the *substance* concept, and the elision that Baker makes between 'genuine' substancehood and ontological superiority is rejected.

§1.3.e. Wiggins' view of substance

The following interpretation is guided by comments in Wiggins' paper 'Substance'.²⁷⁴ Ostensibly an introductory essay, but one of impressive complexity, it starts by explaining Aristotle's use of the term 'substance' (or its correlates *ousia*, *on hypokeimenon*, etc.), and situates it firmly within the tradition that Schaffer, as above, contrasts with the Quinean programme.²⁷⁵ It goes on to respond to the empiricist rejection of the notion, and in doing so, encompasses the issue of the substancehood of artefacts.

Wiggins states that among our core concepts, alongside our notion of *sameness*, is the concept of *substance*. When we look to our everyday practices we see that they are premised on the primitive idea of a 'a persisting and somehow basic object of reference that is there to be discovered in perception and thought...'²⁷⁶ Here, I quote liberally:

Salient among the things that we have to recognize, if we are to make sense of the world, are the substances.²⁷⁷

There is a central thought in our conceptual scheme which we do not know how to do without, that we can gradually amass and correct a larger and larger amount of information about one and the same thing, the same subject, and can come to understand better and better in this way how these properties intelligibly cohere or why they arise together.²⁷⁸

²⁷³ Rudder Baker 2008: 7–8

²⁷⁴ Wiggins 1995

²⁷⁵ Wiggins 1995: 214ff

²⁷⁶ Ibid: 214

²⁷⁷ Ibid: 216

²⁷⁸ Ibid: 216

Their claim is a claim on our practical and theoretical reason. Everything conspires to force them upon us if we have the slightest concerns to find our way about the world or understand anything at all about how it works.²⁷⁹

Wiggins' descriptive approach elucidates the concept of substance by turning first to the primitive notion he finds underlying our practices. From the outset, therefore, the notion of substancehood is supposed to be attuned to the world-view of the human inquirer.²⁸⁰ As is typical of the descriptive approach, there is a blurring between ontological and epistemological issues:

For us, the importance of the category of substance... is not so much ontological as relative to our epistemological circumstances and the conditions under which we have to undertake inquiry. These circumstances and conditions determine where we have to begin in order to find our way about, in order to designate spatial and temporal landmarks, and in order to find workable, dependable, low-grade generalizations about how identifiable classes of things come into being, persist and behave.²⁸¹

We turn to how the *substance* concept functions in our thoughts to elucidate this metaphysical notion. And – as has been emphasized – this elucidation is one strand in Wiggins' wider connective analysis, and proceeds in concert with elucidations of other central concepts, relating to *identity* and *individuation*. Some of these connections are set out above, and some of the elements of Wiggins' elucidation of substance appear in the proximal quotations.

One central component of the concept is that the continuity of a substance cannot be understood as *bare* continuity. Rather, it is implicit in our individuating practices to see in the substances that we pick out, specific laws, or *principles of activity*.²⁸²

²⁷⁹ Wiggins 1995: 245

²⁸⁰ Ibid: 217

²⁸¹ Ibid: 244

²⁸² Thus, '[s]ubstance, so understood, and *activity*... are notions made for one another.' Wiggins 1979: 315. See also 1995: 218

Wiggins' sees our pre-theoretical *substance* concept as encapsulating some notion of entities that 'have a source of change or principle of activity within them'.²⁸³

Following Strawson and Aristotle, Wiggins also focuses on the grammatical distinction between *subject* and *predicate* when analysing this pre-theoretical concept (the 'subject' being the element of the sentence (like 'Socrates') that refers to a particular thing, where the predicate refers to a general characteristic borne by that thing (e.g. 'is wise')).²⁸⁴ For us to engage with the world in the way that we do (Wiggins claims) we must pick out these items which submit to predication without being predicated:

A substance ...is something that is neither in anything else nor predicable of anything else...²⁸⁵

Referring back to the discussion above, and viewing things through the descriptivist's lens, one can see how this grammatical distinction can be taken to exemplify some form of *ontological dependence*. And this seems to be the thought expressed in the following passage from 'Substance':

Among the different subjects you can talk about, some are and some are not in others in the way in which colours and their determinate shades are in things. Some are and some are not in things in the way in which knowledge in general or some specific knowledge... is in things... To the extent that anything is not *in* other things in this way, it enjoys a certain autonomy.²⁸⁶

Looking to our everyday practices, Wiggins finds that we see some things – colours and so forth – to be *in* other items, to depend in some manner upon them. *Substances* are those things upon which other things depend (and here, at least, 'ontological dependence' seems to be understood as a basic relation in our conceptual scheme).

A third central element which Wiggins divines in our *substance* concept is that of 'internal cohesiveness'²⁸⁷ or 'real unity'.²⁸⁸ In our dealings, we treat these basic objects as

²⁸³ Wiggins 1995: 219

²⁸⁴ See Strawson 1974 (see also Snowdon 1998 for a commentary). The grammatical feature – which Burtt and Mei take to be culturally local – is understood to exemplify a central element of our conceptual scheme, and thus (by Strawson's descriptivism) to stand as an indication of metaphysical structure.

²⁸⁵ Wiggins 1995: 216

²⁸⁶ Ibid: 216

²⁸⁷ Ibid: 242

being *more* than collections of interchangeable parts. This thought (examined in greater depth in §3.4) can also be construed in terms of a type of ontological dependence;²⁸⁹ we see certain things as being *prior* to their parts (we understand hearts, for example, by reference to the role they play as parts of the whole organism). In this connection, Wiggins quotes Spinoza:

By a substance I mean that which is in itself and is conceived through itself: that whose concept makes no essential reference to anything else.²⁹⁰

This is a cursory sketch – to be developed below – but provides (hopefully) a clearer sense of Wiggins’ *substance* project. His aim is to draw out the interrelated elements of the *substance* concept which underwrites our everyday practices. And – significantly – he sees that as we bring this concept to bear on the world around us, we find that some items realize these elements to lesser and greater degrees. Some objects more obviously ‘exemplify the category of substance’.²⁹¹ For Wiggins, it is not a ‘yes/no’ matter of either being or not being a substance (this much is recognized by Baker, who talks of ‘inferiority’, and it is missed in Vermaas and Carrara’s binary picture).

It will relax the intellectual cramp that threatens if, instead of trying to decide the question whether artefacts as a class are or are not substances, we resolve to reinterpret the question and see it as a question about the *distance* at which this or that particular artefact (or this or that group of artefacts) lies from the central case in respect of durability, internal cohesiveness, having a relatively self-contained principle of activity, and exemplifying some simple law of change.²⁹²

It is important to note that in this passage, from ‘Substance’, Wiggins is writing about artefacts as they are defined on the *standard view* – and it demonstrates that, in contrast to Baker’s assessment, Wiggins may well hold that artefacts (on the *standard view*) can exemplify the category of substance.²⁹³ Nor should this be surprising, Wiggins suggests,

²⁸⁸ Wiggins 1980: 98

²⁸⁹ The connection between ‘ontological dependence’ and ‘priority’ is articulated well by Gill (in her 1989).

²⁹⁰ *Ethics*, first part, definition III, quoted in Wiggins 1995: 223

²⁹¹ Wiggins 2001: 90

²⁹² Wiggins 1995: 243

²⁹³ Wiggins, for instance, will see intentionally produced, synthetic organisms and certain artworks, to be substances. Wiggins 2001: 89–90

since fabricated objects are made in such a way that they register as basic persisting objects in our pre-theoretical conceptual scheme.

[T]he solidity, durability, and internal cohesiveness of a vast preponderance of our artefacts, some of them outlasting their makers (who certainly were substances) by millennia, would be a standing reproach to any would-be puristic ruling to the effect that artefacts stand at too great a distance from the natural continuants that furnished us with our original paradigm of substance. Indeed such a ruling would represent in at least one way an affront to the spirit of the original conception. For not only do artefacts submit to predication without being predicated, not only can they furnish us with a ‘this’ and furnish (insofar as we know what this means) something ‘separable’. Their usefulness and effectiveness in the performance of the functions signals and celebrates the very same evolving understanding of the way ordinary perceptible things behave that made the notions of substance, of nature, and of substances with their natures so interesting and important to us in the first place.^{294, 295}

Are artefacts substances? The question is blunt and both ill fits the subtle elucidatory analysis Wiggins offers of *substance* and neglects the distinction he draws between artefacts and natural items. *Are artefacts genuine substances?* This is better, but the binary distinction between genuine and non-genuine still fails to correspond to the spectrum of substancehood that Wiggins articulates. What then *is* his view? By definition, ‘artefacts’ do not have principles of activity but principles of functioning (or operation).²⁹⁶ Depending on the complexity and nomological depth of the principle of functioning, artefacts may more or less clearly exemplify the category of substance – but definitionally they are less substantial than natural things, which possess a principle of activity.²⁹⁷

Perhaps, in some respects, Rudder Baker is right; Wiggins *does* see artefacts to be less substantial than natural things. Yet one must read this metaphysical pronouncement

²⁹⁴ Wiggins 1995: 242

²⁹⁵ Wiggins encourages us to think of the ‘sense of dislocation that would result from our withholding the status of substance’ from them. Wiggins 1995: 242

²⁹⁶ Wiggins 2001: 89

²⁹⁷ ‘Substances are things that have a source of change or principle of activity within them.’ (Wiggins 1995: 219)

carefully. It is not difficult to take it to mean that items which fall further from the paradigm substances, and exemplify that category less well, are somehow less ‘real’ than natural things – this is what is suggested by Rudder Baker’s talk of ‘ontological inferiority’.²⁹⁸ It is, however, an interpretation that sits awkwardly alongside the *pluralistic* elements of Wiggins’ project.

The quotations above indicate that Wiggins does see certain things – colours, for example – to be ‘ontologically inferior’ to the objects in which they inhere, insofar as ‘inferiority’ is read as ‘posteriority’. Thus there is some kind of *hierarchy* in his metaphysics. And if he held, as Rudder Baker believes he does, that artefacts are, as a class, *mind-dependent* on natural objects (us) there might be some basis for this thought. But he does not hold this. Wiggins has no taste for desert landscapes. His metaphysics is verdant and fertile; therein we find *substances* – whose metaphysical character has been sketched above – and *properties* that inhere in those substances. And there are other entities besides, which are not ‘posterior’/‘inferior’ to substances, yet have distinct metaphysical characters – among them are ‘concrete universals’ (introduced below). Moreover, his metaphysics is not in the thrall of the exclusionary ‘ambitious’ descriptivism some find in Strawson.²⁹⁹ He makes no attempt to discredit the structures or entities described in other metaphysical frameworks. This pluralism is clarified in §3.3, but the essence of his view is that there are different metaphysical frameworks or models which partition reality in various ways – models that posit *four-dimensional objects*, or *mereological simples* rather than *substances* – and those these models may be alien to one another,³⁰⁰ they may yet be *cotenable*.³⁰¹ *Concrete universals*, *four-dimensional objects* and *mereological simples* may not be *substances* but that does not make them in anyway ‘ontologically inferior’ (in the sense of ‘posteriority’), or less ‘real’.

There is much here in need of explication, but the general point may be roughly put: artefacts may not exemplify most perfectly the category of substance, yet this should not prejudice us against their reality. Furthermore, a parting proposal may be entered here (to be developed in the pages that follow). The richness of Wiggins’ metaphysical language allows him to go beyond this relatively uninformative pronouncement about substancehood. He is led to ask: if artefacts are not paradigm substances, *what are they?* He has the resources to examine their metaphysical character in greater depth. Among the things he might say about these entities, which possess principles of functioning, is

²⁹⁸ ‘Suggested’, because she nowhere specifies exactly what she means by ‘inferiority’.

²⁹⁹ Haack 1978: 365f

³⁰⁰ Wiggins 2001: 31

³⁰¹ Ibid: 155–156

that they submit (like *substances*) to predication, and – more distinctively – that their parts are conceived as being ontologically *independent* of the whole (this latter feature explaining why it is that we care as little as we do about artefactual part replacement).³⁰² This description of their metaphysical character is taken up again in chapter 4, but for now the point is made. To be a substance is not a yes/no matter – nor does substancehood correspond to ontological superiority.

³⁰² Wiggins recognizes this in his 2001 (100–1), and further adds that ‘[t]he truth is... that, for some practical purposes, we simply do not mind very much about the difference between artefact survival and artefact replacement.’ (101)

§1.4. Conclusion

The **D** theory is – as Wiggins has it – a seamless web,³⁰³ and one in which the impolitic reader may become caught and confused. The aim in this chapter has been to emphasize the different strands that constitute it, and their connections. It has been shown how, consonant with his descriptivist methodology, Wiggins develops a sortal theory of *identity* and *individuation* that attempts to articulate the reciprocity between those two concepts. The above exposition also sets out his account of the *substance* concept, its centrality in our individuating practices, and how different items – artefactual or natural – may exemplify it to lesser and greater degrees.

Simultaneously, this chapter has identified variant readings of Wiggins' work. Snowdon's attempt to detach Wiggins' thoughts about identity and individuation was seen to fail – in large part because of his misinterpretation of 'individuation' – and his critique of what he saw to be Wiggins' 'psychological' thesis was consequently dismissed. Vermaas and Carrara interpreted Wiggins as denying the *existence* of artefacts, and this was read as a Quinean corruption of his neo-Aristotelian position. Relatedly, Rudder Baker's critique of Wiggins' view of artefacts was seen to be based on a misattribution of the *standard view* of the artefact/natural item distinction. It was also seen to neglect the gradations of substancehood that Wiggins describes, and to make a contentious connection between *substancehood* and *ontological superiority*. Wiggins' pluralism allows him to deny that artefacts are paradigm substances without committing him to the claim that they are 'ontologically inferior' or less 'real'.

Another aim here has been to give reasons for these variant readings. One is the opacity of Wiggins' writing – though it has been emphasized as well that a systematic, descriptivist work of this kind is perhaps inevitably intricate. Another is the fact that his project sits somewhat outside the Analytic mainstream, which deploys a 'piece-meal' approach to philosophical questions. Commentators like Snowdon and Rudder Baker, who attempt to isolate the individual components of his theory, risk missing the connections that hold between these different elements. Thirdly, and more generally, it has been suggested that misinterpretations result from an ahistorical analysis of philosophical questions. Treatments like Vermaas and Carrara, which fail to situate Wiggins' within the appropriate tradition and use metaphysical terms like 'exist' uncritically, will not be able to appropriately engage, or exposit the work in question.

³⁰³ Wiggins 2001: 2

This chapter has also raised some points for further investigation. Wiggins is seen to rely heavily on the viability of *conceptual invariance*, and this is discussed more fully in the next chapter, with respect to the *person* concept. At the end of §1.3 mention was also made of his *metaphysical pluralism* – and this is set out and examined in §3.3. Questions were also raised about the distinction between artefacts and natural objects, and it was suggested that the metaphysical character of artefacts may be fleshed out in terms of the ontological dependence of their parts – this will bear on the discussions of *biological mechanism* and *transplantation* in chapters 3 and 4.

THE HUMAN BEING THEORY

The theory of individuation that has been set out in the preceding chapter finds distinctive expression in Wiggins' account of personal identity. In chapter 7 of *Self and Soul* (a greatly revised version of the chapter that appeared in *Self and Substance*) he considers identity judgments about persons, and elaborates the procedures by which we trace *ourselves* through space and time.³⁰⁴

In accordance with the method outlined above, Wiggins claims that we need to settle on the sortal under which we subsume ourselves before we can examine our principle of activity (and from there, our persistence conditions). What develops is his *human being theory* – a position novel enough, and subtle enough, to invite multiple, sometimes contradictory, readings. Eric Olson interprets the *human being theory* as a version of the Neo-Lockean account, whereby we are seen, fundamentally, to be persons – not animals – and our persistence conditions are those of these psychological beings. In contrast, Harold Noonan and Peter Unger position Wiggins as an ‘animalist’, i.e. as holding that we are fundamentally *human animals* – not persons – with the concomitant *biological* mode of being. It is the aim of the first section of this chapter to show what these readings capture, and where they falter.

In essence, these divergent interpretations miss Wiggins' crucial claim that we are fundamentally *both* persons *and* biological beings. This is the thought that lies at the heart of the *human being theory* – one that is simultaneously productive and controversial. Aside from the other worries it may excite, one is bound to wonder – as Snowdon³⁰⁵ does – how we can be, *fundamentally*, more than one sort of thing. Wiggins himself notes that his proposal appears to provoke the worries with relativity with which he started his inquiry. Whatever else we may say, ‘a person’ means something different from ‘a human being’, and hence being one is different from being the other – they have different laws of activity, and thus different persistence conditions.³⁰⁶ To accept that we pick ourselves out, correctly, and fundamentally, as *both* is to accept the relativity of identity, anathema to the Leibnizian formulation of identity that Wiggins defends.

³⁰⁴ Wiggins 2001: xiii

³⁰⁵ Snowdon 1996: 35

³⁰⁶ ‘Well, someone may say, whatever truths there may be to discover about this, the expression “a person” obviously doesn’t mean the same as the expression “a human being”; and neither means the same as “a self”: so being a person isn’t the same as being a human being or being a self. These are different concepts. And so, he may say, moving straight up to the higher or more transcendent ground “x can be the same person as y without being the same human being as y, and x can be the same self as y without being the same human being as y.”...’ (Wiggins 1987: 57)

In §2.2 Wiggins' ingenious response to this concern is laid out. He claims that, though the terms 'person' and 'human being' differ in sense (just as '*equus caballus*' and 'horse' capture different aspects of that animal),³⁰⁷ and though they may even differ in extension,³⁰⁸ the concepts to which these terms allude are in some way *concordant*.³⁰⁹ Our understanding of what a person is interweaves somehow with our understanding of what a human being is. The result of his argument here is briefly stated in an opening passage from chapter 7 of *Self*:

[I]n so far as they assign any, the concepts *person* and *human being* assign the same underlying principle of individuation to A and to B and that that principle, the *human being* principle, is the one that we have to consult in order to move towards the determination of the truth or falsehood of the judgment that A is B...³¹⁰

The *conceptual consilience* Wiggins divines between *person* and *human being* allows him to accommodate the insights of both neo-Lockeanism and animalism. It also provides a generative method for answering the puzzles of the personal identity debate. Assessing the identity conditions of persons leads into a well-trodden but nonetheless prickly thicket of philosophy; Wiggins' advice is to turn to the concordant concept *human being* to avoid it. Both concepts assign the same underlying principle of individuation – but in the latter case it is less obscure.³¹¹

The aim of §2.3 is to problematize the connection Wiggins discerns between *person* and *human being*. There are three central struts that support his argument here, which emerge out of his elucidation of the *person* concept. The first is a Strawsonian point that our concept of a psychological being seems to allude to a biological substrate. The second relates to the *semantics* of the term 'person' – we use it, he argues, as though it were a *natural kind word*. The third strut is an argument from *interpretation and indexicality*, which develops out of Davidsonian thoughts about the conditions that must hold for us to be able to interact with one another in the way that we do. In each, Wiggins' focus is a putatively *pre-theoretical* concept, an element – like *substance* – of our conceptual scheme. Yet the contention below is that his *semantic analysis* misses its target.

³⁰⁷ Wiggins 1987: 59

³⁰⁸ Wiggins 2001: 193

³⁰⁹ Wiggins 1996: 248

³¹⁰ Wiggins 2001: 194

³¹¹ *Ibid.*: 193–4

Our use of the term ‘person’ – inflected by cultural bias – is not a reliable basis for an examination of our (human) conceptual scheme. This point is made, in §2.3.a., by reference to a genealogy of the notion of a person (supported by Marcel Mauss’s historical study). The object of Wiggins’ semantic analysis is shown to be a cultural accretion, devoid of any unifying rationale – a *conception*, as Wiggins would have it, and not the *concept* itself.³¹²

The genealogical study demonstrates how cultural biases intrude on Wiggins’ descriptivist project, and in §2.3.b. it is suggested that while the Strawsonian argument and the argument from interpretation *may* grant insight into the structure of our conceptual scheme, they do not substantiate Wiggins’ claim that this primitive concept – which underwrites our everyday dealings with others – is a *substance sortal concept*. This is a culturally local bias that appears, it seems, out of his *semantic analysis*. It is proposed, in line with comments by David Bakhurst, that the pre-theoretical *person* concept does not necessarily subsume entities for every moment of their existence. The fact that *person* may be a *phase sortal*, while *human being* is a *substance sortal* is taken to undermine the connection that Wiggins sees between the two.

³¹² Wiggins 2001: 10

§2.1. Neo-Lockean and animalist readings

In Book II of the *Essay Concerning Human Understanding*, Locke defines a person as:

...a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places...³¹³

This definition is the linchpin for his account of ‘personal identity’, i.e., that which constitutes the identity of persons through space and time. It has been the subject of varied critiques but remains the lodestone for contemporary Anglophone discussions of personal identity.

Prefiguring Wiggins, Locke proceeds along sortalist lines, and divines an intimate relation between understanding what sort of a thing *is* and what it takes for such things to persist. For Locke we are fundamentally *persons*, that is thinking, *self-conscious* beings; so self-consciousness is a criterial property for personhood, and consequently (for the sortalist) stands as the central condition for identity. Our survival, as self-conscious beings, depends on the continuation of our consciousness – and ultimately, for Locke, this continued consciousness is evidenced by the self-recording faculty of *experiential memory*. A memory of an earlier experience indicates that an individual is continuous with (identical to) the person that experienced it:

[A]s far as this consciousness can be extended backwards to any past action or thought, so far reaches the identity of that person.³¹⁴

Wiggins’ work emerges in dialogue with Locke’s. And – importantly – he takes the Lockean account to disclose an important insight about the kinds of beings we fundamentally are. In *SC&S* he writes:

There is something so interesting about the notion that a person is an object essentially aware of its progress and persistence through time, and peculiar among all other kinds of thing by virtue of the fact that its present being is always under the cognitive and affective influence of its

³¹³ Locke 1690/1975: II, xxvii, 9

³¹⁴ Ibid: II, xxvii, 9

experiential memory of what it was in the past; and this notion is so closely related, not only to profound contentions of Leibniz and Kant,³ but also to deeply ingrained ordinary ideas of life as something to be reviewed and looked back upon; that I believe we should look with some suspicion at the contention that a continuity of consciousness condition of personal identity is irreducibly circular.

³ Cf. Leibniz, *Discours de Metaphysique* XXXIV...; J. Bennett, *Kant's Analytic*, Cambridge 1963, p.117, 'the notion of oneself is necessarily that of the possessor of a history: I can judge that this is how it is with me now, only if I can also judge that that is how it was with me then. Self-consciousness can coexist with amnesia – but there could not be a self-conscious person suffering from perpetually renewed amnesia such that he could at no time make judgments about how he was at an earlier time.'³¹⁵

This thought about the importance of experiential memory is restated and modified in *Se&SR*:

[W]hat I am in the present ('my present self') always lies under the cognitive and affective influence of what I remember having been or having done or undergone in the past, no less than of that which I intend or am striving to make real in the present or the future. But if it is the nature of persons to be remembering beings whose conception of what they themselves are is all of a piece with their experiential memory, then some constitutive connexion ought to be expected (it will be said) between their experiential memory and their identity.³¹⁶

In the first quotation Wiggins suggests, along the Kantian lines contained within the footnote, that we cannot *but* experience ourselves as remembering beings. It is part of our conceptual framework that earlier thoughts underpin our present ones. As the second quotation makes clear, he weakens, or at least does not explicitly state this position in later work; but he continues to view remembering and memory as central, significant elements of our nature – and in doing so aligns himself with Locke. Add to this his overt description of his work as 'neo-Lockean' (in e.g. 'The Person as Object of

³¹⁵ Wiggins 1980: 150–1

³¹⁶ Wiggins 2001: 196

Science...’),³¹⁷ and it is unsurprising to find interpretations of his work as endorsing some kind of psychological, ‘neo-Lockean’ persistence condition for persons. It is for these reasons that Olson writes, in *The Human Animal*:

Whereas my view is that psychological continuity is completely irrelevant, except derivatively, to our persistence, Wiggins insists that certain broadly mental capacities – sentience, desire, belief, motion, memory and others – are part of what it takes for a person to remain alive, and so to continue existing... Wiggins argues [that memory] is ‘*crucially relevant* to our choice of continuity principle for determining the biographies of persons’... Although there is much in Wiggins’s work that I do not understand, his view seems to me to be a sophisticated version of the Psychological Approach.³¹⁸

The contention here, however, is that this is a misreading of Wiggins’ position. Wiggins does not take experiential memory to indicate anything about identity. He is sympathetic to Locke’s position (and in his earlier work perhaps more so), but he never goes so far as to endorse an exclusively psychological criterion of identity. He rejects the view that our survival stands or falls with continued consciousness – memory is not called on as evidence for survival.

It is understandable that Olson – whose focus is on *Se&S*, and an earlier paper, ‘Locke, Butler and the Stream of Consciousness...’³¹⁹ – reads Wiggins as a supporter of Locke. In both texts, Wiggins carefully defends the Lockean thesis against various critical descendents of the objections raised by Joseph Butler in his *First Dissertation*.³²⁰ But where Wiggins denies any circularity or absurdity in Locke’s consciousness criterion³²¹ he denies too that memory can provide any significant basis for identity judgments, and ‘is doomed always to bring too little too late...’ to the analysis.³²² (And though, of course, its publication followed Olson’s *The Human Animal* by four years,

³¹⁷ Wiggins 1987: 68

³¹⁸ Olson 1997: 20–21

³¹⁹ Wiggins 1976

³²⁰ Butler 1736

³²¹ E.g. Wiggins 1976: 132–136

³²² Wiggins 1976: 142

SeSR explicitly distances itself from that earlier position, and recants any dubiety about Butler's critique.³²³)

Wiggins finds in Butler an insurmountable obstacle to the Lockean account. The famous objection, to which he pledges full support, runs thus:

One should really think it self-evident, that consciousness of personal identity presupposes, and therefore cannot constitute, personal identity, any more than knowledge, in any other case, can constitute truth, which it presupposes.³²⁴

The Butlerian thought, which appears obscurely in *SeS* and fully in *SeSR*, is that determination of a *genuine* memory invokes *another* account of identity, and so cannot *constitute* it.³²⁵ In *SeSR* (shorn of the previous arguments against absurdity and circularity) the point is demonstrated with an example case of putative remembering. Imagine, Wiggins writes, that we know that A once inadvertently caused a fire in the Chigwell College of Commerce. Suppose that B seems to remember doing this. That *appears* to suggest that B is A. However, Wiggins continues,

B is only the same person as A if his seeming to remember is his really and truly remembering setting fire to the books stack.³²⁶

It must be a genuine memory.³²⁷ But how can this genuineness be substantiated? How can it be established that B is not, for example, subject to some bizarre hallucination, or suffering delusions? Here we reach the nub of Butler's point, as Wiggins reads it:

*Where someone appears to remember starting that fire, they can't be right unless they were indeed there at the fire.*³²⁸

³²³ '...the new chapter on personal identity, focuses on human beinghood, and recants anything I have ever said against Bishop Butler's objection to Locke's account of personal identity.' Wiggins 2001: xiii (see also 204 n.12) This shift helps to account for his positioning of himself as a 'neo-Lockean' in the earlier work, but not the later.

³²⁴ Butler 1736

³²⁵ Cf. Wiggins 1976: 142f, 1980: 161ff, and 2001: 203ff

³²⁶ Wiggins 2001: 204

³²⁷ N.b. this worry appears in Wiggins 1976, and 1980, as the concern that 'C*' offers no account of error'. E.g. Wiggins 1976: 138

³²⁸ Wiggins 2001: 204 (original italics)

Which is to say *another account* of identity must be invoked to explain what it is for someone to do something, and then *genuinely* remember doing it. As is discussed in §2.2.a., this thought segues into a positive thesis about our spatio-temporal continuity being understood by reference to some material foundation – and Wiggins subsequently claims that this material foundation can only be an animal – specifically a *human being*. The intermediary point here, however, is simply that Olson’s characterization of Wiggins as endorsing an essentially ‘psychological’ criterion of identity does not, and cannot, correspond to Wiggins’ Butlerian critique of Locke.

§2.1.a. Quasi-memory

Before turning to the material foundation, and the *human being theory*, it is necessary to note another avenue that this discussion of Butler opens up, and one which receives considerable attention in *S&SR* and the correlative secondary literature: the issue of *quasi-memory*.

As Wiggins points out, the most obvious way of distinguishing between real and apparent memories is to say that the genuine memory – and not the delusion – is of an experience the rememberer herself actually *had*; and as was evident to Butler, this creates a circularity in Locke’s account. Yet Sydney Shoemaker and Derek Parfit have argued that genuine memories and delusions can be distinguished by yet other means: it is not, they say, about *who had* the original experience, but rather about how the subsequent memory-experience was *caused* that determines whether or not a memory is delusional.³²⁹ Thus, Napoleon’s memory-like experiences of Waterloo are not delusional because they are causally connected to the events at Waterloo in the right way, while the same is not true of the memory-like experiences of George IV (who was never there, but believed he was).³³⁰ So, Parfit writes:

To answer this objection, we can define a wider concept, *quasi-memory*. I have an accurate quasi-memory of a past experience if (1) I seem to remember having an experience, (2) *someone* did have this experience and (3) my apparent memory is causally dependent, in the right way, on the past experience.³³¹

³²⁹ Parfit 1984: 220 (see also Shoemaker 1970: 269–285)

³³⁰ Wiggins 2001: 215

³³¹ Parfit 1984: 220

It is along these lines that some neo-Lockeans deny that memory-experiences presuppose identity (citing cases of memory-transplantation to show how an individual can have a non-delusional quasi-memory of someone else's experience).³³² By this means they hope to circumvent Butler's circularity objection, and any reformulations by those like Wiggins. Consequently, a considerable portion of chapter 7 in *SeSR* is devoted to replying to this neo-Lockean line.

While my aim here is only to acknowledge the discussion, it is helpful to briefly consider Wiggins' response. Pointing to Parfit's definition of quasi-memory he asks whether condition (3) can admit *incomplete* or *imperfect* or *partially wrong* or *oddly produced* memories as quasi-memories. (For these are things we surely have: you may remember your last birthday party, perhaps, but what clothes were you wearing, and who was there?) As Wiggins puts it, trenchantly:

The thing we see that Parfit presents [in the passage above] is not a definition of 'quasi-remember' or 'quasi-memory' at all. It's a definition (he himself announces that it is a definition) of 'have an accurate quasi-memory'. Inaccurate quasi-memory is not provided for.³³³

It's true that the neo-Lockean may well disagree with this (Shoemaker, certainly, seems to).³³⁴ In any case, quasi-memory is not the focus of the present work, and more paper will not be added to the reams already spent on it. As will be discussed in chapter 4, there are other, more interesting, disagreements between Wiggins and the neo-Lockeans.

§2.1.b. Against an 'animalist' reading

The focus being put on this *material/biological foundation*, combined with the critique of Lockeanism (and neo-Lockeanism), suggests that Wiggins will ultimately endorse some variant of an 'animalist' thesis. In Olson's dichotomous terms, he appears to propound a

³³² Parfit gives the example of Jane, who agrees to have Paul's memory-traces implanted in her brain (1984: 221) These kinds of science-fiction thought experiments are critiqued in §4.2.

³³³ Wiggins 2001: 224

³³⁴ See Wiggins' and Shoemaker's discussion in *The Monist* (Shoemaker 2004a, Wiggins 2004a, Shoemaker 2004b, Wiggins 2004b)

‘biological’ theory, while rejecting a ‘psychological’ one.³³⁵ This is how Harold Noonan³³⁶ and Peter Unger³³⁷ both read him – i.e. as claiming that we are fundamentally human animals, and *not* fundamentally persons, and that our persistence conditions are those of the animals that we are. Yet this is another misreading, once again capturing some of the story, but not all.

Wiggins certainly holds that we are, *fundamentally*, a kind of animal – specifically, members of the species *homo sapiens*. But as noted, he is also deeply impressed by the Lockean thought that we are conscious, remembering beings. The kind of picture outlined by the animalist, which denies that we are fundamentally persons, does, as Wiggins puts it, ‘insufficient justice to a line of reflection still prompted by John Locke’s account of these things: what I am in the present (‘my present self’) always lies under the cognitive and affective influence of what I remember having been or having done or undergone in the past, no less than of that which I intend or am striving to make real in the present or the future.’³³⁸

Wiggins denies that continued consciousness is a condition for our survival (according to the *human being theory* we may survive in vegetative states) – but we are beings who typically have a rich psychology, who have potential (as will be discussed) for *Bildung*, who are, among other things, *rememberers*. The animalist account fails to capture these complexities, and Wiggins consequently disassociates himself from it.

A terminological point can be entered here. Despite the (relative) popularity of the term ‘human animal’, following the publication of Olson’s book in 1997, it does not appear in *Self* or in Wiggins’ subsequent work.³³⁹ Instead, Wiggins talks of ‘human beings’. The discussion above offers an explanation. The two terms differ in sense: the first refers to what, following Bakhurst, one may call a ‘mere animal’; the second, to biological beings that, as John McDowell puts it, are ‘at home in the space of reasons’.³⁴⁰ Wiggins inclines towards ‘human beings’ because it does not restrict the area of inquiry to the biological (the ambit of ‘biological’ is discussed in chapter 3).³⁴¹

³³⁵ Olson 1997: 7ff

³³⁶ Noonan 1998: 302

³³⁷ Unger 1990: 120–123

³³⁸ Wiggins 2001: 196 Note, though, that Wiggins nowhere explicitly talks about ‘animalism’. This passage appears as part of a defense of the *human being theory*, in which he denies that it neglects the Lockean concern with the psychological (as animalism, as construed, also does).

³³⁹ Others use the term frequently to describe his view – even those who do not appear to position him as an animalist (e.g. Bakhurst 2005).

³⁴⁰ McDowell 1994: 125. Bakhurst brings McDowell to bear (in his 2005)

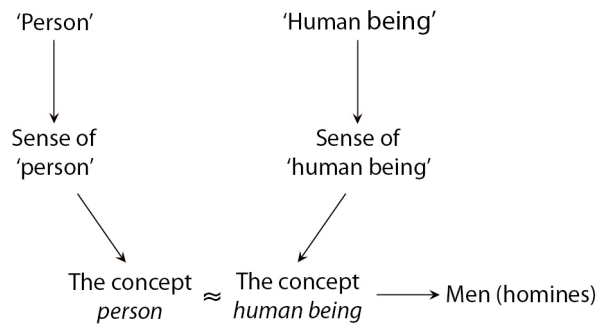
³⁴¹ There is another potential reason why Wiggins prefers ‘human being’ to ‘human animal’. ‘Human being’ has a different linguistic pedigree to ‘human animal’ – where the latter is a technical term that exists almost exclusively within philosophical discourse, the former is not. It is the former, then, which is

Wiggins is not a neo-Lockean (*pace* Olson), but nor is he an animalist (*pace* Noonan and Unger). He agrees with the animalists that our persistence conditions are those of the organic beings that we are, but objects to their rejection of the neo-Lockean claim that we are fundamentally persons. He simultaneously rejects the neo-Lockeans' exclusive focus on psychological continuity, which overlooks the biological aspects of our nature. He holds instead that we are fundamentally human beings *and* persons. This is a claim he defends by focusing on the *consilience* of those concepts – a connection explored in the next section.

ostensibly better suited to Wiggins' kind of descriptive analysis (though this style of descriptive analysis – which functions on the use of terms – is critiqued in §2.3 below).

§2.2. Arguments for conceptual consilience

For Wiggins, our understanding of what a person is interweaves, somehow, with our understanding of what a human being is. This is a thought, which in ‘Person as the object of science’, he tries to capture in the following diagram (with due deference to Frege):³⁴²



Though the terms ‘person’ and ‘human being’ differ in sense, *person* and *human being* refer (in the same way that *horse* and *equus caballus* do) to ‘the same things out there in nature’ (‘homines’).³⁴³ Wiggins presents different, interlinking arguments to substantiate this intersection.³⁴⁴ He presents a *Strawsonian argument* for why persons may necessarily be *material* things (§2.2.a.). There is also a *semantic argument*, grounded in the way we use ‘person’ as though it were a natural kind word (§2.2.b.). And lastly, but perhaps most importantly, there is an argument from *interpretation and indexicality* (§2.2.c.), which collects together various insights from Donald Davidson in an attempt to elucidate a central element in our conceptual scheme.

§2.2.a. The *Strawsonian argument*: a preliminary link

It is Peter Strawson’s thought that *person* is a ‘primitive concept’ that forms the initial connecting cord between that concept and *human being*.³⁴⁵ Wiggins uses Strawson’s analysis to augment the Butlerian critique (presented above) to claim that our concept of a thinking being must also be of a material being. While there is some disagreement

³⁴² Wiggins 1987: 60

³⁴³ Ibid: 60

³⁴⁴ Which appear in various forms in Wiggins 1976, 1980, 1987, 1996, 2001, 2005a, 2012

³⁴⁵ Strawson 1959: ch.3

about what exactly Strawson means by ‘primitive’³⁴⁶ Wiggins’ interpretation (followed here) runs thus:

[A] person is, *par excellence* (and as a presupposition of all the traditional questions in the philosophy of mind), the bearer of *both* M-predicates *and* P-predicates, where M-predicates are predicates that we could also ascribe to material objects and P-predicates are predicates that we could not possibly ascribe to material objects and comprise such things as actions, intentions, thoughts, feelings, perceptions, memories, and sensations: and that ‘a person’ is a type of entity such that both predicates ascribing states of consciousness and predicates ascribing corporeal characteristics are equally applicable to an individual of that single type.³⁴⁷

Strawson’s claim develops out of his descriptivist critique of Cartesian mind/body dualism. Briefly put, his thought is that the idea of an immaterial, thinking thing collides with a basic principle about psychological thought, made evident by our practices of thought ascription. The idea is that one can only ascribe experiences to oneself if one is prepared to attribute them to others. And to do this, Strawson claims, one must be able to fix on other subjects such that they cannot be – as Descartes proposed – *non-spatial*.³⁴⁸

What is significant for present purposes is a particular objection that Wiggins levels at this Strawsonian account, to which he is otherwise largely sympathetic. Strawson notes that, while our practices of self-reference require that we are bearers of P-properties and M-properties, we can *conceive* of ourselves as lacking P-properties (for example, as comatose or unconscious individuals).³⁴⁹ Yet, in the same way that the material body can survive the loss of psychological properties, so too – says Strawson – can a person’s consciousness outlive her body:

[E]ach of us can quite intelligibly conceive of his or her individual survival of bodily death. The effort of imagination is not even great.³⁵⁰

³⁴⁶ E.g. Ishiguro 1980

³⁴⁷ Wiggins 1987: 63–64

³⁴⁸ Strawson 1959: ch. 3. See also Snowdon 2009 for a helpful commentary.

³⁴⁹ There is no tension here because he sees this idea, of our lacking psychological properties, as ‘secondary’ to the primary concept of person. Strawson 1959: 115

³⁵⁰ Strawson 1959: 115

While Wiggins agrees that we can conceive of ourselves as lacking psychological properties, as Snowdon points out³⁵¹ he also takes issue with this overly even-handed treatment of the mental and physical aspects of a person. He suggests that the situation Strawson describes – of a consciousness outliving her body³⁵² – clashes with how we ordinarily conceive of psychological experiences. The decisive proposal in his 1987 paper ‘Person as the Object of Science...’ is that once it has been sufficiently worked out, we will find that the notion of a bearer of P-properties will *necessarily* involve ascription of M-properties. That is to say that psychological states and capacities are, in some way, essentially ‘matter-involving’.³⁵³

Wiggins does not aspire to prove the confluence of P-properties with M-properties in its full generality.³⁵⁴ But in the 1987 paper he attempts to demonstrate its plausibility by presenting studies of psychological events that cannot but be conceived of as involving something material. Of prime interest is his conceptual analysis of *remembering*, in which we find the crucial intersection of his thoughts about his Strawson, and the earlier, Butlerian critique of the Lockean memory criterion.

Consider again the example given above: A’s setting fire to the College of Commerce, and B’s memory of causing the fire. How do we understand the claim that B *remembers* this? Not, surely, as meaning only that B has some kind of agent-centered inner representation of the event. A delusional might have such a representation too. The point is that we must also think there is the right sort of *causal* relation between the act and the subsequent memory-experience. Something else must be invoked. And it is at this point that Wiggins turns to an influential – but now somewhat overlooked – paper, by C.B. Martin and Max Deutscher.³⁵⁵ In ‘Remembering’ Martin and Deutscher assay a claim about what exactly it is to be the ‘right sort of causal relation’ – a claim, which Wiggins characterizes in the following way:

[I]t is impossible to say what the right sort of causal connection between an incident and memory representation of it is without having recourse to the notion of something like a memory trace.¹¹

³⁵¹ Snowdon 1996: 33

³⁵² For however short a time – Strawson describes how quickly this ghost-like entity will fade away (1959: 116)

³⁵³ Wiggins 1987: 64 (see also Snowdon 1996: 33)

³⁵⁴ Ibid: 64

³⁵⁵ Deutscher and Martin 1966

¹¹ The memory trace may be conceived under the specification ‘the normal neurophysiological connection whatever that is, between rememberings and the incidents of which they are rememberings’... Deutscher and Martin carefully explore a multiplicity of alternatives to the explicit memory-trace account of the causal connection between incident and experiential memory of incident. They show that none of these accounts can simultaneously allow for the possibility of prompting and define the particular sort of operativeness we are looking for between incident and representation.³⁵⁶

According to this analysis of remembering, we cannot conceive of memory causality as ‘a transaction over a matterless gap between the external world at one time and a mind at a later time’.³⁵⁷ Thoughts about remembering and memory necessarily involve (overtly or otherwise) some conception of the normal sort of *bodily* process that issues in the inner representation of a past experience. I.e. we cannot conceive of an individual actually remembering something without also thinking that their memory is the result of a material process, which reaches back to the initial activity.^{358, 359}

How stable is Wiggins’ position here? Snowdon identifies one potential issue:³⁶⁰ while it may be the case that remembering and perceiving and other such psychological states require some *material* foundation why, he wonders, must this foundation be organic, ‘biological’ and ‘living’? That, surely, is what Wiggins needs if he is to tie the knot between the relevant concepts: and it is a live issue whether or not psychological states can only be had by organic beings. (And certainly, science-fiction stories furnish us with numerous examples of robotic intelligences, as well as immaterial consciousnesses.) Of beliefs and desires, alongside other psychological states, Snowdon writes:

[There is] nothing obviously biological in the idea of these structures.³⁶¹

³⁵⁶ Wiggins 1987: 65 and 209 n.11

³⁵⁷ Ibid: 65 and 209 n.12

³⁵⁸ What of ‘computer memory’? It is likely that Wiggins will dismiss this as metaphorical usage, secondary, if not tertiary, to our everyday conception of memory.

³⁵⁹ The argument in the 1987 paper thus stands as a structural shift in Wiggins’ work. In 1976 and 1980, he registers Butler’s concern with the Lockean criterion, that the memory condition cannot be sufficient, because it presupposes another account of identity. His 1987 paper marks an explicit transition from this critique to the positive thesis that this alternative account involves something *material*, and, as indicated, *physiological*.

³⁶⁰ Snowdon 1996: 44

³⁶¹ Ibid: 44

Closer attention to Wiggins' texts reveals an implicit response to this concern. Consider his analysis of perception, which also appears in the 1987 paper:

For there to be a perception of *x*, something would have to be able to count as a misperception of it. But what is the difference? If we are to make the distinction we need, then there has to be something independent of what is subjectively given in perception. But then we must ask the position of the perceiver. There must be such a thing as an answer to the question of where the perception is *from*. Otherwise there is nothing that the perception is answerable to. And what else can fix where the perception is from but the body, head, and eyes of the perceiver?³⁶²

This passage indicates the importance of the *arrangement* of the material foundation (in a way that the discussion of memory does in more abstract terms). 'Perception' is clearly meant to be visual perception, and visual perception requires some suitable material structure: e.g. the body, the head, the eyes. The predictable answer to this will be that a suitably structured robot (i.e. one with cameras and some kind of recording unit) might be said to 'perceive' (although, as with computer 'memory', there is the possibility of this sliding into metaphor).³⁶³ But consider too – Wiggins might say – the *desires*, experienced by persons, which Snowdon denies need any 'biological' element.³⁶⁴ Certain desires surely seem to contradict this. After all, in the same paper, Snowdon himself points to our overwhelming sense of being a certain sex³⁶⁵ – but if we include sexual desire among the states of persons, particular kinds of biological structure *do* seem to be necessary. Thinking of persons as entities enjoying a variety of psychological experiences – including sexual desire – we might well begin to think of them as having a particular kind of *biological* makeup.³⁶⁶

Maybe it will be said that – irrespective of love, desire, hatred (and other such arguably paradigmatic psychological states) – the crucial question is whether or not our idea of *memory* involves conceiving the *rememberer* as a biological being. And this, perhaps, is less obvious than it is in the case of e.g. sexual desire. Wiggins' first recourse

³⁶² Wiggins 1987: 65

³⁶³ Snowdon 1996: 40

³⁶⁴ Ibid: 44

³⁶⁵ Ibid: 35

³⁶⁶ Note that this does not mean we cannot (perhaps) *synthesize* persons – but we are committed to thinking that to synthesize them we must effectively synthesize the workings of the human body. Wiggins notes this repeatedly, e.g. 1996: 247, and 2001: 90.

is to Martin and Deutscher's discussion of remembering, and to the centrality of the notion of a 'memory trace'. If one is persuaded that our ideas about memory necessarily involve the notion of this 'memory trace', one might also be persuaded that rememberers can only be beings that possess those special capacities afforded by our neurophysiological make-up.

However Wiggins' position does not stand or fall with Martin and Deutscher's analysis. It is consonant with his general approach to emphasize instead the complexity, and the deeply integrated nature of our psychological states. This harks back to a point made in chapter 1; that Wiggins opposes a drive in much English-language philosophy to take a *piecemeal* approach to philosophical issues and to separate areas of study into smaller, more 'easily digestible' chunks without attending to the connections between them. One may well wonder whether a piecemeal attitude is organizing Snowdon's discussion here, and one option for Wiggins is to say that a memory is not a distinct, isolable, object of study – it also involves auditory and visual and emotional states, which are more clearly reliant on a biological nature. He may respond to the kind of question proposed by Snowdon by asking how separable psychological states – desiring, believing, imagining, remembering – actually are, and whether we can conceive of a memory devoid of any other aspect. If we focus on how deeply interrelated our psychological states are, and how some such states cannot but be conceived of as being borne by biological beings, then perhaps this can be taken to suggest a link between personhood and animalhood (if not yet human beinghood). These are thoughts contained within the passage from Hegel that Wiggins quotes at the start of his chapter on personal identity in *SC&S*:

It is only in its proper body that mind is revealed. The [idea of the] migration of souls is a false abstraction, and the physiology ought to have made it one of its axioms that life had necessarily in its evolution to attain to the human shape as the sole sensuous phenomenon that is adequate to mind.³⁶⁷

The thought is that our psychological states can only be enjoyed by beings with a particular physiology – *human beings* – and this stands as the first, provisional link between the *person* and *human being* concepts. It is a speculative connection, and not one

³⁶⁷ Wiggins 1980: 148, quoting Hegel, *Lectures on Fine Art*

that Wiggins tries to strengthen particularly (the quotation from Hegel does not appear in the later texts).³⁶⁸ He takes it to be suggestive but not conclusive; the argumentative work is done by his *semantic argument*, and his argument from *interpretation and indexicality*.

§2.2.b. The *semantic argument* and the Animal Attribute View

As a descriptivist, Wiggins is interested in elucidating the structure of our conceptual scheme. And in *S&S*, and to a certain extent *S&SR*, his method for doing so involves, in no small part, an examination of our use of language.³⁶⁹ Following his paper ‘Locke, Butler and the Stream of Consciousness’, a central aim of his 1980 book is to present an explicitly ‘descriptive’ analysis of ‘person’³⁷⁰ – investigating how we commonly apply the term, in order to elucidate its meaning, and the conceptual requirement it fulfils.³⁷¹

Wiggins takes Locke’s account of ‘person’ as his point of departure – and while his sympathies with Locke have fluctuated, his objection to the Lockean definition of ‘person’ has remained unwavering. He describes Locke’s definition as an ‘analytical excogitation of a nominal essence’.³⁷² That is, in the *Essay*, ‘person’ is not taken to introduce a real essence in the way that a natural kind term would do; it *stipulates* one, as do the terms we use to refer to artefacts and positions of authority.³⁷³ A central strand of Wiggins’ work has been to argue that this rendering of ‘person’ clashes with our use of that term in everyday practice. We do not use it as though it is a role to be fulfilled, or as though it has a functional specification. Thus, Wiggins writes (and mark well the descriptivist entreaties to ‘our innermost convictions’ etc.):

Nobody thinks of the persons we actually encounter in nature as artifacts, or as having identities which are ‘for decision’ as artefact identities are sometimes for ‘decision’ when there is a changing of parts...³⁷⁴

A pure conventionalist view of the identity of people would fly in the face of the innermost convictions of almost everyone...³⁷⁵

³⁶⁸ Though the thought is preserved, e.g. in 2001: 198–9

³⁶⁹ Wiggins 2001: 2

³⁷⁰ Wiggins 1980: 149

³⁷¹ See also Wiggins 1976: 149, 151, and 1987: 62–63

³⁷² Wiggins 1976: 151

³⁷³ Wiggins 1987: 63

³⁷⁴ Wiggins 1976: 151

³⁷⁵ *Ibid.*: 151

[A]t flies in the face of the innermost convictions of almost everyone to try to think of the persons we encounter in nature as having identities that are any less determinate than the identities of animals.³⁷⁶

The definition of *person* is not something we conceive for ourselves in the way in which we have conceived for ourselves the nominal essences for *boe* or *house*...³⁷⁷

‘Person’, Wiggins claims, functions in our everyday practice as though it were a *natural kind word*.³⁷⁸ We do not stipulate, as the constructionists do (discussed below), what ‘person’ means; rather we learn more about persons by singling them out *in rerum natura*.³⁷⁹ It is not by consulting textbooks, or dictionaries, that we learn what persons are, but by encountering them in the world around us. And when we try to adumbrate the marks of personhood – consciousness, memory, imagination, love, intelligence... – we find an essential *aposiopesis*,³⁸⁰ spaces we have yet to fill. The attributes of persons are not circumscribed by a definition; we constantly add to them as we discover more about ourselves and each other.

Yet while Wiggins takes these features as indicators that ‘person’ is *akin* to a natural kind word, he is cautious of giving it the full status of such terms, like *rabbit*, *ivy*, *butterfly*, and (putatively) *human being*.³⁸¹ Rather, he suggests that we see ‘person’ as something like a *qualification* of a natural kind determinable, a ‘hybrid concept’ with a natural kind element and a systemic element as well³⁸² (alike to how ‘vegetable’ collects together a group of savory, edible plant kinds).³⁸³

Whether it functions *as* a natural kind word, or akin to one, this descriptive analysis appears to indicate that the *person* concept intersects with some idea of a natural, animal kind. This is something Wiggins takes to be clear in our use of that term (and consequently explains why we feel the strain we do when trying to understand whether

³⁷⁶ Wiggins 1980: 171

³⁷⁷ Ibid: 173

³⁷⁸ Ibid: 171, 1987: 62, 2001: 238f

³⁷⁹ Wiggins 1987: 62

³⁸⁰ Ibid: 68–69

³⁸¹ Wiggins 1976: 151, 1987: 59

³⁸² Wiggins 1976: 152, 1980: 172–173

³⁸³ Wiggins 1980: 172–173

robots are persons – since they have shallow nominal essences,³⁸⁴ and when we think of ourselves as ‘artefact-like’ – that is, being subject to part-replacement, and so on):³⁸⁵

[I]t is certain that we still believe that, to have genuine feeling or purposes or concerns, a thing must *at least* be an animal of some sort.³⁸⁶

Wiggins holds that the richness of our use of ‘person’ suggests that it is conceptually allied, in some way, with a natural kind concept. This line of argument culminates in *SeS* in what Wiggins calls the ‘Animal Attribute View’.³⁸⁷ He sets it out as follows (note the dots which show how this elucidation of person is not a strict definition, but an essentially incomplete statement that is to be filled out by looking to persons as we encounter them):

Perhaps x is a person if and only if x is an animal falling under the extension of a kind whose typical members perceive, feel, remember, imagine, desire, make projects, move themselves at will, speak, carry out projects, acquire a character as they age, are happy or miserable, are susceptible to concern for members of their own or like species... [note carefully these and subsequent dots], conceive of themselves as perceiving, feeling, remembering, imagining, desiring, making projects, speaking... have, and conceive of themselves as having, a past accessible in experience-memory and a future accessible in intention.³⁸⁸

The frailties of this treatment are considered in depth in §2.3, but it is worth noting here that however effective this argument is, it is not enough to substantiate a specific connection between *person* and *human being*. Even if this semantic analysis of ‘person’ is found to be persuasive, the connection it forges is between *person* and *animal*. There is, as yet, no special association with the concept *human being*. As Wiggins himself notes:

[I]t is not absolutely excluded... that the extension of *person* should give hospitality to such creatures as chimpanzees or dolphins or even, in

³⁸⁴ Wiggins 1980: 175

³⁸⁵ This is revisited in §4.2.

³⁸⁶ Wiggins 1980: 175

³⁸⁷ Ibid: 171

³⁸⁸ Ibid: 171 (reiterated in Wiggins 2001: 198–199)

exchange for suitably amazing behaviour, to a parrot. According to this view, a person is any animal that is such by its kind as to have the biological capacity to enjoy fully the psychological attributes enumerated; and whether or not a given animal kind qualifies is left to be a strictly empirical matter.³⁸⁹

More needs to be said. The extra link is provided by another argument, which appears alongside the semantic one, and works in concert with it. This argument has come to increasing prominence in Wiggins' later texts. This is an argument from *interpretation and indexicality*.

§2.2.c. An argument from *interpretation and indexicality*

'Interpretation' here is a term of art, and requires some unpacking. It refers to a discussion found in the work of Donald Davidson – another figure who, alongside Strawson, exerts a keen influence in Wiggins' work.³⁹⁰ In his paper 'Radical Interpretation',³⁹¹ Davidson examines the structure that underpins certain aspects of our linguistic practices; following on from Quine's work in *Word and Object*³⁹² he investigates what exactly it takes for us to be able to understand one another – what it is that makes our interpretation of the linguistic behaviour of a speaker possible.

In broom-broad brush-strokes, Davidson sees there to be two important assumptions on the part of the interpreter (assumptions which he calls, collectively, the 'principle of charity'):³⁹³ the first is that the speaker's behaviour satisfies strong normative constraints – i.e. that she reasons in accordance with logical laws; the second is that our interpretive procedures depend on thinking the speaker asserts something she believes to be true, and that something's being true. In order to make this second assumption, the interpreter must overcome innumerable unknowns (for how can one know what someone else believes?), and doing this, Davidson suggests, she *projects* herself into the subject's position, and assumes that the speaker does or would believe what she, the interpreter, would believe in their position. That is, she must see the

³⁸⁹ Wiggins 1980: 171–172

³⁹⁰ See Wiggins' autobiographical note to this effect in his 1996: 229 (also 2001: 198)

³⁹¹ Davidson 1973

³⁹² Quine 1960

³⁹³ Davidson 1973: 136–139 (See Malpas 2013 for a good overview)

speaker *as a being like her*.³⁹⁴ She sees the speaker as a being with whom she can get ‘on the same wavelength’.

How does this connect with Wiggins’ work? Wiggins is interested in our everyday practices, and Davidson’s discussion gives an insight into certain everyday, linguistic procedures. These interpretive assumptions are ones we must make for us in order to be able to interact with each other in the way we do: for interpretation to be possible, one has to see others as being like oneself. That is, we must see each other as ‘subjects of interpretation’,³⁹⁵ beings with whom we may get ‘on the same wavelength’, or ‘on net’.³⁹⁶

Crucially, Wiggins sees this requirement of our everyday linguistic practices to *underwrite* our use of the term ‘person’. He states that persons are ‘subjects of interpretation’. In *SC&SR* he writes:

Par excellence, a person is... a subject also of interpretation, a being that both interprets and is interpreted.³⁹⁷

And, more recently, in his ‘Identity, Individuation and Substance’:

[A] person is... a creature that interprets other human creatures and is wide open to be interpreted by them.³⁹⁸

Significantly, understanding *person* thus makes good sense of the natural kind-style *aposiopesis* Wiggins identifies in our usage of the term. Understanding persons as ‘subjects of interpretation’ is the principle (note, *not* a definition)³⁹⁹ by which the marks of personhood are enumerated:

No wonder... that, in the interest of our securing and vindicating our mutual attunement, the Lockean elucidation of ‘person’ grows and grows. For there is no clear limit to what concerns and capacities and

³⁹⁴ See Joseph 2011 for an overview

³⁹⁵ Wiggins 2001: 198. See Wiggins 1980: 222 and 2001: 198 for the explicit connection he draws between his own analysis and Davidson’s.

³⁹⁶ Wiggins 1987: 69 and 1996: 245

³⁹⁷ Wiggins 2001: 198. For an indication of the shift in focus of Wiggins’ analysis of ‘person’, contrast this rendering with the claim in his 1987 that ‘...a person is, *par excellence* (and as a presupposition of all the traditional questions in the philosophy of mind), the bearer of *both* M-predicates *and* P-predicates’ (63)

³⁹⁸ Wiggins 2012: 16

³⁹⁹ Wiggins 1987: 68–69

perceptions and feelings... we shall have to credit our fellows with if we are to make sense of them.⁴⁰⁰

We cannot give a definitive list of the marks of personhood because the concerns and capacities we must be attuned to in order to interpret are not static or restricted. Wiggins emphasizes the procedural richness of putting oneself ‘in another’s shoes’ in *Self*;⁴⁰¹ in the Longer Note 6.36 he claims the interpreter’s imaginative act cannot just be about what the speaker is seeing, hearing, etc., it must also be about recognizing the kinds of *concerns* they will have and e.g. the kinds of objects that will be of interest to them, and why.⁴⁰² For interpretation to take place the interpreter needs to ‘know more than nothing not only about the world but also about men in general’.⁴⁰³

Finally it begins to emerge how, in addition to supporting a link between *person* and some animal kind, interpretation secures an important connection between *person* and *human being* – because ‘person’ is understood to be *indexical* – persons are those entities that are *like us* (with whom we may get ‘on net’) where we are *human beings*.

[W]e shall only count something as a person if it is the kind of thing that we who are human beings can interpret and can make sense of in a manner that is in principle not delimited or circumscribed... People are creatures of a kind to be the subjects of fine-grained interpretation *by* us, who are human beings, and to be the putative exponents of fine-grained interpretation *of* us... The thing we are concerned with here is a rationality of ends (as well as of means and the fit of means to ends). For these purposes, our only usable paradigm or stereotype of a reasonable being, or of a rational conscious being whom we can interpret, or of a person, is that of a human being. Our only proxy for a thinking, feeling soul is a striving, symbol using/misusing, embodied human being.⁴⁰⁴

⁴⁰⁰ Wiggins 1987: 71

⁴⁰¹ Wiggins 1980: 222 (A point he gets, perhaps, from Grandy’s emphasis on ‘humanity’ – see Wiggins 1980: 222)

⁴⁰² ‘[W]e have to start to envisage radical interpretation proceeding through a succession of approximations which, at some points, will involve holding belief relatively constant in the light of what the world represents to the subject’s experience *taken together* with the concerns of the subject.’ (1980: 222)

⁴⁰³ Wiggins 1980: 222 – see also Wiggins 1987: 70–71

⁴⁰⁴ Wiggins 1996: 245

Wiggins acknowledges that this is not a ‘transcendental argument’ for the conceptual connection between *person* and *human being*.⁴⁰⁵ He concedes that there might be beings, other than humans, with whom we can get ‘on net’. But the aim of these arguments – set out above – is to tease out why we may think a conception of a non-human person stretches the concept too far. It is not *logically* excluded that other animals could be persons, but see, he says ‘whether you can describe, up to any required level of detail, how we should make sense of non-human creatures, become attuned to them, or be in a position to treat their feelings as if they were our own; or see how you imagine making sense of these creatures *without* doing that.’⁴⁰⁶ It is hard to think we could understand Martians or dolphins or automata as anything other than inscrutable alien intelligences.⁴⁰⁷ (This is discussed further in §4.4.b., where a shift in Wiggins’ attitude is identified.)

§2.2.d. Intermediary conclusion

Wiggins’ elucidation of *person* is insightful. He presents a series of persuasive arguments that indicate a link between that concept and the concept *human being*. Doing so, he manages to accommodate attractive elements of both the neo-Lockean and the animalist positions.

Reading ‘person’ in conjunction with Davidsonian thoughts about *interpretation* shows exactly *why* the Lockeans think as they do: experiential memory is so central to our view of ourselves because it plays a central role in interpretation. When people do or suffer something, this impresses itself on their mind, colours their experience, and influences their future responses.⁴⁰⁸ Therefore, Wiggins can say that experiential memory is of considerable importance, while resisting the Lockean emphasis on it:

⁴⁰⁵ Wiggins 1996: 248, 2000: 1

⁴⁰⁶ Wiggins 1987: 71

⁴⁰⁷ Ibid: 72. There is an interesting stronger version of this argument from interpretation in Wiggins’ paper ‘Truth, Invention, and the Meaning of Life’. There he suggests that we can only get ‘on net’ with others if we have the same neurophysiological make-up – so non-human persons are excluded (though not artificially synthesized humans). He writes: ‘Surely neither the consensual method nor the argued discussion of such forms would be possible in the absence of the shared neurophysiology that makes possible such community of concepts and such agreement as exists in evaluative and deliberative judgments. Nor would there be such faint prospects as there are of attaining reflective equilibrium or finding a shared mode of criticism.’ See also Nicholas Rescher for a similar view – Rescher 1982: 37

⁴⁰⁸ Wiggins 2001: 199

Locke can be right about remembering as central among the marks of personhood without Locke's or the neo-Lockeans' being right about personal identity...⁴⁰⁹

The conceptual consilience Wiggins finds between *person* and *human being* creates a synthesis of the neo-Lockean and animalist accounts. Confused by the intricacies of *person* we can turn to the concordant sortal concept *human being* when answering the questions of the personal identity debate. That substance sortal encapsulates a *principle of activity*, or 'mode of being' for members of that sort – from which persistence conditions may be extrapolated.

According to Wiggins, the 'human being principle' is the theoretical description that we find (via the deictic-nomological method described in §1.3) holding between exemplars of that kind. It includes all the biological processes characteristic of human beings: the way we typically breathe, walk, digest, reproduce, grow, age and die. It also includes, for example, typical behaviour, social tendencies, and manner of interaction and communication. Each human being gives this principle specific determination, and it is this specialized and refined determination of the human mode of being that we track when individuate ourselves.

The *human being theory* thus leads to determinate answers in a number of the traditionally problematic cases. The amnesiac is seen to be identical with the person who suffered whatever event resulted in amnesia because memory does not register on identity, and they are clearly possessed of the same principle of activity.⁴¹⁰ The same is true for the comatose patient. They are identical with the person who suffered the accident that caused the coma since, though they have lost consciousness (perhaps never to regain it), they continue to be the kind of entity that could fulfil those characteristic, and uncircumscribed, capacities.⁴¹¹ Wiggins does not mention patients in vegetative states,⁴¹² but he will likely say they also continue to realize a particular principle of activity.⁴¹³ The foetus is identical too, to the adult it will later become, realizing, as it does, that same principle of activity.⁴¹⁴

⁴⁰⁹ Wiggins 2001: 199

⁴¹⁰ Ibid: 197

⁴¹¹ Ibid: 202 and 2005a: 475

⁴¹² As described by Olson in his 1997 (10)

⁴¹³ Though there will be some questions about the extent of the interference of technology (discussed in chapter 4).

⁴¹⁴ Note that a question arises here about the boundaries of the human being. When does the principle of activity become realized? Wiggins writes 'Normally the zygote becomes the embryo, but sometimes it

Mention should also be made of the brain transplantation story (to be discussed in greater length in chapter 4). There is considerable vacillation in Wiggins' view of this canonical tale – in which Brown has his brain transplanted into Robinson's skull – but at points he concedes that Brownson *is* Brown.⁴¹⁵ This verdict is not founded on neo-Lockean sensibilities but emerges out of his *human being theory*. Wiggins sees Brown's particular and refined activity⁴¹⁶ to be 'inherited' by Brownson from Brown in roughly the same way that it is inherited in normal survival.⁴¹⁷ When judging whether or not a human individual continues we look to the 'transfer of the plurality of specialized and refined capacities'⁴¹⁸ – and this, it seems, can be achieved, conceivably at least, in brain transplantation.⁴¹⁹

Wiggins' engagement with the personal identity debate is subtler than most. He brings his characteristic acuity to bear on the problems found therein.⁴²⁰ Gathering together the insights of Strawson and Davidson, he elucidates the meaning of our everyday concept of *person* and the thoughts that underpin our use of the word. With these elucidations now elucidated, questions will be raised about the real strength of the lien between *person* and *human being*.

divides and becomes twin embryos... I am committed to react to this fact with a general ruling to the effect that the human being dates from a time after the zygote finally splits or settles down to develop in a unitary fashion.' (2001: 239)

⁴¹⁵ Wiggins 2001: 207. This may well be one of the reasons he is sometimes read as a neo-Lockean. The 'brain transplantation case' is often seen as a guide to Lockean or animalist leanings: Lockeans and neo-Lockeans see Brownson to be identical to Brown, while animalists like Olson firmly deny this (e.g. Olson 1997: 42ff).

⁴¹⁶ Wiggins 2001: 22, 194

⁴¹⁷ Ibid: 226

⁴¹⁸ Ibid: 211. He qualifies this further by saying, of cognitive capacities, that 'these things figure in the specific determination of the determinable principle of activity to be invoked in making judgments of identity through time...' (211 n.22)

⁴¹⁹ Or at least, Wiggins holds, it is achieved if certain *requirements* are met. See the discussion in §4.1.

⁴²⁰ Anticipating the arguments in chapter 3, it is worthwhile noting that this conceptual consilience also seems to immunize Wiggins against the sort of 'thinking part puzzle' described by Olson (e.g. 2007: 215). Understood as concordant with *human being* (a natural substance), our substance sortal predicate 'person' will not apply to undetached heads, brains, etc. (Cf. Olson 2007: 218) There is thus no reason to pursue the kind of eliminativist picture encouraged by Olson and Merricks (2001b).

§2.3. Testing the conceptual connection

Descriptivists, like Strawson and Wiggins, turn to our conceptual scheme to extrapolate the structure of reality. As was noted in §1.1, this method is not without difficulties, and among them is the concern, raised by Burt and Mei, that in examining their ‘everyday thoughts’ the descriptivist runs the risk of importing cultural biases into their metaphysical framework. The contention here is that Wiggins’ analysis of our use of the term ‘person’ does precisely this. Wiggins avers that his *semantic analysis* will grant us insight into the pre-theoretical concept that supposedly sustains it. The claim assayed below is that our use of the term is guided by diverse and sometimes conflicting rationales, and that it does not, therefore, provide a stable basis for Wiggins’ descriptivist claims. The fragmentary nature of our notion of a ‘person’ becomes clear when it is subject to a genealogical analysis.⁴²¹

§2.3.a. A genealogy of the notion of a person

‘Genealogy’, as a philosophical method, came to prominence in the 1970s in the work of Michel Foucault⁴²² (himself drawing largely on the work of Nietzsche⁴²³). It has been picked up in the Anglophone tradition by Bernard Williams,⁴²⁴ Edward Craig,⁴²⁵ Quentin Skinner,⁴²⁶ and Raymond Geuss.⁴²⁷ Crudely put, genealogy is a form of historical critique, designed to problematize norms by presenting them, not as natural and inevitable, but as products of diverse historical factors.⁴²⁸

Genealogical analysis is used in a variety of ways, but for present purposes the ‘modified’ genealogy that Geuss deploys is perhaps most suitable. In his *Public Goods, Private Goods*, he presents genealogy as taking as its object of study some ‘deeply entrenched contemporary item or phenomenon’ – in his case a conceptual distinction, i.e. that between ‘public’ and ‘private’.⁴²⁹ For Nietzsche it was Christian morality, for Foucault, the prison system, and sexuality. Before the application of genealogy, each of

⁴²¹ In the following section, talk of ‘the concept *person*’ will be largely eschewed in favour of ‘the notion of a “person”’, ‘notion’ being a much less loaded term in Wiggins’ texts (and one suggested by Mauss’s essay).

⁴²² E.g. Foucault 1994

⁴²³ E.g. Nietzsche 1887 (see Foucault 1994)

⁴²⁴ E.g. Williams 2002

⁴²⁵ E.g. Craig 1990

⁴²⁶ E.g. Skinner 2002

⁴²⁷ E.g. Geuss 1999: 1–29, and 2001

⁴²⁸ See Hill 1998 for an overview

⁴²⁹ Geuss 2001: viii

these items presents itself as being unitary and coherent: while there may be different elements, each ‘item’ appears to be unified by some single, unitary rationale.⁴³⁰ Furthermore, this rationale is often construed as stemming from a single point of origination: thus sexuality is supposed to have its natural origin in biological nature, and Christianity, despite its schisms and heresies, ‘can still be seen as arising from a unitary aboriginal *Sinnstiftung* by Jesus in Palestine two thousand years ago’.⁴³¹

Wiggins clearly recognizes that we use the term ‘person’ in different ways, but throughout his work he tries to show how, ultimately, these different conceptions are bound together by a unitary rationale. This aim is made explicit in the 1987 paper, ‘The Person as Object of Science...’,⁴³² where he draws the connections between the three seemingly disparate aspects of our everyday thoughts about ‘persons’:

- 1) the idea of the person as object of biological, anatomical, and neurophysiological inquiry
- 2) the idea of the person as subject of consciousness
- 3) the idea of the person as locus of all sorts of moral attributes and the source or conceptual origin of all value.⁴³³

There is something admirably optimistic about the kind of story Wiggins tells, presenting ‘person’ as capturing a coherent idea in spite of the variety of ways that we apply the term. And there is something rather sad about trying to disassemble this jigsaw and show that some pieces will never fit together; but such is the aim of the genealogical project (certainly as Geuss conceives it). A genealogical analysis shows how such ideas, far from being unitary, are in fact syncretic phenomena, with many distinct roots, no single beginning (hence the ‘genealogical’ metaphor), and no unifying rationale. The elements of Christianity, born from Stoic thought, Roman law, Hebrew scriptures and the politics of resistance to Roman power (etc.) are distinct and possess completely different rationales.⁴³⁴ The same, it will be argued here, is true of the notion of a ‘person’ – and this should be no surprise, since the process by which that concept reached its current state will be just as complex (and indeed, according to Mauss, that

⁴³⁰ Geuss 2001: viii–ix

⁴³¹ Ibid: ix–x

⁴³² Wiggins 1987

⁴³³ Ibid: 56

⁴³⁴ Geuss 2001: xi

process encompasses Christian doctrine relating to the soul, and the Holy Trinity⁴³⁵). As Geuss puts it:

Any significant human phenomenon that has succeeded in maintaining itself throughout a long history into the present... can be expected to be a highly stratified composite whose parts derive originally from different periods. The original rationale of each of these parts will have been oriented to a completely different (past) context of action.⁴³⁶

The notion of a ‘person’ is just such a phenomenon.

Wiggins claims that *person* and *human being* are non-accidentally concordant. His analysis of the semantics of ‘person’, and its associations with the notion of a subject of interpretation, is meant to secure the connection between the two concepts – but the genealogy problematizes this treatment by suggesting that our use of the term is informed by numerous, culturally diverse, and sometimes conflicting influences, unbound by a unifying rationale.

§2.3.a.i. Preliminaries

Three preliminary points should be made. Firstly, the aim of a genealogy is not to discredit a practice, institution or item simply by focussing on a kind of shameful origin; that is, it does not commit the genetic fallacy (since the genealogical method presupposes *no* originary point).⁴³⁷ Secondly, like Geuss’s, this genealogy is ‘modified’ in the sense that it is not directed at an institution or practice, but an idea.⁴³⁸ The following analysis attempts to dissolve the appearance of unity in our everyday notion of a person.

Thirdly, a genealogical study may seem to be an overly ambitious project, and one ill-suited to the space constraints of the present study, but the story entered here is intended only as a rough sketch of *some* of the various, disparate elements of the notion of a person. Furthermore, if it is ambitious then the ambition exists outside this thesis. There are two texts that directly inform the following analysis: Amélie Oksenberg Rorty’s ‘Persons and *Personae*’⁴³⁹ and Marcel Mauss’s ‘A Category of the Human Mind:

⁴³⁵ See e.g. Mauss 1938: 19–20

⁴³⁶ Geuss 2001: xiii

⁴³⁷ Ibid: xv

⁴³⁸ Ibid: xvi

⁴³⁹ Rorty 1990

The Notion of Person; the Notion of Self.⁴⁴⁰ Both attempt to show, in different ways, how ‘the various functions performed by our contemporary concept of person do not hang together’ (indicating too, the value of such a genealogy outside the current discussion).⁴⁴¹ It is particularly in Mauss’s anthropological study, that the following analysis is grounded.⁴⁴²

Mauss’s last essay, published in 1938, is a survey of various historical and ethnographical studies, in which he describes the long and complex history of the seemingly natural notion of a person. He identifies its different renderings, and charts how they came into contact, and were subsequently conjoined, from societal role, to legal fact, to moral fact, and to metaphysical entity:

From a simple masquerade to the mask, from a ‘role’ to a ‘person’ to a name, to an individual, from the latter to a being possessing metaphysical and moral value, from a moral consciousness to a sacred being, from the latter to a fundamental form of thought and action...⁴⁴³

This quotation gives a sense of the vastness of the project. It also indicates one of the problems with Mauss’s approach. Emerging from the French sociological school dominated by Durkheim, it appears to construe the distinct notions as related in some form of linear narrative: the different points appear as stages, which lead on from one to the next. This, it should be noted, is troublesome for the genealogist, who sees her approach to be characterized by multiple branching (or, in Deleuzian idiom, as ‘rhizomatic’).⁴⁴⁴ It is also potentially politically suspect, since this kind of evolutionary picture positions some cultures as ‘less evolved’ than others.⁴⁴⁵

Whether or not Mauss intended his narrative to be linear is unclear (there is room for disagreement).⁴⁴⁶ Either way, the aim here is to show how it can be read as something like a genealogy: to build on the different strands he identifies, and the interrelations he sees between them, in order to raise issues for Wiggins. The following,

⁴⁴⁰ Mauss 1938

⁴⁴¹ Rorty 1990: 22

⁴⁴² It is gratifying to hear that, following our discussions, Wiggins is now incorporating a treatment of Mauss into a paper rewritten for a forthcoming collection.

⁴⁴³ Mauss 1938: 22

⁴⁴⁴ Koopman 2012

⁴⁴⁵ See e.g. below, the Pueblo of Zuñi construed as stuck in the ‘Totemic stage’, from which our own conception of person evolved.

⁴⁴⁶ Certainly in this essay, it seems he does not. He talks about simultaneous movements (the movement away from the Totemic mask civilizations, and the injection of the ‘prosopon’ concept from Stoic tradition).

then, may be seen as a creative *reinterpretation* of Mauss, drawing out, by reference to his cross-cultural study, the different components of the notion captured by the word ‘person’.

Having said this, there is still no better introduction to the essay, and to these thoughts, than Mauss’s own – and the relevance to Wiggins’ work is nowhere better signalled than at the start of ‘A Category of the Human Mind’:

[This essay] deals with nothing less than how to explain... the way in which one of the categories of the human mind – one of those ideas we believe to be innate – originated and slowly developed over many centuries and through numerous vicissitudes, so that even today it is still imprecise, delicate and fragile, one requiring further elaboration. This is the idea of ‘person’ (*personne*), the idea of ‘self’ (*moi*). Each one of us finds it natural, clearly determined in the depths of his consciousness, completely furnished with the fundamentals of morality which flows from it. For this simplistic view of its history and present value we must substitute a more precise view.⁴⁴⁷

§2.3.a.ii. ‘Person’ as a mask

Mauss’s investigation begins with the ‘mask’ culture of the Native American Pueblo of Zuñi, and the pre-Roman Etruscans; he finds in their practices the notion of the ‘person’ as something like a *mask* or *role* – that is, like *dramatis persona*.⁴⁴⁸ And while the practices of the Pueblo of Zuñi are far removed from the historical process out of which the ‘personal identity’ debate emerge, this use of person is – as many have noted – apparent in the etymological roots of the English word ‘person’, as a mask, through which (*per*) resounds the voice (*sonare*). (Wiggins himself recognizes this.)⁴⁴⁹

⁴⁴⁷ Mauss 1938: 1

⁴⁴⁸ This is an example of the unfortunate consequences of his evolutionary analysis; the, still extant, Native American cultures are seen to be in some senses ‘stuck’ in the ‘aboriginal state’ (Mauss 1938:4) out of which our own culture emerged.

⁴⁴⁹ Wiggins 1996: 282 n.27. It is worthwhile noting that Mauss questions this reading: ‘In reality the word does not even seem to be from a sound Latin root. It is believed to be of Etruscan origin, like other nouns ending in ‘-na’ (Porsenna, Caecina, etc.). Meillet and Ernout’s *Dictionnaire Etymologique* compares it to a word, *farsu*, handed down in garbled form, and M. Benveniste informs me that it may come from a Greek borrowing made by the Etruscans, *πρόσωπον* (‘perso’).’ (Mauss 1938: 15) Nevertheless, as he emphasizes, either way it emerges from the Etruscan’s mask civilization. (Mauss 1938: 15)

In these ‘mask cultures’, the communities, or ‘totemic groups’ are described as possessing only a fixed number of names⁴⁵⁰ – and in naming rituals, these ‘characters’ or ‘roles’, or ‘persons’ are conferred on members of the group. Following this baptismal rite, the bearers of the name are regarded, at any time, as the *reincarnation* of the original bearer.⁴⁵¹ Indeed, for Mauss, this account of ‘person’ as mask is central to the logic of reincarnation, where a single person is seen to span different biological lives:

The individual is born with his name and his social functions... The number of individuals, names, souls and roles is limited in the clan, and the line of the clan is merely a collection (*ensemble*) of rebirths and deaths of individuals who are always the same.⁴⁵²

On first reading, these kinds of ethnographic details might seem to register on a completely different level to the one that Wiggins is working on. But attention to *S&S*, and his earlier paper, ‘Locke, Butler and the Stream of Consciousness’, reveals that he explicitly engages with exactly this kind of hypostatization of social roles, in analysing our understanding of what it is to be a ‘person’.⁴⁵³ His point of reference is Clifford Geertz’s *Person, Time and Conduct in Bali* rather than Mauss, but the issues discussed are strikingly similar, focussing on ‘the strange fusion of role and human being that is involved in [the Balinese] system of naming’.⁴⁵⁴

Wiggins’ comments about Balinese naming practices surface in his discussion of fission. Fission becomes a conceptual possibility on the neo-Lockean model because an exclusive focus on consciousness cannot proscribe against, e.g. hemispherectomies, and subsequent so-called ‘deltas’ in the stream of consciousness.⁴⁵⁵ One aim, in ‘Locke, Butler and the Stream of Consciousness...’ and *S&S*, is to demonstrate how this sort of splitting would destabilize our *everyday usage* of the term, since it presents persons as things that can *transcend bodies*, and *individual lives*.⁴⁵⁶ If this is right, then for the descriptivist the neo-Lockean’s focus on memory and consciousness cannot be seen to constitute personal identity (since it clashes so forcefully with our everyday pre-theoretical practices). He writes:

⁴⁵⁰ Allen 1985: 32

⁴⁵¹ Ibid: 32

⁴⁵² Mauss, as quoted in Allen 1985 (33)

⁴⁵³ Wiggins 1976: 146, and 1980: 166

⁴⁵⁴ Wiggins 1980: 166

⁴⁵⁵ See Wiggins 1976 for this ‘delta’ terminology.

⁴⁵⁶ Wiggins 1980: 163ff

The conceptual possibility of a delta in the stream of consciousness jogs our whole focus on the concept of personhood.⁴⁵⁷

Geertz's study of Balinese society becomes important, therefore, because it describes an 'extant conception',⁴⁵⁸ where *person* functions less like a substance sortal, and more like what Wiggins calls a 'concrete universal'.⁴⁵⁹

What is a 'concrete universal'? Wiggins' discussion of these entities is only cursory (emerging in dialogue with his reading of Plato's *Parmenides*).⁴⁶⁰ He outlines the idea we have of a type of being with potentially spatially and temporally dislocated parts – the collection of all Cox's Orange Pippin trees, for example,⁴⁶¹ or, in this context, the collection of those who wear the same mask.⁴⁶² (An ancillary point to be made here, and revisited below, is that whatever they are, *concrete universals* have a different metaphysical character to *substances*). For the Balinese, a single person may be comprised of distinct individuals. Nor is this hypostatization of social roles restricted to the Balinese, and the Zuñi, and the pre-Roman Etruscans; Wiggins finds a version of this concrete universal conception of person in our own culture (or, as he puts it, 'a neighbouring compartment'). He quotes from Sartre's commentary on Flaubert:

Un homme n'est jamais un individu; il vaudrait mieux l'appeler un universal singulier; totalisé et, par la même, universalisé par son époque, il la retotalise en se reproduisant en elle comme singularité.⁴⁶³

[A man is never an individual; it would be better to call him a singular universal; total, and also, universalized by his epoch, he retotalizes it by reproducing it as a singularity.]

Examples abound in Western literature.⁴⁶⁴ The point is that, in these contexts, 'person' is understood as a role that is played, and which can be played by different individuals. It

⁴⁵⁷ Wiggins 1980: 169

⁴⁵⁸ Ibid: 167

⁴⁵⁹ Ibid: 166

⁴⁶⁰ Wiggins 2001: 229

⁴⁶¹ Wiggins 1980: 166

⁴⁶² Ibid: 167

⁴⁶³ Ibid: 167

appears that it is not only an ‘extant conception’, but one which exists (if residually) in our own thoughts about *what persons are*. And it is one, as Wiggins notes, that clashes with the simultaneous and persuasive thought that a person is an entity with an individual biography:

[T]here is no question of building up a coherent historical record of the individual passions, thoughts and actions of an individual person. There is little or no provision for the individual or, as it were, the perspectival aspect of human experience. The whole ordering of the events of human history is interpreted so far as possible in terms of the recurrence of generic types of doing or suffering. And where there scarcely is such a thing as history, the idea of biography loses all purchase...⁴⁶⁵

Wiggins sees the concrete universal conception to clash too strongly with our everyday attitudes to person and the practices that relate to them – so he tries to shear it from the central notion. Yet more needs to be said for this to be other than arbitrary. The clash between the ‘mask’ conception of person and our everyday practices is taken as grounds for rejecting that conception of person; but could it not equally be taken as evidence of the contradictory make-up of the notion itself? It is true that the ‘concrete universal’ conception sits awkwardly alongside our use of ‘person’ to pick out a locus of moral attributes, but perhaps this is because our notion is syncretic, with elements organized by diverse rationales. It is not immediately clear what licenses Wiggins’ disavowal of the ‘concrete universal’ conception. It is, maybe, significant that this discussion of Geertz and the Balinese disappears after *SeS* (and is not referred to in the secondary literature).

§2.3.a.iii. ‘Person’ as a legal fact

Let us turn to another potentially controversial element: the conception of the person as a *legal fact*. As noted, Mauss sees the ‘mask’ rendering of person to be one of the earliest

⁴⁶⁴ In slightly less august terms than Sartre’s, we find a similar use of ‘person’ in the trope that pervades Western literature, of one’s *becoming* or *being* one’s parent (e.g. Brookner 1995: ch.1, Gaiman 2013: ch.1, Goodison 1986: ‘I am becoming my mother’). Describing the inheritance of character, Julien Green captures the common thought in his novel *Léviathan* (Green 1929/1993: 32):

In growing older we become our parents.

⁴⁶⁵ Wiggins 1980: 167

stages in its evolution. He identifies evidence of this kind of ‘mask’ civilization in early rituals in Rome⁴⁶⁶ – but then describes a conceptual move away from the person as ‘a mask, a tragic mask, a ritual mask and the ancestral mask’, towards the *privileges* of those individuals with a *right* to a mask. Personhood becomes ‘a fundamental fact of law’.⁴⁶⁷ Rights are accorded to the bearers of masks (or latterly, to those holding names which stood in place of the masks).⁴⁶⁸ Thus, compare the states of Roman citizens, or ‘legal persons’ (‘all freemen of Rome were Roman citizens, all had a civil *persona*’⁴⁶⁹) with their slaves (‘*Servus non habet personam*’⁴⁷⁰), beings who lacked ‘personality’, owning neither body, nor ancestors, name, nor belongings; individuals, but not persons. Here, the person is presented as a legal entity, and ‘personhood’ is a legal status, and the individuals who are granted it are subject to the laws of persons, rather than of property.⁴⁷¹

This legal sense of person survives – and it is indicative of the connections between this and the ‘mask’ conception that in the modern, juridical usage, different individuals may still be the same person. This is because, in the current British legal system, *corporate bodies* register as ‘persons’:

IV.6. Law. a. ‘A human being (*natural person*) or body corporate or corporation (*artificial person*), having rights and duties recognised by the law... TUCKER *Lt. Nat.* (1834) II. 188 *A crowd is no distinct existence, ...but if the same people be erected into a corporation, there is a new existence superadded; and they become a person in law capable to sue and be sued [etc.]*’⁴⁷²

Again we find a point of tension between two ideas about what persons are. This legal conception sees our usage of the term ‘person’ to refer to some (legally specified) *stipulative definition*, which is palpably at odds with Wiggins’ claim that it functions like (although it might not *be*) a natural kind word.⁴⁷³ ‘Person’, here, is a construct of legal

⁴⁶⁶ Mauss 1938: 15

⁴⁶⁷ Ibid: 15–17

⁴⁶⁸ Mauss identifies an interesting point of transition in the dissolution of the father’s power over the life and death of his descendents (*vitae necisque potestas*) – prior to the dissolution, his children, as bearers of his name, were ‘part of his person’ (in the fullest sense) (Mauss 1938: 16).

⁴⁶⁹ Mauss 1938: 16

⁴⁷⁰ Ibid: 17

⁴⁷¹ Ibid: 17

⁴⁷² See entry in the *Oxford English Dictionary*

⁴⁷³ Consider too that a corporate person may be constituted by numerous and diverse individuals at different times, and exist spatially dislocated (in different ‘branches’). Perhaps this will provoke similar difficulties to the mask conception.

practice – an entity with certain rights and duties – and we learn about persons in this sense, not by looking to the world but by looking to how they're specified in law (in the same way that we grasp what a chairman is, for example).

Here, the marks of personhood are seen to be socially determined. What counts as a person is a matter of convention or tacit agreement – it has a nominal essence that is up for discussion.⁴⁷⁴ That we use 'person' in this way is noted by Snowdon, in his contribution to *Identity, Truth and Value*:

[I]t is not clear that there is any deep difference between those concepts which we all regard as capable of nominal elucidation and the notion of a person...⁴⁷⁵

Snowdon rejects the natural kind reading in favour of the stipulative one,⁴⁷⁶ but the suggestion here is that both are valid. The notion is a stratified composite with conflicting elements.

As before Wiggins does not deny that 'person' can be read as specifying a nominal essence.⁴⁷⁷ Again, in 'The Person as Object of Science...' he writes:

[T]he concept *person* had best not be like the concepts of various kinds of executant or like concepts that have to change in response to technological progress such as *surgeon*, or *infantryman* or *footplateman*, or like legal concepts that we may decide at any moment to modify, such as *tenant*, *citizen*, *metic*, *minor*, or like legal concepts that we simply invent, such as *patrial*.⁴⁷⁸

He does not deny that we *do* sometimes use 'person' in this way. Rather he warns us against such usage, because he thinks that to treat 'person' in this way is to invite a form of moral degeneration. There are social and political implications of treating the concept of *person* otherwise than as a peculiar restriction of a natural kind concept. This view is made explicit towards the very end of *SES*:

⁴⁷⁴ Bakhurst 2005: 463

⁴⁷⁵ Snowdon 1996: 38

⁴⁷⁶ 'We would not countenance the possibility that the elements on the standard list elucidating person might be eliminated given investigation of a wider sample, nor that features with no obvious connection to those already on it might, on investigation, merit being put on the list.' Snowdon 1996: 38

⁴⁷⁷ Though at times he seems tempted to (e.g. 1980: 173)

⁴⁷⁸ Wiggins 1987: 63

Not only does [a constructionist conception of persons] reduce the theoretical subject matter of morals and politics and limit the range and variety of counterfactual speculation that this subject matter can be expected to sustain; and not only does it reduce drastically (for the same reasons) the scope for real criticism of the actual works of social engineering that ought to have [been] held in check by a healthy respect for the partly imponderable real essence of actual persons: it will also license a state of affairs in which there was absolutely nothing except fear of confusion to obstruct proposals for modifying or reinventing even the *accepted* specification of what a person was – just as we constantly and effortlessly modify and refashion through time certain institution- and artifact-concepts...⁴⁷⁹

This is one section of what Wiggins calls his ‘anti-constructionist tirade of 1980’⁴⁸⁰ – a furious attack that has largely been cut from subsequent texts (and appears only in condensed form in the concluding pages of *SC&SR*).⁴⁸¹ The reason for this cut is not made explicit, but as Bakhurst notes, many will find it judicious.⁴⁸² Some will think the constructionist a straw-man.⁴⁸³ Others, like Bakhurst, will find something awkward in this moral attack on a metaphysical position.⁴⁸⁴ To these lines of criticism the following can be added: irrespective of its damaging outcomes, the descriptivist’s concern should be with how we *use* ‘person’, and in some context we certainly use ‘person’ as though it possessed some nominal essence; moral objections to this usage will not show that it is incorrect, only (potentially) problematic.

§2.3.a.iv. ‘Person’ as a moral fact, and as a metaphysical entity

Let us finish Mauss’s story. The sense of person that grounds Wiggins’ account only starts to appear towards the end of the narrative. Mauss describes a third strand in the idea of a person, the result of the interweaving of the juridical notion and the legal-cum-

⁴⁷⁹ Wiggins 1980: 180–181

⁴⁸⁰ Wiggins 2005a: 474

⁴⁸¹ Wiggins 2001: xi (and 242ff)

⁴⁸² Bakhurst 2005: 463

⁴⁸³ Ibid: 464 n.6

⁴⁸⁴ Ibid: 464

moral ‘*prosopon*’ that is found in the Stoic tradition. What results from the cross-pollination of Greek and Roman thought is a notion of person as both the legal ‘mask’, but also the *true face* of the person/citizen.⁴⁸⁵ Here, a person is both a role, or position, with particular rights and duties, and also the individual who is responsible for their own actions, who is faced with choices, with respect to those legal duties:

The word *πρόσωπον* did indeed have the same meaning as *persona*, a mask. But it can then also signify the ‘personage’ (*personnage*) that each individual is and desires to be, his character (the two words are often linked), his true face... *πρόσωπον* is no longer only a *persona*, and – a matter of capital importance – to its juridical meaning is moreover added a moral one, a sense of being conscious, independent, autonomous, free and responsible.⁴⁸⁶

As Mauss points out, we find the superimposition of the juridical and moral in Marcus Aurelius’ command to ‘carve out your mask’⁴⁸⁷ – and this connection, between the legal, and the conscious, *moral* person transfuses more recent accounts (though it is a point bordering on the banal, it is no surprise that Locke’s account of personhood is constructed by reference to the legal conception).

Even here, however, where we are moving into more familiar territory, ‘person’ will not carry the full weight that Wiggins assigns to it. In particular, the *persona/prosopon* conception as it stands in the Greco-Roman tradition does not refer to *each and every* human being. It still functions like a status, which can be achieved or withdrawn. As Martin Hollis points out, in general, in the Classical era, there was ‘no single generic word for each and every human being’⁴⁸⁸ (to say nothing of those cultures perhaps further from our own, like the Balinese and the New Guineans).⁴⁸⁹ (Nor, it seems, is Wiggins fully blind to this concern.⁴⁹⁰)

⁴⁸⁵ Mauss 1938: 18–19

⁴⁸⁶ Ibid: 18. Hollis presents a fair summary of the development up to this point (Hollis 1985: 219).

⁴⁸⁷ Mauss 1938: 19

⁴⁸⁸ Hollis 1985: 217

⁴⁸⁹ La Fontaine 1985: 123

⁴⁹⁰ Wiggins 1996: 248

In the classical era, Greeks and Romans seem to have found no need whatever for a term with the general sense or function of the word ‘person’.²⁷

²⁷ The Latin word *persona* means primarily (1) mask or (2) a character in a drama. What first pushed the word in the direction of its modern meaning was the task of codifying Roman Law.

It is only after the advent of Christianity that Mauss sees ‘person’ to pick out all and every human being for the entirety of their existence. It is here that we have the transition from ‘the notion of *persona*, of “a man clad in a condition”, to the notion of man, quite simply, that of the human “person” (*personne*).⁴⁹¹ This is a fourth strand of the notion of a person, which grounds Wiggins’ treatment. There is no need for present purposes to examine it in too great a depth – except to say that, following the intermingling of the Christian doctrine of the Trinity and the evolution of the concept of the soul, Mauss claims that ‘person’ begins to apply to all human beings (just as all human beings have a soul, ‘which Christianity had given them’).⁴⁹² Personhood becomes something that all humans, citizens or slaves, possess and cannot be stripped of.

§2.3.b. A critique of Wiggins’ semantic analysis

As we use it in everyday speech, ‘person’ functions in multifarious ways; the study above is taken to lend substance to the claim that the notion of a ‘person’ is a cultural accretion, a ‘syncretic phenomenon’. It is not, as Mauss presciently saw, a ‘primordial innate idea, clearly engraved since Adam in the innermost depths of our being...’⁴⁹³

Crucially, our use of the term ‘person’ is guided by *conflicting* rationales. We use it as though it picks out particulars but also, sometimes, as though it picks out concrete universals; we use it as though it were a natural kind word, but also stipulatively. The thought here is that an analysis of our use of so plastic a term cannot provide a stable basis for Wiggins’ descriptivist claims. How we use it will grant us no insight into a coherent pre-theoretical concept.⁴⁹⁴

Furthermore, focussing on ‘our’ use of the term may be seen to introduce cultural biases into Wiggins’ descriptivist picture. Wiggins is interested in some strands of the notion of a ‘person’ but not others. The concrete universal conception is marginalized – but what then of the cultures, like the Balinese, which put particular emphasis on this understanding of personhood? Do they fail to capture a fundamental

⁴⁹¹ Mauss 1938: 19

⁴⁹² Ibid: 17. See also La Fontaine 1985: ‘[the conception of *prosopon*] is translated by Christianity into the idea of the soul to arrive finally at the notion of a unity, of body and soul, mind and conscience, thought and action which is summed up in the concept of the individual which Mauss labeled ‘*la personne morale*’ (124). See also Hollis 1985: 217

⁴⁹³ Mauss 1938: 20

⁴⁹⁴ More generally, one might wonder whether the *person* concept can be reduced in this way, whether attempting to separate certain elements will damage that rich and complex notion. One may well think that the ambiguities between these different, occasionally conflicting elements, are an important feature of our living language, and our way of interacting with others. This is prompted by Wittgensteinian thoughts conveyed to me by Christoph Schuringa.

element of our conceptual scheme? Wiggins can, plausibly, avoid such morally and politically disturbing conclusions⁴⁹⁵ by revising his reading of Geertz, and focussing on the obvious ability he shares with the Balinese, for getting ‘on net’. Still, it is important to recognize the worry, which touches all metaphysical inquiries but achieves particular prominence with this descriptivist project, that the cultural bearing of the philosopher will have direct effects on their metaphysical claims.

Do these thoughts disturb the conceptual consilience of *person* and *human being*? It should be remembered that Wiggins does not think there is a ‘transcendental argument’ to conjoin the two concepts.⁴⁹⁶ He simply aims to provide arguments that strongly suggest a connection. And where the semantic analysis fails, he may turn to the other two connecting cords: the Strawsonian argument and the argument from interpretation. Perhaps they more neatly tie *person* and *human being* together? Perhaps – but if so, the connection is not quite of the kind that Wiggins claims.

The Strawsonian argument and the argument from interpretation are not based on how we use the term ‘person’; rather, they are used to flesh out the structure that undergirds our everyday thoughts. If we examine our modes of thought ascription we will find that thinking things must be material things. If we look to how we interact with one another we see that we must understand others as *subjects of interpretation*. Wiggins takes these thoughts to elucidate an element of our conceptual scheme – the *person* concept.

They are persuasive arguments, and both hint towards the conceptual concordance of this basic, pre-theoretical thought and the thought of a *human being* – one of *us* – the kind of biological being with our distinctive capacity for culture, and so on. On these grounds, Wiggins holds that *person* and *human being* assign the same *principle of activity*; when we are interested in the persistence conditions of one, we can examine the persistence conditions of the other. Claiming this, he is implicitly committed to the thought that both *person* (which we might reasonably take to cover the things whose persistence the personal identity debate is focussed in tracking) and *human being* are *substance sortals*. The question to be investigated in the remainder of this chapter is: what justifies this substance sortal reading of *person*?

⁴⁹⁵ See, e.g. Wiggins 1980: 222 ‘We entertain the idea, unless we are irredeemably conceited or colonialist in mentality, that there be something we ourselves can learn from strangers about the true, the good, and the rational...’

⁴⁹⁶ Wiggins 1995: 248

‘Person’ looks like a fundamental or basic sort of classification.⁴⁹⁷

This conclusion emerges, in ‘The Person as Object of Science...’, from Wiggins’ semantic analysis. When we use the term ‘person’, we use it as a substance sortal predicate, which applies to an individual for every moment of their existence. Yet our everyday usage is not, as noted, a stable foundation for Wiggins’ position. So: can the substance sortal reading be substantiated by the other two arguments?

On a generous interpretation, the Strawsonian argument supports the claim that certain psychological states can only be enjoyed by beings with a particular physiology – human beings. But this, by itself, is not enough for Wiggins’ purposes. It might be basic to our conceptual scheme to understand psychological beings as material beings; it remains open whether or not psychological beings must be psychological beings for every moment of their existence.⁴⁹⁸

What about the analysis founded in Davidson’s ideas about interpretation? Is the notion of a *subject of interpretation* necessarily the notion of a fundamental sort of thing? If an individual is a subject of interpretation is it necessarily so at every moment of its existence? Consider again what is meant by ‘interpretation’:

[T]he only way for us to make sense of being a person is to think of persons... as subjects of fine-grained interpretation by us, as subjects for whom we are subjects of fine-grained interpretation, and as creatures with whom we can have relations of co-operation and reciprocity.⁴⁹⁹

Understood thus, can we conceive of personhood as being acquired? Let us turn to our everyday dealings. Think of gestating or newly born babies. Think of the way we interact with them. We do not treat them as beings we can reason with, with whom we can engage in joint projects. We do not see them as beings who – but for some physiological impairment – interpret, reason, empathize, or imagine themselves in our shoes (unlike, e.g. adults suffering severe mental delay). There are conceptual capacities they have yet

⁴⁹⁷ Wiggins 1987: 63

⁴⁹⁸ And indeed, attending to his comments in his 1987 paper, Wiggins does not seem to want to use the Strawsonian point to do anything other than gesture towards the connection.

⁴⁹⁹ Wiggins 2000: 1

to acquire.⁵⁰⁰ There is potential there, but we do not enter into co-operative and reciprocal relations with them.

The thought that personhood is acquired is nicely captured by David Bakhurst in his commentary ‘Wiggins on Persons and Human Nature’.⁵⁰¹ Bakhurst emphasizes the process of *enculturation* that eventually allows a child to ‘tune in’, or ‘get on net’, with those around it:

Human beings owe their distinctive psychological powers to ‘cumulative cultural evolution’: each individual inherits the legacy of the collective achievements of past generations. This is not just a matter of the transmission of knowledge and skills across generations. Rather, children’s minds and characters are formed through their assimilation of culture. At its strongest, this perspective endorses an idea that might be thought anathema to Wiggins, though it emerges in the work of thinkers he admires, such as John McDowell and Lev Vygotsky: the idea that personhood is acquired. On such a view, human beings are born ‘mere animals’ and become persons as they attain a ‘second nature’, in the form of conceptual capacities and moral sensibilities which make them, as McDowell puts it, ‘at home in the space of reasons’. These capacities and sensibilities are acquired and refined through *Bildung* – initiation into the traditions of thought and action embodied in language and culture. Personhood is thus both a result of the normal maturation of human beings and an artefact of culture.^{502, 503}

Bakhurst’s proposal can be read as suggesting that the *person* concept – underwritten by the Davidsonian notion of a *subject of interpretation* – need not be a notion of a fundamental kind of thing. And this seems to resonate with our interpretative procedures; it makes sense, for example, of many of the ways that we think of and interact with gestating or newly-born babies. At the very least it puts the onus on

⁵⁰⁰ Note too, how commonplace it is to wonder what kind of person a baby, as yet unborn or newly-born, will become. Looking at an ultra-sound image of a foetus we may well think the entity depicted there is not yet a person, but will become one.

⁵⁰¹ Bakhurst 2005

⁵⁰² Ibid: 467

⁵⁰³ In anticipation of the discussions in chapter 3 it should be noted that this picture fits neatly with John Dupré’s (e.g. Dupré 2010c/2012).

Wiggins to explain why, if one is a subject of interpretation, one must have always have been so.

Wiggins' reply to Bakhurst is as follows:

Reading his proposal quite literally, I am troubled to think that one might find oneself saying that A was more of a person aged 32 than he was at 20, or that B was more of a person than C was and meaning it quite literally. Once we started saying that sort of thing and taking it as seriously confirming Bakhurst's proposal, we should need to take more seriously than we now do the fact that we sometimes say 'D is a real Mensch' whereas (we say) 'E is scarcely human' – ways of talking we do not think of as committing us to think of human beinghood as something acquired or committing us to exempt E from all reproof for his callousness or brutality. Is it not better to conceive of a human person as a creature with a *natural capacity*, which may or may not be realized, for reason, morality, Bildung... and better to say that these achievements *fulfil the potentialities* of human beinghood / personhood? Adapting a dictum of Woodger's I have quoted before would it not be better to say that the child is the *primordium* of the moral / rational being but not of the future person, because the child already is that person?⁵⁰⁴

Yet Bakhurst's proposal is in conflict with none of this. Wiggins is articulating two objections – but neither is an insurmountable obstacle.

His first objection sounds on a moral register and follows from his views, alluded to above, about what it means to be a 'good person'. In his 1976 essay 'Truth, Invention, and the Meaning of Life'⁵⁰⁵ he suggests that to think of personhood as a status to be *achieved* 'make[s] a mess of what we mean by "a good person"'.⁵⁰⁶ Where personhood is seen as a socially-determined status, 'person' is used as a functional term (i.e. as referring to beings with a determinate, specifiable function/purpose) and this is at odds with the emphasis in our everyday moral language, which revolves around notions of autonomy and the exercise of our human capacities for self-direction.⁵⁰⁷ This

⁵⁰⁴ Wiggins 2005a: 475

⁵⁰⁵ Wiggins 1976 and also 1987

⁵⁰⁶ Wiggins 1987: 63

⁵⁰⁷ Wiggins 2000: 1 Note too, that this connects to the moral objection to the nominal-essentialist account of 'person' (described above).

is one way of understanding the claim above that it is ‘better to conceive of a human person as a creature with a natural capacity, which may or may not be realized, for reason, morality, Bildung...’. The pre-theoretical concept is deeply embedded in our moral practices – and our moral practices belie any *functional* reading of it (as having a *principle of functioning*).

Wiggins’ second – related – point seems to be that persons are better understood as creatures with certain natural capacities because it is only by seeing them thus – and not as beings defined by some nominal essence – that we can accommodate the *aposiopesis* that is a necessary correlate of seeing individuals as *subjects of interpretation* (note how the ellipsis that signals the essential incompleteness of the list is included in the quotation).⁵⁰⁸ We cannot stipulate what capacities a being must have to be ‘one of us’. We must look to the world to discover this. When thinking properly ‘about what interpretation and reciprocity involve on the levels of reason and response’⁵⁰⁹ the only stereotype we can have of a person is a human being.⁵¹⁰

Yet Bakhurst can wholeheartedly agree that the constructionist, stipulative account of personhood is problematic. His suggestion, refined here, is only that our stereotype of a person is a human being who has achieved some level of psychological-cum-cultural integration (not e.g. an unborn, or newly born, baby). When we think about persons we naturally think of beings whom we can interpret and who can interpret us; our stereotype is a human being who has passed through certain developmental stages. (Wiggins himself exhibits this bias in the above quotation, where he suggests that Bakhurst’s proposal licenses the thought at a 32 year-old could be ‘more of a person’ than a 20 year-old. It might suggest that a 32 year-old is more of a person than a one day-old, or an unborn baby in the third trimester of gestation – but this is less intuitively surprising.) Seeing personhood as a stage in the life of a human being does not commit one to thinking that the marks of personhood are stipulated by us. We do not think of *butterfly* or *fawn* as being nomologically shallow concepts just because they refer to stages in an animal’s life.

Perhaps Wiggins will say – following Aristotle – that human beings are essentially ‘rational animals’. On these grounds he may justifiably object to Bakhurst’s claim that ‘human beings are born “mere animals” and become persons as they attain a “second nature”’ since it conflicts with the Aristotelian thought that rationality pervades

⁵⁰⁸ See also Wiggins 2001: 198

⁵⁰⁹ Wiggins 2000: 1

⁵¹⁰ Ibid: 199: ‘the marks of personhood are assembled of persons *as we know them* from the only case we shall ever become familiar with, namely that of persons who are human beings.’

our being, and is not a skill to be acquired.⁵¹¹ And, in his early work, Wiggins does appear to interpret ‘person’ along these lines, as being the form, the *psuche*, of the human being. He writes, in the avowedly Aristotelian *ISTC*:

[F]or our purposes it will not do very much harm to think of *psuche* as much the same notion as *person*...⁵¹²

Yet this is not how he reads ‘person’ now. Roughly, a *rational animal* is a creature that can learn, and understand, and think about itself, and find its place in the world. A *person* is such a creature that is also *one of us* – a being who we can interpret and who interprets us. The two are distinct. As was seen above (§2.2.b), there may be rational animals – dolphins, or aliens – who are *not* persons.⁵¹³

Where, then, does this leave us? Nothing that has been said seems to have severed the conceptual connection between *person* and *human being*, irrespective of the semantic analysis, the Strawsonian argument and the argument from interpretation provide strong grounds for thinking that our pre-theoretical concept – ‘*person*’ – is sustained by our notion of a human being. Still, the contention has been that the connection is different in kind from the one that Wiggins finds. In *SeS* and *SeSR*, he holds that both sortals assign the same underlying principle of activity;⁵¹⁴ for this to be the case, both need to be substance sortals. Guided by Bakhurst, however, we are led to the thought that personhood – insofar as it is underwritten by the Davidsonian notion of a subject of interpretation – can be *acquired*. It was claimed too that the Strawsonian argument does not justify the substantial reading. *Person*, while still construed as a fundamental element of our conceptual scheme, appears as a restriction of *human being*.⁵¹⁵

The thought that *person* is a ‘fundamental or basic sort of classification’ is grounded in the way we use the term ‘person’. It is true that we do use it as a substance sortal (think how awkward we find the claim that human beings *become* persons) – but we use it too as though it describes a *phase*. The ‘mask’⁵¹⁶ and ‘legal’⁵¹⁷ conceptions of

⁵¹¹ For a helpful introduction to this Aristotelian thought see Boyle *forthcoming*.

⁵¹² Wiggins 1967: 46–47

⁵¹³ Wiggins 1987: 72

⁵¹⁴ Wiggins 2001: 194

⁵¹⁵ In fact, attention to Wiggins’ own various discussions of the relation between the concepts *person* and *human being* suggests an asymmetric dependence, characteristic of the dependence of a restricted sortal on a substance sortal. See Wiggins 1987: 60 and 75

⁵¹⁶ See, e.g. Mauss 1938: 8–9

person – both still present in our practices – construe ‘person’ as a status that an individual can attain. Similarly, on the Lockean account, one may conceive of a man ceasing to be one person and becoming another,

[This explains] our way of speaking in English when we say such an one is ‘not himself’, or is ‘beside himself’; in which phrases it is insinuated, as if those who now, or at least first used them, thought that self was changed; the selfsame person was no longer in that man.⁵¹⁸

The genealogy shows that our uses of the term are supported by different, sometimes conflicting rationales. It thus demonstrates why our use cannot be a stable foundation for Wiggins’ analysis. It also indicates a point at which the term ‘person’ began to function properly as a substance sortal term – after the advent of Christianity (see 2.3.a.iv.) – and the suggestion here is that it is this seam in the rich and variegated notion, and not some pre-theoretical concept, that Wiggins is tapping when he presents his substantial reading of ‘person’.

⁵¹⁷ See e.g. Tur 1987: 117 (and Mauss 1938: 17)

⁵¹⁸ Locke (1690/1975): II, xxvii, §18. Note the descriptivist appeals in this passage – it is a commonplace of our natural way of talking to describe ourselves as *becoming* different persons. This is suggested too, by common phrases like ‘she was a different person then’ and ‘you’re a different person here than at work’ (and so on).

§2.4. Conclusion

The aim of this chapter has been threefold; firstly, to present a clear statement of Wiggins' account of personal identity; secondly, to correct various misreadings of it; and thirdly, to suggest a modification to his claim about conceptual consilience.

Central to Wiggins' view is a careful and complex elucidation of the *person* concept; he shows how it functions in our everyday language, and ties it to the Davidsonian notion of a *subject of interpretation*. What emerges from his analysis is the claim that, when properly considered, we find that *person* is conceptually consilient with *human being*. The genealogy, however, encouraged us to test the *semantic analysis* of our use of the term 'person'. Our use, it was suggested, is guided by conflicting rationale – and, as a result, Wiggins' reading of 'person' was seen to be inflected by certain socio-cultural biases. Among these was the thought that our notion of a person is necessarily the notion of a *substance*. This thought is not licensed or corroborated by the Strawsonian argument or the argument from interpretation. It might be that our understanding of what it is to be a psychological being involves understanding that being as in some way material; and perhaps our notion of a person *is* developed through examination of creatures on the same wavelength as us – but these claims are compatible with the further thought that *person* is a sortal term that marks a *phase* of the life of a human being. Thus the conceptual relation between *person* and *human being* – if there is one – might well be an asymmetric one. A human being may be understood to *become* a person; their spatio-temporal limits, therefore, are not the same. This undermines a central tenet of Wiggins' *human being theory*, that those two concepts assign the same *principle of activity*.

THE BIOLOGY OF PERSONS

Leaving aside the issues about the consilience of *person* and *human being*, let us fix our thoughts more firmly on the latter of the two concepts. Irrespective of the fate of *person*, Wiggins takes human beings to be *natural substances* – and examining his analysis one becomes aware of how his metaphysical project intersects with certain concerns in the philosophy of biology. Specifically, his work bears on, and is affected by, discussions about *biological anti-reductionism* and *biological individuality*. It is the aim of this chapter to draw these discussions out.

As was noted in the introduction, Wiggins enters forceful claims about the relevance of the philosophy of biology to metaphysical issues⁵¹⁹ – yet despite these claims, and occasional allusions to differing conceptions of that science,⁵²⁰ he fails to offer a sustained treatment of these issues. Moreover, his view appears to verge on what he calls ‘the anti-scientistic’⁵²¹ and he writes, at times, to deny his aim has ever been ‘to place the question of what we are under the alien direction of physiologists, biologists, evolutionists or others who are expert in matters relating to *organisms*.’⁵²²

Thus, commentators tend not to discuss the role of biology in Wiggins’ work,⁵²³ unless it is to bemoan his failure to attend to it. (Michael Ruse, for example, describes him as displaying ‘an almost proud ignorance of the organic world.’⁵²⁴) This, it shall be argued, is an oversight of his critics. The following reading presents Wiggins as having a determinate view of the place of biology in his philosophical system – and this chapter aims to collect together and interpret his thoughts on the application of that science in metaphysics.

What emerges is a broadly neo-Aristotelian analysis of the metaphysical character of organisms – an anti-reductionism, it is argued, that stands as a productive alternative to the kind of biological ‘emergentism’ advanced by, among others, John Dupré. Wiggins’ neo-Aristotelian picture is compatible with the thought that organisms are real because they possess *novel causal properties*, but it is not committed to it. Unlike the emergentist, Wiggins is not directly interested in causal dependence, but rather in some form of *ontological* dependence.

⁵¹⁹ Wiggins 1967: vii, 1980: vii, 1996: 228, 2001: xi

⁵²⁰ Wiggins 2001: xiii, 2005a: 475–6, 2012: 14ff

⁵²¹ Wiggins 2012: 14

⁵²² Wiggins 2001: 234 (see also 2005a: 475–476)

⁵²³ Samir Okasha is a notable exception here – and his 2002 paper is discussed below.

⁵²⁴ Michael Ruse 1987: n.358

Before turning to this, however, a more immediate concern must be addressed. Wiggins defers to biology to flesh out the *human being principle* – the theoretical description that allows us to articulate the spatio-temporal boundaries of human organisms. Yet, turning to the philosophy of biology, one finds lively debate about the possibility of some such theoretical description, and even about the viability of the *organism* concept itself. The aim in the next section is to set out this concern with *biological individuality* in greater depth, and to offer some clarifications.

§3.1. Investigating the *human being principle*

Wiggins states that when we pick out and track human beings – as we often do in our daily lives – our efforts are guided by a clear, if indistinct,⁵²⁵ idea of what the *principle of activity* of a human being is. We have a rough and ready conception of the activity, of such a thing – and, he writes, *biological inquiry* can tell us more about the typical growth patterns, behaviour, development, etc., of creatures like us:

[W]e are led by simple conceptual considerations to precisely the account of living substances that biologists can fill out *a posteriori* by treating them as systems open to their surroundings, but so constituted that a delicate self-regulating balance of serially linked enzymatic degradative and synthesizing chemical reactions enables them to renew themselves on the molecular level at the expense of those surroundings, such renewal taking place under a law-determined variety of conditions in a determinate pattern of growth and development towards and/or persistence in some particular form.⁵²⁶

However, when we turn to biology to precisify our understanding of these everyday individuals, certain puzzles appear. Picking human organisms out phenomenally seems relatively straightforward (we just ‘see’ organisms and take them to be delimited, e.g. by the boundaries of their skin), but investigation at the microscopic level shows that a human organism is:

...a symbiotic system containing a multitude of microbial cells – bacteria, archaea, and fungi – without which the whole would be seriously dysfunctional and ultimately non-viable.⁵²⁷

We enjoy numerous, mutually beneficial relationships with the vast numbers of endosymbionts that live within us. Are these endosymbionts parts of us? Do we include their activities in the ‘principle of activity’ of the human being? (The processes they are involved in – digestive, immunological, etc. – are not unimportant for our survival.) The

⁵²⁵ See Wiggins’ Leibnizian thoughts on this in his 2012: 8

⁵²⁶ Wiggins 2001: 86

⁵²⁷ Dupré 2010a/2012: 125 See also Paracer and Ahmadjian 2000 for a good overview.

puzzle becomes even starker when we consider apparently *colonial* organisms, like slime moulds, corals and medusae jelly-fish.⁵²⁸ How do we set a principled limit to an investigation into the organismic activity?

Such questions – sidelined in discussions of personal identity⁵²⁹ – are raised by philosophers of biology interested in *biological individuality*.⁵³⁰ While we seem, relatively unproblematically, to be able to pick out human beings (and many other organisms) *phenomenally*, this phenomenal ability of ours does not offer substantial theoretical grounds for saying what counts as a part of an individual. Thus, it is not clear where the limits of human ‘activity’ lie.

There are various responses to this kind of worry.

We might – like Eliot Sober – think that organismic boundaries can be set by reference to something like ‘functional integration’.⁵³¹ This chimes with our commonsense view of the biological realm, where – as Stephen J. Gould has it – a biological item

...is an organism if it is spatially separated from others and if its parts are so well integrated that they work only in co-ordination with others and for the proper function of the whole.⁵³²

Yet, as Thomas Pradeu has noted, functional integration remains awkwardly gestural:

[W]e simply trust our impression that the organism is a coherent ‘whole’, which we cut into functional pieces.⁵³³

Functional integration occurs at many different levels; cells are spatiotemporally localized and functionally integrated, but so are symbionts, and ‘colonial’ organisms, which have common vascular networks.⁵³⁴ There are innumerable overlaps, which suggest that ‘functional integration’ is not enough – or at least, not enough by itself – to provide substantial theoretical grounds for demarcating organismic limits.

⁵²⁸ Sterelny and Griffiths 1999: 71

⁵²⁹ Jack Wilson (in his 1999) draws attention to the tendency of such philosophers to overlook the relevance of philosophy of biology to personal identity.

⁵³⁰ See e.g. Clarke *forthcoming*, Pradeu 2010, J. Wilson 1999

⁵³¹ Sober 2000: 151

⁵³² Gould 1984 (as quoted in J. Wilson 1999: 62)

⁵³³ Pradeu 2010: 4

⁵³⁴ *Ibid.*: 5

Perhaps instead we should make reference to the ‘human genome’ when talking about what is and what is not a part of the human being? On the genetic view, the organism’s parts are seen to be genetically homogenous; each cell in the human body has a characteristic genome, which is unique and distinctive to us. Symbionts, then, are excluded as parts because they are genetically different.⁵³⁵ Maybe it is by mapping our genetic codes that we can better understand our distinctive principle of activity?

However, despite the pervasive assumption that there is a one-to-one relation between an organism and its genome, philosophers of biology view this idea as deeply problematic. Dupré, in his paper ‘The Polygenomic Organism’, identifies a number of points of controversy. Firstly, genetic individuals can be composed of spatially discontinuous clones (the genet versus the ramet individual). This is the case with aphid colonies (the product of asexual reproduction) and monozygotic twins⁵³⁶ – conglomerates we would not normally take to be individual organisms. Secondly, genetic mosaicism and chimerism – where different parts of the organism have different genomes – abound in the natural world (e.g. calico and tortoiseshell cats).⁵³⁷ A third challenge corresponds to the pervasiveness of epigenetic processes.⁵³⁸ In short, drawing organismic boundaries along genetic lines will lead us to lose sight of the original entities we picked out phenomenally.

One may start to doubt there is a scientific theory that bears out our everyday individuating practices – but this is an unduly pessimistic conclusion. In order to set the parameters for the investigation into the activity of these phenomenal entities, Wiggins can call on recent work by Thomas Pradeu and Edgardo Carosella,⁵³⁹ which presents arguments for a *physiological-immunological* view of biological individuality.

As mentioned, organisms are commonly seen to be functionally integrated units – this was Gould’s assessment. The problem identified above was that the notion of ‘functional integration’ – realized in ‘physiological’ accounts⁵⁴⁰ – was too *vague*. There are too many puzzle cases where it remains unclear whether the parts of the apparent organisms are themselves functionally integrated entities.⁵⁴¹

⁵³⁵ Where philosophers interested in personal identity *do* engage with this discussion this seems to be the line that they take – see, e.g. Olson 1997: 129.

⁵³⁶ Dupré 2010a/12: 118

⁵³⁷ Ibid: 119

⁵³⁸ Ibid: 123

⁵³⁹ See Pradeu 2010 and Pradeu and Carosella 2006

⁵⁴⁰ Pradeu 2010: 2

⁵⁴¹ Sober 2000: 151

Yet, in recent work, Pradeu (with Carosella) has presented a way of supplementing the standard physiological, functional-integration account, with a ‘criterion of immunogenicity’ – and has consequently provided a viable alternative to the two views described above. For present purposes this approach need only be given in outline. He claims that the immunological system operates as a principle of inclusion for the organism, and can accordingly be used to draw the relevant lines to demarcate the organism. In his paper ‘What is an organism?’ Pradeu writes:

[T]he immune system, by its surveillance activity, defines what will be accepted, and what will be rejected, by the organism, and therefore a criterion of immunogenicity constitutes a *criterion of inclusion* for the organism: the distinction between the entities which will stick together as constituents of the organism, and those which will be rejected from the organism, is made by the immune system.⁵⁴²

Thus the immune system provides principled grounds for drawing the boundaries of the functional-integrated ‘whole’. It is a sub-system, the activity of which determines which are and which are not proper parts of an organism. Moreover, this account indicates a primary level of functional integration: cells may well be functionally-integrated, but the immune system provides grounds for defining them *as* parts of a greater (functionally integrated) unity.⁵⁴³ In sum, therefore, Pradeu’s focus on the immunological allows him to bolster the standard physiological account, and to overcome the issues of vagueness. Further, if successful, this physiological-immunological view provides Wiggins with a sound scientific basis by which to pick out certain interconnecting biological interactions⁵⁴⁴ – those moderated by the immune system – and to state that these are the physiological processes that constitute the ‘principle of activity’ of the organism.

It may be objected that Pradeu’s view still fails to capture the everyday entities that Wiggins is interested in. In contrast to previous immunological accounts,⁵⁴⁵ Pradeu’s departs from what is known as the ‘self-nonsel’ criterion of immunogenicity, which claims that an organism does not trigger immune responses to its own

⁵⁴² Pradeu 2010: 5

⁵⁴³ Ibid: 4–5. It may be objected that only very few organisms exhibit immunogenicity. This is an objection Pradeu thoroughly rejects: ‘...it is now clear to all immunologists that immunity is ubiquitous...’ (Pradeu 2010: 6)

⁵⁴⁴ Pradeu 2010: 9

⁵⁴⁵ Paradigm texts include Metchnikoff 1907 and Loeb 1937 (more recently, Gould and Lloyd 1999)

constituents but to *every foreign entity*. Pradeu follows this line to accommodate the immune role that exogenous bacteria play in our bodies (they register, immunologically, as ‘parts’ of the body). But the result is that his account construes organisms as having heterogeneous constituents.⁵⁴⁶ He takes this to be ‘counter-intuitive’ to our everyday thoughts about organisms.⁵⁴⁷

This worry, however, should not detain us. On reflection, it seems odd to say that revelations at this level of biological scrutiny are ‘counter-intuitive’. Few of us are aware of the huge numbers of symbiotic bacteria that cover our skin and the lining of our guts, so there will be no intuitions about whether or not they are parts of us. If Wiggins tacks thus, this rendering of organisms need not disturb him. On the phenomenal level, a human being conceived as an organism with heterogeneous constituents will not seem relevantly different from a human being seen otherwise.⁵⁴⁸ Indeed, this finding is precisely the kind of information that biological inquiry into the human being principle was expected, hoped even, to deliver.

Pradeu’s physiological-immunological theory provides a suitably precise theoretical framework in which investigations into the human being principle may be conducted. Thus, the initial puzzles about the limits of human ‘activity’ may be bypassed. With this strut in place, attention can now be turned to discussions about the *metaphysical character* of organismic individuals.

⁵⁴⁶ Pradeu 2010: 9

⁵⁴⁷ Ibid: 11

⁵⁴⁸ One may wonder about ant’s nests, and other such items. On the phenomenal level these are seen to be collections of organisms, but one may wonder whether they are functionally integrated enough to be seen on the physiological-immunological level, to be unities. Perhaps. But if so, Wiggins will still be able to accommodate these entities without harming his everyday picture – as will be clear from the description of his pluralism, to follow.

§3.2. Are organisms real?

In his paper, ‘Biology’s “Phoenix”: Historical Perspectives on the Importance of the Organism’, Keith R. Benson describes the twentieth-century relegation of the concept of the ‘organism’ to the backwaters of biological theory. He sets out an opposition between older, *organismic* theories of biology, and more recent, *reductionistic* ones:

[T]he older tradition, with its descriptive methods from Aristotle, and the modern interpretation, often described as reductionistic and mechanistic, have been depicted as mortal adversaries and competitors. J.H. Woodger, the major twentieth-century advocate of the organism, popularized this notion in his 1930 article in the *Quarterly Review of Biology*.

In histories of biology in the dim future there will probably be a chapter entitled ‘The Struggle for Existence of the Concept of Organicism in the Early Twentieth Century’, which will relate how this concept came to be neglected on account of the influence of Descartes, how the metaphysics of natural science in the Nineteenth Century so completely dazzled biologists that they never dreamed of regarding organisms as being anything but swarms of little invisible hard lumps in motion, and how the first blossoming of the concept of organism towards the end of the century was nipped in the bud by the mismanagement of those who advocated it. (Woodger, 1930–31)

The struggle, which David Hull described as ‘more reminiscent of political polemics and biblical exegesis than science’ (Hull, 1974), eventually and inexorably led to the removal of the organism from center stage by the twentieth century.⁵⁴⁹

This passage is interesting for a variety of reasons. Wiggins – as discussed – takes organisms to be paradigm substances. That is, he falls firmly on the Aristotelian side of the described opposition. He exemplifies the ‘descriptive methods’ of Aristotle, where metaphysics is guided by our everyday navigation of the world, and ontology

⁵⁴⁹ Benson 1989: 1067–1068

encapsulates those entities, like human beings, to which we cannot but attend. Like Woodger, Wiggins is a *biological anti-reductionist* (and the mention of J.H. Woodger, a somewhat neglected theoretical biologist and philosopher of biology,⁵⁵⁰ is significant too, since he is one of the few to whom Wiggins regularly refers when writing on biology (a connection discussed in greater detail below)).⁵⁵¹

Benson's article, written in 1989, situates reductionism as the mainstream. The terms 'reductionism' and 'anti-reductionism' are clarified below, but Woodger's characterization captures the general idea: reductionists see organisms to be nothing more than the sum of their physico-chemical parts – anti-reductionists resist this claim, and Wiggins seems to be among them. Benson, towards the end of his paper, suggests that imminent research will encourage a revival of interest in the latter, and this has been borne out, to some extent, by the now widespread critiques of reductionism, and the growing popularity of the kind of emergentist thesis found in the work of Dupré.

The aim of the remainder of this chapter is to set out a particular dialectic between reductionists and anti-reductionists, and to show how Wiggins provides a novel and generative form of neo-Aristotelian anti-reductionism. It is suggested that a central point of controversy in the standard debate is whether or not organisms have *novel causal properties*. Anti-reductionists argue that they do and that, because of this, they are *real*. By contrast, Wiggins' neo-Aristotelian picture positions an organism as irreducible, not because its parts are causally dependent upon the whole, but because they are *ontologically* dependent upon it.

§3.2.a. 'Reductionism' and 'anti-reductionism'

'Biological reductionism refers to not one, but a family of interrelated theses,⁵⁵² which may be distinguished from one another in a variety of ways. The first aim of this section is to clarify the different kinds of reductionism (and their antithetical partners);⁵⁵³ the second is to focus on a particular area of disagreement between anti-reductionists and reductionists, which concerns the reality of organisms.

⁵⁵⁰ A neglect now being rectified – see Nicholson and Gawne 2013

⁵⁵¹ There are references to his *Biology and Language* (Woodger 1952) and his *Axiomatic Method in Biology* (Woodger 1937) in e.g. Wiggins 2001: 156 and 38

⁵⁵² Dupré 1993: 88

⁵⁵³ Hull 1979 and Wimsatt 1976 both take this ordering to be necessary in statements of anti-reductionism.

Ingo Brigandt and Alan Love present a tripartite division between types of reductionism: *epistemic*, *metaphysical* and *methodological*.⁵⁵⁴ As they construe it *epistemic* reductionism focuses on theories, or concepts or models, and claims that such items in one scientific domain – e.g. biology – can be *translated into*,⁵⁵⁵ or *derived from*,⁵⁵⁶ or *explained by*⁵⁵⁷ theories, concepts or models in another – e.g. physics. Here, reduction can be conceived *synchronously* or *diachronically* – between contemporaneous theories or successive ones.⁵⁵⁸ Epistemic reductionists are primarily interested in how the branches of human knowledge connect, *not* about what entities there are, or what methods we should employ to investigate the biological realm. These latter areas correlate to Brigandt and Love’s characterization of *metaphysical* and *methodological* reductionism.

Metaphysical reductionism focuses on the structure of reality, and (relatedly) whether certain biological items do or do not exist. In general terms, the metaphysical reductionist’s thesis is that biological things are ‘nothing more’ than the physico-chemical items that make them up (bundles of quarks or fields, etc.).⁵⁵⁹ The historical debate about the viability of the *vitalist’s* thesis demonstrates these kinds of metaphysical concerns. The vitalist holds that there are non-physico-chemical forces – vital sparks or *élan vital* – that govern biological systems.⁵⁶⁰ The metaphysical reductionists (in this context sometimes called ‘mechanists’)⁵⁶¹ reject this view of non-spatial, formative

⁵⁵⁴ Brigandt and Love 2008. See also Nagel 1998, Sarkar 1992, and Wolfe 2010

⁵⁵⁵ *Translative* reductionism is the kind of reductionism found in the work of the positivists, like Otto Neurath and Rudolf Carnap. In the *Unity of Science*, Carnap advocates the translation of all statements – phenomenalist, biological, philosophical, etc. – into the language of the physical sciences (Carnap 1934). The aim was the creation of a common language in which truly interdisciplinary discussions could be conducted, and redundancy between theories eradicated (for practical, as well as ideological reasons – Cartwright at al. 1995).

⁵⁵⁶ The decisive move away from Carnap and Neurath’s positivist reductionism occurs in Ernest Nagel’s *The Structure of Science* (1961). Nagel’s model – *derivative* – holds that a reduction is effected when the laws of the target theory are shown to be logical consequences of the theoretical assumptions of the base theory (Nagel 1961: 345–358).

⁵⁵⁷ *Explanatory* reductionism – advanced by e.g. Wimsatt and Kenneth Waters (Wimsatt 1976, Waters 1990) – states that the target domain reduces to the base domain when the latter explains all of the observations that are explained in the former (see Ney 2008). Like the derivative reductionists, the explanatory reductionists post a single ‘ultimate’ theory but also (i) admit reduction between fragments of theories *and* individual facts (thus taking theoretical weight off problematic ‘bridge laws’) and (ii) describe reductive explanations as *causal* explanations, where higher-level features in the domain of e.g. biology, are explained by the interaction of the *constituent parts* in the base theory (see e.g. Kauffman (1971)) (thus avoiding involvement with the controversial deductive-nomological method (Theurer *forthcoming*: 3, Rosenberg 2003: 3)).

⁵⁵⁸ Dupré 1993: 94

⁵⁵⁹ Brigandt and Love 2008

⁵⁶⁰ The most well-known (recent) representatives of this approach are Henri Bergson and Hans Driesch, (see Mayr 2004: 23) who describe the ‘formative power’, as “‘something’ without spatial character and to which no definite position in space can be assigned’, an entelechy. (Driesch 1908)

⁵⁶¹ As with ‘reductionism’, we must recognize the ambiguous ambit of ‘mechanism’ and ‘vitalism’ (see Wolfe 2010 and Hein 1972) and resist being drawn into unhelpful dichotomies (e.g. vitalism *versus* mechanism (Roe 2003)).

‘entelechies’. Nowadays, most philosophers of science do the same – few endorse mysterious *vis vitalis*.⁵⁶²

Methodological reductionism relates to scientific practice. The methodological reductionist claims that biological research should work ‘from the bottom up’. One should look to the lowest, most fundamental levels to understand the higher-level features. Biological systems, including organisms, are best investigated by looking for molecular and biochemical causes. This kind of strategy is described by Bechtel and Richardson as ‘decomposition and localization’,⁵⁶³ and is often articulated by reference to the use of the *machine* motif, ubiquitous since the seventeenth century, as the ‘founding metaphor of modern science’.⁵⁶⁴ The methodological mechanist (described by Dupré, Grene, Depew, Toulmin and Goodfield),⁵⁶⁵ states that items in the biological realm should be understood in the same way that we understand human-engineered machines – that is by looking to the parts and working upwards.

Though gestural, this tripartite analysis provides a general framework for separating out, and assessing, the various reductionist claims. In his paper, Benson suggests that reductionist theses are in state of decline – and, with respect to *epistemic* and *methodological* types this seems to correspond to the current consensus among philosophers of biology.⁵⁶⁶ Over the past decades, there has been growing doubt about epistemic, ‘theory’ reductionism, motivated by issues with *multiple realizability*⁵⁶⁷ and the *deductive-nomological model*.⁵⁶⁸ Similarly, though most recognize the successes of a mechanistic methodology, it is now seen to be highly controversial, systematically blinding the enquirer to relevant high-level features in biological systems.⁵⁶⁹

Metaphysical reductionism, however, is still the subject of lively debate. Most philosophers deny the existence of vital sparks – but there remains significant resistance to the brand of *materialist* anti-reductionism proposed by ‘emergentists’. While many

⁵⁶² Cf. Normandin and Wolfe 2013. The relevance of this historical position is also discussed in chapter 4.

⁵⁶³ Bechtel and Richardson 1993

⁵⁶⁴ Dupré 1993: 2

⁵⁶⁵ Dupré 1993, Grene and Depew 2004: 36, Toulmin and Goodfield 1962: 207–334

⁵⁶⁶ Dupré 2010b/12: 129

⁵⁶⁷ For example, in order for the psychological property *pain* to be reduced to physical properties all descriptions of being in pain, for any animal, will have to be worked out as descriptions of the possession of those physical properties – and it seems highly unlikely that there are such physical properties (see Putnam 1975: 436).

⁵⁶⁸ The deductive-nomological model of explanation proposes that phenomena should be explained by deduction from initial conditions and genuine, general ‘laws of nature’ – and there are now well-known counter-examples to this proposal, which show that the ‘DN’ model provides neither *necessary* nor *sufficient* conditions for scientific explanation (see Theurer *forthcoming*: 3, Rosenberg 2003: 3. See also, e.g. Scriven’s ‘singular causal explanations’ which make no appeal to generalized laws (Scriven 1962) and Salmon’s examples of ‘defective explanation’ (1971: 34)).

⁵⁶⁹ See, e.g. Wimsatt 1980

have abandoned the ‘epistemological dream of reductionism’,⁵⁷⁰ discussion continues about its metaphysical tenability, and about the ‘reality’ of biological items.⁵⁷¹ This discussion is the focus here. Dupré characterizes the relevant disagreement as follows:⁵⁷²

The reductionist believes that in the end there is nothing in the world but the stuff of which things are made – let me call this basic physical stuff. Of course, the reductionist does not say, bluntly and absurdly, that houses, for example, don’t exist. The claim is rather that a house is, ultimately, nothing but an aggregate of physical stuff, and all the properties of any house can, in principle, be fully explained by appeal to the properties and relations of basic physical stuff. So there is a possible, microphysically grounded, account of the world which would have no need to mention houses. I am insisting, on the contrary, that there is a whole hierarchy of increasingly complex things that really exist, and that have causal powers that are not reducible to the mechanical combination of the powers of their constituents.⁵⁷³

As Dupré presents it, the reductionist sees organisms (and houses, and so on) to be nothing more than the physical entities (quarks, etc.) that make them up; they do not ‘really exist’ in the way that the basic physical stuff does. Elsewhere, he puts this in terms of ‘ontological priority’⁵⁷⁴ and ‘ontological primacy’.⁵⁷⁵ The reductionist sees homogenous matter to be more ‘metaphysically robust’ than higher-level objects.

Dupré also presents the disagreement by reference to ‘reality’. The reductionist holds that physical stuff is *real*, while questioning the reality of higher-level items. The anti-reductionist says that higher-level items are just as real. Thus Dupré, positioning himself in the debate, writes in the first of his Spinoza Lectures as follows:

According to [my] perspective there are many different kinds of thing in the world, from physically simple things like electrons or quarks, to very

⁵⁷⁰ Dupré 2008a/12: 70

⁵⁷¹ Wolfe 2010: 2

⁵⁷² This passage indicates certain points where the Brigandt and Love’s tripartite division fails to identify salient connections between epistemic and metaphysical reductionist claims.

⁵⁷³ Dupré 2008a/12: 72 For the full import of ‘in principle’ see Dupré’s discussion of ‘practical’ versus ‘theoretical’ reductionism in his 1993 (95–96).

⁵⁷⁴ Dupré 1993: 89

⁵⁷⁵ Ibid: 92

complex things such as planets, elephants or armies. Many or all of these things, in my view, have *equal claims to reality*.⁵⁷⁶

What is it to be ‘real’ in this context? Unless the anti-reductionists and reductionists are to talk past each other they must agree on this. The passage continues, stating (as has already been intimated), that being *real* relates to having *causal powers*:

At the basis of [my] position is the idea that many or all such entities have causal powers that are not simply consequences of the way their physical components are fitted together.⁵⁷⁷

To be real is to have causal powers. This is the view formalized in Jaegwon Kim’s influential ‘Alexander’s dictum’,⁵⁷⁸ and the assumption that shapes many of the current, metaphysically accented discussions of reductionism. Reductionists hold that biological entities are not real in the way the basic physical stuff is real because the properties of those higher-level systems are, in the end, simply the result of a linear causal chain reaching up from the material substrate. In contrast the ‘emergentists’⁵⁷⁹ claim that when physical systems reach certain levels of complexity novel causal properties emerge, non-derivable (and not deducible)⁵⁸⁰ from the properties of their parts⁵⁸¹ – and because organisms (among other things) have these novel causal properties, they are just as real.

We find a wide variety of interrelated reductionist and anti-reductionist theses. Attention here is focussed on one point of disagreement in particular. *Do organisms exist?* The reductionists and anti-reductionists disagree because they disagree about whether or not organisms have novel causal powers.

Having now articulated the relevant exchange, Wiggins’ assessment of the metaphysical character of organisms will be discussed. There is a reading of his work that construes him as an emergentist – but a stronger interpretation attributes to him an alternative, neo-Aristotelian form of anti-reductionism, which is compatible with

⁵⁷⁶ Dupré 2008a/2012: 70 (my italics)

⁵⁷⁷ Ibid: 70

⁵⁷⁸ Samuel Alexander: one of the pivotal figures in ‘the Golden Age of British Emergentism’ (see Malaterre 2013: 160). For a more precise statement of Kim’s dictum see Kim 1992 and 1993.

⁵⁷⁹ Though n.b. ‘emergentism’ has numerous valences – see O’Connor 2012. See also Garrett (2013: 135) for further indication of the shortcomings of Brigandt and Love’s epistemic/metaphysical division, particularly with respect to how epistemological claims of emergence relate to metaphysical ones.

⁵⁸⁰ See Garrett 2013 for a discussion of how non-derivability relates to non-decibility and inexplicability.

⁵⁸¹ Though, again, there are different types. Cf. Mark Bedau 2003

Dupré's claims, but not committed to them. Attention will be turned first to the former emergentist reading.

§3.2.b. An emergentist reading?

There are certainly elements of Wiggins' project that suggest he might be sympathetic to some version of the emergentist thesis. Notable here are his references to the biologist J.Z. Young in both Prefaces to *SS* and *S&SR*. He writes (in the latter):

I shall recall from the 1980 Preface the keen pleasure that I felt at that time on discovering how, in response to all the facts that confront the biological scientist, Professor J.Z. Young had arrived, in chapters Five and Six of his *Introduction to the Study of Man* (Oxford, 1971), at a conception of identity and persistence through time that is strikingly similar, where living things are concerned, to the neo-Aristotelian conception that I defend:

The essence of a living thing is that it consists of atoms of the ordinary chemical elements we have listed, caught up into the living system and made part of it for a while. The living activity takes them up and organizes them in its characteristic way. The life of a man consists essentially in the activity he imposes upon that stuff... it is only by virtue of this activity that the shape and organization of the whole is maintained.⁵⁸²

'The life of a man consists essentially in the activity he imposes upon that stuff'. It might be that 'imposes' here could be read to refer to some causal influence, which does not derive from the body's constituent parts. And Wiggins quotes Young again, in the Longer Notes of *S&S* – discussing the defensibility of concepts of organismic guarantee (discussed below in §4.1):⁵⁸³

⁵⁸² Wiggins 2001: xi

⁵⁸³ Wiggins 1980: 207. Note also, that this quotation appears alongside a quotation from another 20th century organicist – Joseph Needham (see the discussion of Needham in Haraway 1976).

Thus the activity which we hold to be characteristic is not expressed by describing DNA alone, since the interchanges between the organism and the environment are the factors that determine what sections of DNA are to be transcribed at a particular time and the rates of transcription.⁵⁸⁴

This quotation alludes to a key challenge to the reductionist program, a problem characterized by Hull, as the ‘one–many’ objection.⁵⁸⁵ As Young indicates, the transcription of the DNA depends on the *context* in which it occurs – a view now widely held.⁵⁸⁶ The implication here is that the functions of the molecules can only be understood in terms of *context*. And the context is the *organized whole* in which they occur.

This latter point is a criticism of practical ‘epistemic’ reductionism; but the passage can be read too as an endorsement of metaphysical anti-reductionism. Young can be interpreted as claiming that the activity of the whole exhibits properties that are not caused by properties at the genetic level. The activity of the organism is not causally down-stream from that of its parts. This reading can be supported, to an extent, by his analysis of homeostasis and ‘living activity’ in chapter 6 of his *Introduction to the Study of Man*,⁵⁸⁷ and is roughly captured by his comments at the start of chapter 3 (‘Living Organization’). Young states:

Study of the outlines the elementary molecular composition of living things... has already shown some of the characteristic features of organisms. But analysis only at that level can never provide the full basis that we require for forecasting their behaviour. In every known organism the molecules are organized into systems of a higher order of complexity, the cells...⁵⁸⁸

Although Young himself does not explicitly detail his anti-reductionist position, one may interpret these passages, alongside his criticisms of epistemic reductionism,⁵⁸⁹ as describing a form of *biological emergentism*. Having done so, one might read Wiggins’

⁵⁸⁴ Young 1971: 88

⁵⁸⁵ See Hull 1972

⁵⁸⁶ Indeed, it is often pointed out that the same allele may lead to two different phenotypes occurring in two individuals with a different overall genotype. Brigandt and Love 2008

⁵⁸⁷ Young 1971: chapter 6 – see particularly §1, §5, and §6

⁵⁸⁸ Ibid: 37

⁵⁸⁹ Boycott 1998

endorsement of Young as symptomatic of a general inclination towards emergentist thought. This, at least, is one line of interpretation.

Emergentist sympathies might also be found in the combination of Wiggins' emphasis on *Bildung*⁵⁹⁰ and his claim that languages (and other social items) are irreducible public objects. These elements of his work suggest that he finds novel causal properties at higher levels than the physico-chemical.

As noted (in §2.3.b.), Wiggins' thoughts about *Bildung* appear in his reply to David Bakhurst. For Wiggins – like Bakhurst – we have distinctive psychological capacities, including rationality and morality, which are the effect of *cultural formation* (this emphasis on our 'encultured' nature recurs frequently in his texts).⁵⁹¹ Wiggins claims that our conception of ourselves should embrace 'our capacities to assimilate culture [and] our achievement, such as it still is, of Bildung'.⁵⁹² And stating this, he explicitly positions himself in opposition to the 'reductive fixations of... present day biological science'.⁵⁹³ That is, he takes the process of enculturation to stand against the kind of genetic determinism that, for example, reduces morality to a product of genetic evolution.

In the reductive picture – found e.g. in the work of E.O. Wilson⁵⁹⁴ – our psychological capacities (and their causal powers) are the result of an upwards causal flow from the interactions of the more fundamental parts.⁵⁹⁵ In contrast, Wiggins – following Bakhurst⁵⁹⁶ (who in turn follows the Russian psychologist, Lev Vygotsky)⁵⁹⁷ – specifically ties the development of our psychological traits to our assimilation of culture.⁵⁹⁸ That is (as Bakhurst puts it), it is 'through participation in and internalization of social forms of activity that [a] child's mind is *created*'.⁵⁹⁹ This thought runs throughout

⁵⁹⁰ Wiggins 2005a: 475

⁵⁹¹ Wiggins 1991: Essay V and 2001: chapter 7 *passim*

⁵⁹² Wiggins 2005a: 475

⁵⁹³ Ibid: 475

⁵⁹⁴ Wilson 1975

⁵⁹⁵ Consider an (extreme) reductive account of our psychological capacities (taking morality, and rationality as place-holders for the rest). A reductionist will describe these faculties and their properties as ultimately caused by, and exhaustively explicable in terms of, activity at the genetic level. We inherit a genetic 'program' (See Smith 2000, Griffiths 2001 and Avise 2001 for more on this metaphor.) from our parents, which has been honed over the millennia by natural selection; this 'program' causes a particular kind of production of RNA, which in turn produces certain proteins, which then organize the specific neurological structures that determine the psychological traits we enjoy. In the end, as Robert Wright has it, 'everything boils down to the genes' – including our psychological capacities (Robert Wright 1994: 9). See also Dawkins, e.g. 2006 (217), Rose et al 1984, Lewontin 1993, and Rosenberg 2005)

⁵⁹⁶ Wiggins 2001: 195 n.3

⁵⁹⁷ Specifically in Bakhurst 1991

⁵⁹⁸ See Lovibond 1996 for an overview.

⁵⁹⁹ Bakhurst 1991: 78

Wiggins' essays on human value (in his collection *Needs, Values, Truth*).⁶⁰⁰ Our psychological capacities are not simply the mechanical run-off from some genetic blueprint. Rather, he contends, they depend on and feed into 'a process of interpersonal education, instruction, and mutual enlightenment'.⁶⁰¹ There are causal influences, other than our genetic make-up, that significantly shape the development of a human mind (if not its genesis):⁶⁰² specifically, the systems into which it is initiated via language and culture.⁶⁰³

Two points can be made here. Firstly, these comments by Wiggins – in particular, his worries about 'present day biological science' – account for his wariness (stated at the start of the chapter) about turning to biology to articulate the *human being principle*. Where biology is taken to examine only the effects of the lower-level causes, its focus is too narrow.⁶⁰⁴

Secondly, and more importantly here, Wiggins' emphasis on the formative effects of culture suggests sympathy for the emergentist's thesis. The connection is further strengthened when it is remembered that Wiggins endorses a *libertarian* account of free will.⁶⁰⁵ His suspicions about Dawkins-esque 'reductive fixations' are of a piece with his worries about determinism – and such worries often seen to be typical of emergentist positions.⁶⁰⁶ Yet the focus on *Bildung* is not in itself emergentist. It leaves open the theoretical possibility that these cultural systems, and everything else, can ultimately be understood in purely physico-chemical terms. It is important, then, that Wiggins appears to deny that these over-arching systems – of language and 'culture' (where culture is, i.e. 'education in the broad sense')⁶⁰⁷ – are reducible to the psychology of the individuals from which they arise. This claim about the irreducibility, of language, is found, e.g., in his comments in 'Language as a Social Object':

⁶⁰⁰ It is what underpins what Lovibond denotes his 'Bildung model of value-experience' (in her 1996 (76)).

⁶⁰¹ Wiggins 1991: Essay V

⁶⁰² At points Wiggins denies that the human person is *created* through the process of socialization, enculturation, etc. He says instead that it is 'a creature with a natural capacity, which may or may not be realized, for reason, morality... Adapting a dictum of Woodger's I have quoted before (see S&SR p. 64), would it not be better to say that the child is the primordium of the moral / rational being but not of the future person, because the child already is that person?' Wiggins 2005a: 475

⁶⁰³ Bakhurst 2005: 467

⁶⁰⁴ Thus, replying to Bakhurst, he asks 'how broadly ought the biological to be conceived' Wiggins 2005a: 476

⁶⁰⁵ E.g. Wiggins 1987: Essay VIII

⁶⁰⁶ See e.g. Malaterre 2013: 158

⁶⁰⁷ See Lovibond 1996: 78

[A] language like English or Polish is a social object, a public thing with attributes irreducible to the individual psychology of its speakers...⁶⁰⁸

And the irreducibility of culture – in this instance, of the human penchant for humour – is found in his ‘A Sensible Subjectivism’:

What is improbable in the extreme is that, either singly or even in concert, further explanations will ever add up to a *reduction* of the funny or serve to characterize it in purely natural terms (terms that pull their weight in our theoretical-cum-explanatory account of the mechanisms of the natural world). If so, the predicate ‘funny’ is an irreducibly subjective predicate.⁶⁰⁹

(Note that in this latter passage, Wiggins seems to be saying that it is, *in principle*, irreducible – not that its irreducibility is a contingent fact of our limited knowledge.)

The combination of the causal power Wiggins attributes to language and culture, and their apparent theoretical irreducibility, invites a reading of emergentism in his work: language and culture have novel causal properties that emerge from, but are not reducible to, the psychology of their speakers and members, which play a significant role in the development of human minds. Read alongside the endorsement of Young, and Wiggins’ own libertarian commitments, and this interpretation is strengthened further.

§3.2.c. Reasons for doubt

There are, however, reasons to doubt this emergentist reading. Not least among these is that – despite growing popularity⁶¹⁰ – emergentism remains deeply controversial. Wiggins will be wary about endorsing a thesis that seems to raise serious worries about e.g. *causal exclusion* and *downwards causation*.⁶¹¹ It is not the aim of the present work to

⁶⁰⁸ Wiggins 1997: 499. See also Charles Taylor’s discussion of Wiggins’ anti-reductive view of culture in his 2003

⁶⁰⁹ Wiggins 1991: 195–6 (see also 197f, and 352f for like-minded comments on socio-biology: ‘...the thing we really need to try to describe is what morality *has become*, a question on which evolutionary theory casts no particular light.’)

⁶¹⁰ Malaterre 2013: 156–7

⁶¹¹ Kim’s ‘exclusion argument against non-reductive physicalism states that since there is only one sufficient cause for any effect, if all physical effects have physical causes all other causes are excluded – so emergent properties are *epiphenomenal*’ (Garrett 2013: 128). Conversely, if emergent properties *are* seen to effect physical change then we will have ‘downwards causation’ – a thesis which might be thought

examine such objections; it is sufficient here to point out that Wiggins – while critical of epistemic reduction⁶¹² – at points certainly seems to doubt the occurrence of novel causal properties at higher levels. His scepticism appears, for instance, in his comments about *supervenience* – the thesis that any change at a higher level corresponds to a change at the lower level (the higher *supervenies* on the lower).⁶¹³ In *SE&SR* he writes:

[T]he kind-bound laws of coming to be, of distinctive activity, and of passing away are nomologically grounded. They are *supervenient upon*, or better (as Leibniz might put it) *consentient with*, the more basic laws that are immanent in all things.⁶¹⁴

And again, in ‘Identity, Individuation and Substance’, he talks of the organismic as

...a (level or category) of being that the ultimate constituents of reality subvene/sustain/make possible.⁶¹⁵

While supervenience is sometimes conceived of as non-reductive,⁶¹⁶ Dupré points out that it typically corresponds to a form of *practical*, but not *theoretical*, non-reductionism.⁶¹⁷ For the supervenience theorist, while we – humans – may fail to grasp the link between the lower levels and the higher, it is in principle possible for this link to be understood (by e.g. a divine mind). Wiggins’ endorsement of supervenience – alongside Dupré’s reading of that position – suggests he is both aware of the criticisms of emergentism and, to some extent, persuaded by them.⁶¹⁸

problematic because of the ‘implication ...that a scientist cannot do physics completely and adequately without doing biology and, ultimately, psychology!’ (Garrett 2013: 150). The severity of these objections is assumed here for the sake of argument.

⁶¹² E.g. Wiggins 2005a: 476

⁶¹³ More broadly, talking of supervenience one need not talk of ‘levels’ – see McLaughlin and Bennett 2014.

⁶¹⁴ Wiggins 2001: 143

⁶¹⁵ Wiggins 2012: 21. Even Dupré at times seems to express doubts about the existence of emergent properties. While in his Spinoza Lectures, he appears to be endorsing a form of causal emergence, elsewhere he notably assumes a more moderate view, closer to practical, rather than theoretical epistemic anti-reductionism. He writes (2010b/12: 142):

Perhaps I should concede that everything in the universe supervenes on the total physical state of the universe? Perhaps. But, here, we are so deeply into the domain of speculative metaphysics that I am more than happy to remain agnostic.

⁶¹⁶ E.g. in R.M. Hare’s 1952

⁶¹⁷ Dupré 1993: 97

⁶¹⁸ The relations between emergentist, reductionist and supervenience theses are vexed. The point here is not to examine them in depth, but it should be noted that the confusion might be taken as a further

There is a further reason to doubt the emergentist reading of Wiggins. Methodological concerns occur when one considers interpretative issues about the terms of the emergence debate. As noted, Dupré describes the controversy by talking of the metaphysical ‘primacy’ or ‘priority’ of some items over others. He also talks of claims to ‘reality’. Harking back to the distinction drawn in §1.3, between the Aristotelian and Quinean projects, one may wonder from which the emergentist’s thesis issues. ‘Primacy’ and ‘priority’ imply some notion of ontological *ordering*, a hierarchical approach typical of the Aristotelian view. Yet at the same time there is a distinctly Quinean tone to Dupré’s use of ‘reality’; it is easy to read questions about what is and what is not *real* as questions about what does and does not *exist*. Of course, one might talk about ‘degrees of reality’, but it is not clear that having novel causal properties is a matter of degree, and the disagreement does not seem to be about whether some items have more novel properties than others.⁶¹⁹ It is not clear-cut, but emergentism seems to attach to a Quinean conception of a flat ontology: organisms have novel causal properties so should be included on the ontological call-sheet.^{620, 621}

It is significant as well that emergentists like Dupré appeal to science to substantiate their position – as do the reductionists they contend with. Science will tell us where the causal buck stops,⁶²² and is positioned as an arbiter of ontological questions. It is to science that they turn when settling metaphysical disputes.⁶²³ In this respect their position appears to correspond to the *revisionary* approach described above. Emergentists stand to be wrong about whether these ordinary, everyday objects are real, and engaging with the reductionists thus, run the risk of ontological revisions.

This Quinean-cum-revisionary framework, which the emergentist appears to inhabit, contrasts noticeably with Wiggins’ neo-Aristotelian, descriptive account. As was noted in §1.3, Wiggins is not interested in putting ticks or crosses in an existence column – rather, his aim is to examine the metaphysical character of the *substances* we

motivation for pursuing the neo-Aristotelian account offered below (which, insofar as it avoids the puzzles about causality, avoids these more general confusion).

⁶¹⁹ Dupré himself notes the influence of Quine’s conception of ontology in the debate, with respect to reductive materialism (1993: 94).

⁶²⁰ Note that having causal properties correlates to ‘ontological commitment’ in the Quinean sense, since our best scientific theory must posit bearers of novel causal properties.

⁶²¹ There is another issue here worth mentioning. There is more than one type of causal theory, and it is not immediately clear which the emergentists are relying on when they defer to Alexander’s dictum, and whether their position is compatible with them all. For more on the different types of causal theory, see Schaffer 2013.

⁶²² See e.g. Benson 1989: 1067

⁶²³ Dupré, for example, points to methylation, and to the susceptibility of lower ranking Macaque monkeys to cocaine addiction, to ground the claim that novel properties at the social level effect changes at the genetic level. 2008c/2012: 257

find around us. His project is guided, not by science, but by our everyday interaction with the world (though scientific theories – like Pradeu’s – can be used to gain a sharper focus on those pre-theoretical entities). On methodological grounds, then, we might doubt the emergentist reading assayed above.

Before presenting an alternative interpretation of Wiggins’ anti-reductionism it will be helpful to examine this methodological disagreement more closely: does Wiggins aim to discredit revisionary metaphysics entirely, or is his descriptivism less ambitious? Can he recognise the insights that emergentism offers without being committed to that thesis? In the next section it is suggested that his position might well complement the emergentist’s, while remaining independent from it.

§3.3. Descriptivism and pluralism

How serious is the methodological disagreement between Wiggins and the emergentists? In this section it is argued that Wiggins' descriptivist project has no ambitions to undermine science-led metaphysical programs and, further, that the entities picked out in those programs can be accommodated in the pluralistic picture implicit in his texts.

§3.3.a. Ambitious descriptivism?

Wiggins states that we should turn to our everyday experience of the world to guide our metaphysics. This is not because he thinks reality is dependent on human minds; his conceptualist-realism avoids the excesses of idealism. Our agreement about what kinds of things there are is not a matter of opinion – it is not *relativistic*, but *relative* to us being the kinds of being that we are (e.g. of a particular size, duration, and with particular perceptual abilities).⁶²⁴ There may be particular items (specifically *organisms*) that we cannot help picking out, but despite the revisionist's worries, that we do so is not enough to prejudice us against their reality.

Furthermore, in responding to the revisionists' worries, Wiggins may raise similar concerns about their methodological program. The revisionary metaphysician privileges science over everyday experience because it can – supposedly – reach beyond our limited anthropocentric concerns. However (Wiggins may say) since science is a *human* practice it will ultimately be grounded in our pre-theoretical scheme, and thus cannot displace it.

Susan Haack finds this 'ambitious descriptivism' in Strawson,⁶²⁵ and a version of it is also present in the quotation from Kolakowski (given in §1.1). Kolakowski writes that 'scientific thinking' is a human creation, just as much as everyday perception; and he holds that both the linguistic *and* the scientific divisions of the world 'arise from man's practical need'. Of course, Wiggins' modest conceptualism is quite different from Kolakowski's, but there are indications in his texts of similar thoughts. They emerge, for instance, in his discussion of the 'alien' language of four dimensionalism. Wiggins writes:

⁶²⁴ As noted by Hull (in his 1992). For a (relatively) clear exposition of this rendering of relativity see Wiggins 1987: 204–5.

⁶²⁵ See §1.1.

At one and the same time, how can we deny ordinary substances their status as proper continuants, insist that ordinary substances are really *constructs*, yet lean shamelessly upon our ordinary understanding of substances when we come to specify that from which these constructs are to be seen as constructed or assembled?⁶²⁶

Again, in ‘Identity, Individuation and Substance’, he describes the centrality of our everyday concepts to scientific endeavors:

Think what damage would result from expunging the distinction between substance and process/narrative/event from most ordinary scientific exposition...⁶²⁷

This point is also helpfully drawn out by a reference he makes to J.H. Woodger, specifically in relation to biological items:⁶²⁸

There is one more point to be mentioned in connexion with the doctrine of the reducibility of biology to physics and chemistry: people who hold the doctrine do not in fact believe it. If you want to reduce biology to physics and chemistry, you must construct bi-conditionals which are in effect definitions of biological functors with the help of those belonging only to physics and chemistry; you must then add these to the postulates of physics and chemistry and work out their consequences. Then and only then will it be time to go into your laboratories to discover whether these consequences are upheld there. From the fact that people do *not* do this, I venture the guess that they confuse *reducibility* of biology to physics and chemistry, with *applicability* of physics and chemistry to biological objects.⁶²⁹

Wiggins accepts that science posits entities that do not register in our everyday experience – microphysical particles, say, or four-dimensional beings – but he also notes

⁶²⁶ Wiggins 2012: 12

⁶²⁷ Ibid: 24 n.30 See also Wiggins 1995: 231

⁶²⁸ Originally this passage featured prominently at the start of chapter 6 in *SC&S*, but has since been suppressed, and is now found in a footnote in *SC&SR*, at the end of chapter 5. Wiggins will be gratified at the attention that Woodger (oft-neglected) is now getting in the philosophy of biology (see Nicholson and Gawne 2013).

⁶²⁹ Woodger 1952: 336–8

that the practices that issue in their discovery depend on our pre-theoretical scheme. It is only by studying the organisms themselves that we come to find they are constituted exclusively by protons, and neutrons (and so on). Thus Wiggins has grounds to question the revisionist's impulse to supplant the entities of the 'older' ontology with those found in the 'newer' one.⁶³⁰

Unlike Strawson, however, Wiggins does not take the descriptivist's articulation of reality or the entities that it describes to be in any way 'prior' to those posited by science.⁶³¹ Wiggins is not claiming that organisms are *more real* than the stuff from which they are made. The suggestion contained in the quotations above is simply that the converse claim should be resisted. Physics describes new entities – atoms, quarks, etc. – but they should not be taken to *downgrade* or *discredit* the entities of the older, pre-theoretical ontology. Even when the older entities are discarded for certain explanatory purposes, it need not necessarily be the case that scientific revisions should legislate metaphysical ones. In a passage, which anticipates the pluralistic picture to follow, Wiggins writes:

The older ontology may yet be cotenable with the more theoretical conception. Contrasting the actual discrediting of entities of some kind, palpable or impalpable, with the discovering of new entities at the atomic or subatomic level, let us not conceive the latter as determining the level to which everything else must be reduced (in the serious sense of 'reduce'), even if this is the level at which macroscopic events are promised certain sorts of explanation.⁶³²

The general point here is that Wiggins has grounds for questioning the viability of the *revisionary* use of science, with respect to our pre-theoretical scheme. And this encourages the thought that the items of everyday experience are at least as well grounded as those of the scientific scheme. That is, he can be interpreted as a *pluralist*.

On this interpretation his aim is not to challenge the metaphysical status of entities posited by science, nor the legitimacy of non-descriptive inquiry. There are, for Wiggins, different metaphysical frameworks, which defer to different schema –

⁶³⁰ Wiggins may still abandon apparently everyday entities, given the necessary scientific encouragement – see Wiggins 2001: 155 – but this is (perhaps) because he sees some elements of our conceptual scheme to be less essential than others in our navigation of the world (e.g. animistic elements).

⁶³¹ Strawson 1959: 9f, and Haack 1978

⁶³² Wiggins 2001: 155–156

scientific, pre-theoretical – and so long as they do not lead to inconsistencies,⁶³³ and there is good reason for positing them, the entities captured by these different means may be ‘cotenable’.

§3.3.b. A pluralistic picture

For Wiggins, the entities one picks out depends on the framework one is working within. As the discussion above suggests there is no obvious reason for saying that one framework – one which defers to science – has priority over another – one which defers to our everyday interaction with the world. On this reading, Wiggins sees reality to be populated by metaphysically various entities, which are captured and analysed in different metaphysical frameworks.

Some metaphysicians focus on the posits of scientific theories and, relatedly, analyse them in terms of causal dependence. Items are included in their ontological picture if those items have novel causal properties. Perhaps, in the end, the only entities that register will be the fundamental particles – quarks, or fields. At the same time, descriptivists like Wiggins structure their inquiry around the continuants of everyday experience – organisms not least – and examine how we interact with them to draw metaphysical conclusions.

There are others still. Attending to comments in *Science and Reality*, and in later papers, we find Wiggins acknowledging the four-dimensional objects of Lewisian ontology while seeing them to fall outside the metaphysical framework he is interested in. The four dimensionalist’s model of physics describes objects around us that are both spatially and *temporally* extended; as we have spatial parts (our hands, and feet, etc.) we also have temporal parts (our infancy, our dotage, and so on). David Lewis sees this model to provide clean and principled answers to puzzles of change, of how a single thing can have two intrinsic, and apparently incompatible properties (sitting and standing).⁶³⁴ And while these four-dimensional objects are clearly not the ones Wiggins is interested in, there is no attempt to discredit them. He writes, explicitly, that

⁶³³ Like, for example, *bare substrata*: ‘What is this substance out there that can be conceptualized in radically different ways, which can be seized upon in thought by the anti-essentialist, but can have radically different principles of existence and persistence ascribed to it? This is surely an entity with inconsistent properties.’ Wiggins 2001: 148

⁶³⁴ See e.g. Lewis 2002: 441

[I]t is not an option for philosophy to reject the four dimensional conception of the world urged upon us by some philosophers and metaphysicians of science. But in accepting it one is not committed to see things, people and organisms in perdurantist fashion as made up of instantaneous temporal parts.⁶³⁵

On this reading, Wiggins is situated in a tradition of pluralist thinkers like Hilary Putnam⁶³⁶ (to which, indeed, Dupré might well be sympathetic).⁶³⁷ There are equally real beings, of different metaphysical characters, which are caught by different frameworks. Some catch three-dimensional substances, others fundamental particles, and others still catch four-dimensional beings with temporal parts.

Significantly, Wiggins is also immune to the objection that this pluralism describes *materially coinciding* objects, despite the ‘truism frequently called in evidence and confidently relied upon in philosophy that two things cannot be in the same place at the same time.’⁶³⁸ The possibility of material coincidence is (as discussed in §1.2.c.) something he has long defended (specifically with respect to *constitution*).⁶³⁹ Thus, on this model, there may be numerous entities, of different metaphysical character, situated, for instance, where you are currently situated. Different schemes will individuate different entities: four-dimensional beings, material ‘constructs’, concrete universals, and *organisms*.

⁶³⁵ Wiggins 2012: 12. Note, he also writes: ‘The answers that these questions [of individuation] require from philosophy ought to be given in a language that speaks as simply and directly as natural languages speak of proper three-dimensional continuants – things with spatial parts and no temporal parts, which are conceptualized in our experience as occupying space but not time, and as persisting whole through time.’ (Wiggins 2001: 31)

⁶³⁶ See e.g. Putnam 2004: ‘[I]t is no accident that in everyday language we employ many different kinds of discourses, discourses subject to different standards and possessing different sorts of applications, with different logical and grammatical features—different “language games” in Wittgenstein’s sense—no accident because it is an illusion that there could be just one sort of language game which could be sufficient for the description of all of reality!’ (22)

⁶³⁷ See, e.g. Dupré 2010a/2012: ‘[W]e should be pluralistic about how we divide the biological world into individuals: different purposes may dictate different ways of carving things up.’ (118). ‘[T]here will be no unequivocal way of ...dividing reality’ (126). See also Dupré 1993 (and his ‘promiscuous realism’). Yet the kind of pluralism advanced by Dupré is not exactly the same as that under discussion here. Importantly, while Dupré states that many different things exist, he does not obviously distinguish between their metaphysical characters. Being able to do so is a distinct advantage of Wiggins’ approach.

⁶³⁸ Wiggins 1968: 90

⁶³⁹ Ibid: 93

§3.3.c. Implications of Wiggins' pluralism

This reading of Wiggins' pluralism is significant in two respects. Firstly, it indicates how he will respond to the emergentist's thesis. The emergentist is engaged in a different kind of metaphysical inquiry to Wiggins, turning to science to find out which objects have novel causal properties – and in this respect, Wiggins' project is independent of theirs. However, the potential success of the emergentist's arguments is not irrelevant to Wiggins. The emergentist is working within a different metaphysical framework and using science to focus their inquiry, but Wiggins can take the metaphysical emphasis he places on organisms to be substantiated, to some extent, if those same entities are found to register within a non-descriptive framework as well as his own. Similarly, the emergentist can take the fact that organisms are central to our everyday navigation of the world to lend indirect support and credence to their project. So the emergentist's thesis, and Wiggins' account may complement one another without being mutually committing.

Secondly, it is worth noting (if only in passing) that the failure to recognise Wiggins' pluralism has led to undue criticism of his work. Samir Okasha deserves commendation as one of the few philosophers of biology to seriously engage with Wiggins' texts. Unfortunately, in his 'Darwinian Metaphysics: Species and the Question of Essentialism'⁶⁴⁰ his critique of Wiggins' essentialism misunderstands the pluralistic nature of his project. He assumes that Wiggins holds Kripke and Putnam's view that biological kind essences – the 'theoretical descriptions' holding between exemplars – register at the genetic level.⁶⁴¹ He writes:

Wiggins, like Kripke and Putnam, assumes without argument that organisms belong to their species in virtue of their 'hidden structures' – their internal, presumably genetic properties.⁶⁴²

⁶⁴⁰ Okasha 2002

⁶⁴¹ Kripke talks of 'internal structure' and Okasha notes that there is an ambiguity here between genetic make-up or physiology. He denies the ambiguity will give Kripke leverage. (2002: 198) However, given the arguments above and below, one might think an anti-reductionist interpretation of 'internal structure' is still possible.

⁶⁴² Okasha 2002: 207. This reading is most likely based on claims in *S&S* about speciation (e.g. 'If we are interested in evolution and speciation... then no doubt genetics (and ultimately molecular biology) must be at the root of what we inquire into.' (Wiggins 1980: 203) Yet such claims are claims about 'species, where 'species' is *not* equivocal with 'natural kind', and they do not commit Wiggins to an exclusively genetic construal of the principle of activity of a kind. Indeed, in *S&SR* he explicitly distances himself from the sort of reductionism Okasha attributes to him and Putnam. 'It is fully compatible with Putnam's

Okasha points out – plausibly⁶⁴³ – that the distinction between species might not, in the end, register at any ‘ultimate’ level.⁶⁴⁴ Yet, the previous sections will have made clear that this is not what Wiggins is claiming. In *SE&SR*, he specifically draws a distinction between *principles of activity* and the more ‘*scientifically basic laws*’.⁶⁴⁵ For Wiggins, investigation into the biological realm can occur on different levels, and the examination of our – human being – *mode of being* will not correlate (or need not) to an examination of genetics. Okasha’s objection fails to register the pluralistic nature of Wiggins’ account, the multiple cotenable spheres, which the preceding sections have attempted to draw out.

Having shown that Wiggins’ metaphysical anti-reductionism is not emergentist (though it is compatible with that thesis), and having laid out the pluralistic nature of his project, the time has come to draw out the alternative, neo-Aristotelian reading of his analysis of organisms. For Wiggins, organisms are *substances* – and this is not a matter of their being causally novel, but of being, in some way, ontologically *prior*.

suggestion... that the theoretical description that comes into question in a given case should make reference to both the microphysical and the macrophysical...’ (Wiggins 2001: 80)

⁶⁴³ Kripke and Putnam (if not Wiggins) *do* suggest that there is something like a *genetic* essence that underpins morphological similarities. Here, Okasha is right to upbraid analytic metaphysicians. Putnam states – of lemons – that the true criterion for membership in the kind lemon, is having the ‘genetic code’ of a lemon. (Putnam 1975: 240) And Kripke talks of a shared ‘internal structure’; to be a tiger, say, is a matter of having the right internal structure. (1980:121) Olson similarly errs (1997: 124ff).

⁶⁴⁴ Okasha 2002: 196 Okasha denies the existence of essential phenotypic traits, but he claims that there *are* ‘phenetic clusters’, clusters of phenetic traits that tend to co-vary. One might wonder – as Michael Devitt does – whether this is just a more general form of essentialism (Devitt 2008: 371). Are the clusters not just the essences? Here the argument depends on how ‘neat and tidy’ one wants the essences to be – and I think there is something to be said for the essentialist’s defence that the notion of a strict essence (or ‘tiger gene’) is a caricature of their position by their detractors... but for the sake of the present discussion, I will assume the effectiveness of Okasha’s position here.

⁶⁴⁵ Wiggins 2001: 143

§3.4. A neo-Aristotelian *organism* concept

What is the metaphysical character of organisms? How are we to understand them, in the descriptivist tradition, as *substances*? The following reading of Wiggins is neo-Aristotelian, with Kantian notes. His claims about our experience of the natural world are seen to correspond to the Kantian thought that our conceptual scheme necessarily partitions the biological realm into *genuine unities* (this is brought out below, by reference to work by Charles T. Wolfe). Furthermore, the understanding of organisms as genuine unities is read to have implications for how their parts are conceived; our way of conceptualising the biological world involves understanding an organism's parts by reference to the whole. That is, the *organism* concept is an intrinsically *anti-reductive* one. The final part of this section discusses how Wiggins understands this anti-reductionism. An interpretation of his neo-Aristotelianism is offered, which demonstrates how Wiggins disassociates metaphysical anti-reductionism from causal readings (and thus both from emergentism and Aristotle's problematic final causality), and associates it, instead, with ontological dependence. Aristotle's metaphysical anti-reductionism is comprised of two distinguishable but interrelated strands of argument – one relates to the causal power of organisms, the other relates to their ontological priority. Wiggins is interested in the latter.

§3.4.a. Organic unities

For Wiggins, human beings – human organisms – are things that we cannot avoid picking out in our day-to-day existence.⁶⁴⁶ This thought is found too – famously – in Kant's discussion in his *Critique of Judgement*.⁶⁴⁷ In that work, Kant also emphasizes the way that we cannot avoid understanding these things in *teleological* terms. Teleological language is ineliminable from the life sciences. This is the substance of the following, oft-cited quotation:

⁶⁴⁶ They are 'substances' as described in chapter 1, above (Wiggins 1995: 217 and 2001: 90).

⁶⁴⁷ Kant 1790/1987

[I]t is absurd for human beings... to hope that perhaps some day another Newton might arise who would explain to us, in terms of natural laws unordered by intention, how even a mere blade of grass is produced...⁶⁴⁸

There can be no such Newton – he claims – because natural entities resist the explanations of mechanical principles exemplified by Newtonian physics. That is, the nature and behaviour of the entities found in the biological realm (organisms) cannot be accounted for by reference to the presence and behaviour of their constituents. They must be seen as *more* than the sum of their parts; we conceive of them as final ends to which the functioning of their parts are directed. For Kant (on the interpretation offered by Philippe Huneman (among others⁶⁴⁹)):

These entities display a specific relationship between wholes and parts, in which the parts are seen to presuppose the whole in order to be accounted for.⁶⁵⁰

The organism is conceptualized, in our pre-theoretical thinking, as ‘prior’ to its parts. Yet, for Kant, this is an epistemological fact with no ontological bite. It might be that we apprehend organisms as unities and conceive of their parts *as* parts (of the whole); yet, as Huneman notes, Kant repeals any theological – or, more broadly, metaphysical – commitments.⁶⁵¹ Picking out organisms is something we do, but not ‘a statement of the real’.⁶⁵² The organism is a heuristic fiction – a *regulative* principle, and not a *constitutive* one.⁶⁵³

However, other uses have been made of the Kantian analysis. Of particular interest here is recent work by Charles Wolfe, who – following the neuropsychologist, Kurt Goldstein – uses Kant’s account for phenomenological ends. In his essay ‘Do organisms have an ontological status?’⁶⁵⁴ Wolfe draws an important connection between Kant’s view of the ineliminability of teleological language and the more recent

⁶⁴⁸ Kant 1790/1987 §75: 282–283 Did Darwin, perhaps, fill this role? There is not the space to discuss this in the depth it deserves, but the profusion of teleological language in Darwin’s work suggests that, although he explained it differently, he still conceived the natural world in some way teleologically.

⁶⁴⁹ See e.g. Wolfe 2010, and Ginsborg 2001

⁶⁵⁰ Huneman 2007: 5–6

⁶⁵¹ Ibid: 5

⁶⁵² As Wolfe construes it (Wolfe 2010: 21)

⁶⁵³ Wolfe 2010: 19

⁶⁵⁴ Ibid

Darwinian musings of Daniel Dennett, and Goldstein.⁶⁵⁵ As Wolfe reads them, Dennett and Goldstein hold that our ability to predict the behaviour of others – on which our survival depends – relies on treating them as unities, and not, say, as a mass of molecules.⁶⁵⁶ Wolfe writes:

[O]ur cognitive or perceptual make-up is necessarily ‘organismic’ [i.e. it is part of our conceptual framework that we pick out organic unities], and indeed, its being so contributes to our aptitude for survival.⁶⁵⁷

He goes on:

The projective view, which I have attributed to Kant, Goldstein (in one of his moods) and Dennett, holds that organism is something we project onto the world, a kind of construction of intelligibility... the organism must be treated as an individuality.⁶⁵⁸

While building on Kant’s view, his conclusion is markedly distinct from it; he finds a metaphysical moral to draw from these analyses. The organism is a projection, yet ‘[t]hat we are, by dint of our nervous systems, ‘projectors’ does not mean we project any structure we choose onto the world: “To understand is always to construct a (meaningful) totality”.’⁶⁵⁹

Without having to reconstruct the arguments that lead Wolfe to this point, it will be clear – in the light of the work in the previous chapters – that this is a trajectory Wiggins may well follow.⁶⁶⁰ Organic *unities* – as Kant, Leibniz,⁶⁶¹ Goldstein, Claude Bernard,⁶⁶² and Wolfe maintain – are a central part of our conceptual framework. For whatever (evolutionary) reason, we humans partition the natural world into beings that are seen to be more than their parts combined. This might not be how the biological

⁶⁵⁵ Dennett 1987

⁶⁵⁶ Wolfe 2010: 24

⁶⁵⁷ Ibid: 21

⁶⁵⁸ Ibid: 21

⁶⁵⁹ Ibid: 29

⁶⁶⁰ Here again we see the significant similarities between the descriptivist tradition, and the phenomenological.

⁶⁶¹ ‘Moreover, by means of the soul or form there is a true unity corresponding to what is called the SELF [*moi*] in us; such a unity could not occur in artificial machines or in a mere mass of matter, however organized it may be...’ Leibniz 1695/1978, 482

⁶⁶² ‘[T]he physiologist and the physician must never forget that the living being comprises an organism and an individuality.’ Bernard, 1865/1984, II, ii, §1, §137

realm is articulated in other schemes, but this – as Wiggins points out – is not to say that this description lacks nomological foundation.⁶⁶³ (Indeed, our human ability to pick out these unities is a scientific fact that may well be accounted for in some ‘ultimate’ theory.) To refer back to Wiggins’ conceptualist-realist phrasing, just because we *construe* reality in a certain way does not mean that we *construct* it.

Reading Wiggins along these lines suggests a particularly novel use of Aristotelian biology in his work. In the following section, it is proposed that he takes the picture described in the *Metaphysics* and *De Anima* to be a clear description of the structure of our thoughts about the kind of entities caught by our conceptual schemes.

§3.4.b. Aristotelian organisms

This section presents an overdue, and somewhat brief, overview of Aristotle’s metaphysical project – specifically his *hylomorphism*. For Aristotle (like the descriptivists⁶⁶⁴), the objects of our everyday experience – cats, flowers, human beings – are the primary focus of metaphysical inquiry. In the works collected in the *Metaphysics*, he delves into the underlying structure of these things,⁶⁶⁵ and it is in those texts that we find *the hylomorphic distinction*.

Aristotle writes that, in the realm of being,⁶⁶⁶ the individuals we encounter in the world are not metaphysically simple but comprised of two distinct elements: matter (*hylê*) and form (*morphê*). All individual things are hylomorphic composites.⁶⁶⁷ He elaborates, in *Metaphysics Z*, using the example of a bronze statue (to which he repeatedly (and perhaps problematically) returns):⁶⁶⁸ The bronze statue has a *material* (hylic) aspect – it is made out of matter, in this case, bronze. It also has a *formal* (morphic) one – it is moulded into a certain shape, or ‘form’ (e.g. of Judith and Holofernes). The form cannot exist without being ‘enmattered’; that is, *realized* in matter; and the matter may exist without the form (the statue may be destroyed when the bronze survives). Uninformed matter is not a distinct particular, but some (relatively) undifferentiated

⁶⁶³ And this, maybe, is what underpins his comments about a ‘guarantee’ (discussed in chapter 4) – an indication of some law-determined activity that may or may not fully correspond to explanations at the ‘ultimate’ level.

⁶⁶⁴ See e.g. Strawson 1959: 9f

⁶⁶⁵ Furth 1978, 629

⁶⁶⁶ See Kosman 1987 for the distinction between the realm of being, becoming and change.

⁶⁶⁷ Cf. Ackrill 1972

⁶⁶⁸ Freeland 1987: 392

mass – it is the form that determines individuals, the form of a statue that makes it the kind of thing that we can individuate.

The statue paradigm is slightly misleading; form is more than a particular *shape* into which something is moulded⁶⁶⁹ (the statue of Judith is not a human being). Consider slightly more complex artifacts, like hatchets, etc. Here, Aristotle associates ‘form’ with a specific *function*, i.e. the chopping of wood.⁶⁷⁰ Form, in this instance, is not just the *shape* of a thing; it is taken to be how it works or functions *in a particular way*. It’s *mode of being*. So the form of a hatchet is to divide wood, by chopping through it, the form of a house is to shelter, by means of a roof, and the form of the roof is to prevent a deluge, by being an impermeable surface.⁶⁷¹

It is central to Aristotle’s picture that a substance’s matter must be *of a specific sort*, or of a certain material configuration, such that it can *subserve* the object’s function:

[T]here is a necessity that the axe be hard, since one must cut with it, and if hard that it be of bronze or iron...⁶⁷²

That is, the matter – which in this case constitutes the hatchet – must have the right *dispositional properties* for chopping.⁶⁷³ Or, to put it in the Aristotelian idiom, the matter must be *potentially* (*dunamis*), what the axe, spade, chisel, is in *actuality* (*energeia*, *entelechia*). (Thinking of uninformed matter as having dispositional properties might seem puzzling at first, since matter is supposed to lack any formal specification – this is addressed below.)

What about organisms? To a degree, Aristotle treats natural things in the same sort of way as artefacts. The organic entities we find around us are matter ‘informed’ by specific *morphe*. An animal is matter informed by a specific mode of being,⁶⁷⁴ just as the hatchet is matter formed to serve a particular function. This natural form, or *psuche*, encapsulates the typical growth and development, the behaviour, of that kind of animal. As Furth and Kosman have put it, it encapsulates the animal’s ‘lifestyle’:

⁶⁶⁹ Freeland 1987: 394

⁶⁷⁰ Furth 1987, 39

⁶⁷¹ Note that the parts – in this case, the roof – also have forms. Kosman 1987: 372

⁶⁷² Aristotle *Parts of Animals* I.I 642a9–13, tr. Balme

⁶⁷³ Freeland 1987: 396

⁶⁷⁴ Wiggins 2001: 72

The specific form of an animal's being is... as we might say, its *lifestyle*; what it eats, how it gets food, where it lives, the manner of its reproduction, sensation, movement, etc.: the entire complex of characteristic activities, in other words, that constitutes the manner of its *bios*.⁶⁷⁵

Human beings are entities comprised of *psuche* and matter (matter that is suitable for the subservience of that form).⁶⁷⁶ Even from this cursory overview it should be clear that this conception of natural substances is the stem from which Wiggins' metaphysics grows. There are certain issues about how his interpretations of Aristotle fluctuate,⁶⁷⁷ but what should be evident from this analysis, and the sections of the previous chapters, is that *psuche*, as it is construed here, and its correlate *phusis*,⁶⁷⁸ are the conceptual ancestor of Wiggins' 'principle of activity' as described by **D(v)**.⁶⁷⁹ The connection is made explicit most recently in 'Identity, Individuation, and Substance',⁶⁸⁰ where he specifically presents his project in these Aristotelian terms, describing how natural kinds have a *phusis* or a nature:

The *phusis* of a thing is its mode of being. It is the principle of activity of a kind whose members share and possess in themselves a distinctive source of development and change.⁶⁸¹

There is an etymological irony here that would be a shame to pass over. Wiggins is often contrasted with the 'psychological' approach to personal identity – but follow the

⁶⁷⁵ Kosman 1987: 379

⁶⁷⁶ Aristotle, *De Anima* II.I. 412a19–27, 412b6 (Hamlyn tr.) I will ignore, for present purposes, the considerable controversy around Aristotle's claim that *psuche* must be present in a body that has life potentially. See Wiggins 1967: 46, Ackrill 1997: 126, Williams 1978, and Rosenthal 2009

⁶⁷⁷ For example, in his most explicitly Aristotelian piece, *ISTC*, he (controversially) parses 'psuche' as 'person'. Wiggins 1967: see particularly part 4. For a critique of his interpretation, see Ackrill 1997. (Cf. Wiggins 2012 and the footnote immediately below).

⁶⁷⁸ What is the relation between *psuche* (form) and *phusis* (nature)? Wiggins, in his 2012, describes the principle of activity as the *phusis*, rather than the *psuche* (which figures much more prominently in his 1967). From what I understand – and this is based on Gotthelf's discussion of first principles (Gotthelf 1987: 187) – the *phusis* is the general nature (e.g. the general nature of birds), and the *psuche* is the specific nature of individual. '[T]he explanation of beaks for example depends on the positing of a bird nature; this would not of course exist separately but only as a component of the natures of the individual bird-forms. Nonetheless, explanation at the level of birds would require the positing specifically of that generic aspect of these individual forms.' The general nature, or *phusis*, is the generic aspects of specific individual forms.

⁶⁷⁹ One can see the original uptake of these ideas in *ISTC*, a work explicitly intended as a rehabilitation of the hylomorphic doctrine.

⁶⁸⁰ See also Wiggins 2001: chapter 3 *passim*

⁶⁸¹ Wiggins 2012: 8f. See also, Wiggins 1995: 219, and 2001: 80–81, 89

derivation of that term, and one finds Aristotelian *psuche* and *phusis*. Wiggins is a psychological theorist in this ancient sense, seeing us to survive where our *psuche* continues. But the question now arises: how far down this Aristotelian path does Wiggins ultimately want to go? The next section deals with a pressing problem for those who whole-heartedly endorse the hylomorphic picture: its seemingly inextricable connection with *final causality*.

§3.4.b.i. Teleology

Central to the Aristotelian schema is the thought that the *psuche*, form, has *causal* powers over the material parts of the organism. It *organizes* them. As Marjorie Grene puts it, *psuche* is the ‘organizing’ principle, which arranges the material parts, the elemental compounds, into the organismic (that is, ‘organized’) structure.⁶⁸² In Aristotle, this position is articulated in contrast to the framework outlined by Empedocles.⁶⁸³ Both Aristotle and Empedocles see matter, at the fundament, to be split between the four elements: water, wind, earth and fire – and both understand these elements to have their own elemental natures (which is why uninformed matter may have dispositional properties), and to be mixable into compounds. Where they differ, however, is in the causal power they attribute to these four fundamental stuffs.

For Empedocles, everything in the earthly realm is borne from the interaction between the elements and their elemental natures: moved together by their environments,⁶⁸⁴ they mix, and through chance and necessity, form more ordered compounds – mud, bark, bronze, blood, etc. – which themselves mix and create even more complex higher level structures.⁶⁸⁵ The reductionist logic of this process is exemplified most strikingly in his rudimentary theory of evolution; he describes a stage in cosmic history where heads and trunks and limbs are formed from the elements, and roll about the ancient tundra, occasionally bumping into each other, and combining, to produce bizarre, chimerical, ‘scrambled animals’, like ox-headed men, and human-faced cows (some of which form viable combinations, which then survive).⁶⁸⁶ In the Empedoclean universe, one explains the organismic unities we find around us as having been originally caused by elements combining in certain conditions. Ultimately, the

⁶⁸² Grene 1972: 42

⁶⁸³ Gottself 1987: 222

⁶⁸⁴ And ‘love’ and ‘strife’ – see e.g. Schofield 2002

⁶⁸⁵ Furth 1987

⁶⁸⁶ Ibid: 44, see also Grene 1972: 403

organism is seen to be the product of a causal chain *reaching up* from these elements, the most fundamental constituents of reality.

This conception of a uni-directional causal ascent stands in marked contrast to the Aristotelian model of biological systems. Aristotle's biology is open to divergent interpretations, but whether credited with an anachronistic vitalism or not,⁶⁸⁷ he clearly opposes this kind of strict reductionist picture. Specifically, he views *psuche*, the living activity, as playing a causal role that is *not* an extension of the upwards-reaching causal chain.⁶⁸⁸ Indeed, he sees *psuche* as having causal influence *over* its parts: the causal chain does not just go upwards, emerging mechanically from the nature of the elemental constituents. Rather, as Furth puts it, it 'reaches down' into the elemental miasma, and thereby gives it structure.⁶⁸⁹

The echoes of the debate between Empedocles and Aristotle are clearly still ringing – but Aristotle's causal anti-reductionism is not exactly the emergentist's one. For Aristotle, the organism is seen to cause the formation of the parts, as the end-product, the *telos*, to which the organization of those parts is directed (unlike in the emergentist's picture, where the novel causal powers are not seen to be the guiding, fixed end-point of a biological process). Which is to say that Aristotle's hylomorphism is wedded to the doctrine of *teleological causality*.⁶⁹⁰

For Aristotle, a teleological cause is a goal to be achieved. With respect to artefacts, a goal causes an activity to occur or an instrument to exist. Consider an intentional action – your desire to hammer some nails, for instance. Hammering nails is your goal. To achieve this goal you arrange a lump of wood and a sharp bit of iron into a hammer. In some sense, then, the *goal* has caused the organization of the wood and iron to be thus.

Some will find this kind of description of a causal process inappropriate when applied to organic matter (especially if, like Aristotle, we do not posit any kind of purposive action by a creator God).⁶⁹¹ Aristotle gives numerous examples where natural

⁶⁸⁷ See D.M. Balme (1987: 279) for a discussion of this anachronism.

⁶⁸⁸ There is an issue here about retrojecting. It is hard to adapt Aristotle's account into modern terms, especially when talking about causality (Aristotle sees four types of causes: material, efficient, formal, and final). But if nothing else, he has been (retrospectively) co-opted by the organicists, like Woodger (see Haraway 1976: 33). It's difficult to map lines of influence, but it is important to recognize that Aristotle is not necessarily influential for what he actually said, but for what he is taken to have said.

⁶⁸⁹ Furth 1987: 30. See also D.M. Balme 1987: 283 'The production of an animal therefore requires two material processes, which are of course combined in nature: there must be the primary actions of the elements, and there must be a limiting movement.' Here we see an upward and downward causal framework, similar to the one Dupré outlines in e.g. his 2008a/2012.

⁶⁹⁰ See Gotthelf 1987 and Charles 2012 for an overview.

⁶⁹¹ See Falcon 2011

processes are construed as being caused by the organism's 'living well'; a plant's roots push down for nutrition,⁶⁹² or its leaves grow to protect its fruit.⁶⁹³ The life of the organism is seen to be the end that is the primary cause of organic development; the movements of the elements are all *directed* towards the growth and persistence of a living being.

This is of a piece with his conception of *dunamis* and *energeia*, mentioned above. An organism is a hylomorphic substance, comprised of matter, and form (*psuche*).⁶⁹⁴ And for this form/lifestyle to be actualized the matter out of which it is constituted must be of the right sort to *support* the characteristic activity (*energeia*). In this case it must be potentially living. And for it to have the capacity (*dunamis*) to support a particular sort of *bios*, the matter must be structured as e.g. organs that perform the required functions of that type (for instance, if the individual is a bipedal thing then two legs are required for locomotion, lungs for breathing, etc.). And for those organs to function thus, they need in turn, to be made of certain matter (matter which has the potential to so function), and onwards, *downwards* to the Empedoclean elements. In short, the 'lifestyle' of the organism – how it gets food, where it lives, etc. – arranges matter into a structure that can realize it.

How far will Wiggins want to go down this line? The talk of elemental miasmas obviously fails to cohere with modern science. Furthermore, to those living in a post-Darwinian age, the idea that a plant, say, is organized in a certain way *because* being so organized is good for it,⁶⁹⁵ will seem both mysterious and obsolete,⁶⁹⁶ since we can much better explain e.g. organic arrangement as the outcome of random, non-purposive mutations that allow organisms (and, consequently, those particular traits) to survive. The idea that inanimate things 'seek' natural end-states sounds profoundly strange to modern ears. Additionally, and crucially, whatever we may say about the renewal of Aristotelianism hoped for by some, following Grene,⁶⁹⁷ Wiggins completely rejects the possibility of final causality.

He writes, uncompromisingly:

⁶⁹² Aristotle *Physics* 199^a29

⁶⁹³ Aristotle *Physics* 199^a28

⁶⁹⁴ N.b. there is some ambiguity over whether form (*eidos*) is form of the individual or of the species (see Furth 1988: 146).

⁶⁹⁵ Charles 2012: 255

⁶⁹⁶ As David Charles points out, 'mysterious' is the perhaps the most prevalent criticism leveled at Aristotle's concept of final causality. Charles 2012: 228f

⁶⁹⁷ E.g. Jonas (1966) and Kass (1999)

‘The failure of Aristotelian science is final.’⁶⁹⁸

Wiggins, like Aristotle, sees organisms to be substances *par excellence*. We understand them as real unities. But in what sense are they unified? The discussion above presents one strand of argument in Aristotle: living things are unified (and thus more clearly exemplify the category of substance) because they have causal power over their parts. In a way, this complements the emergentists’ picture, where causal relations are also taken to correspond to ‘metaphysical robustness’. Yet Wiggins’ use of Aristotle does not rest on the teleological power of the organic whole. In the next section it is argued that his interests lie with another element of Aristotle’s metaphysics: ontological dependence.

§3.4.b.ii. Ontological dependence

Wiggins wants to distance himself from final causality, but at the same time he sees something useful in Aristotle’s picture. He takes it to elucidate our everyday *substance* concept, and to describe the metaphysical make-up of the entities we pick out in our day-to-day lives: continuants (and not e.g. four-dimensional objects). It was described above how some philosophers – including Wiggins – hold that we cannot help seeing organisms as unities, and it is argued below that Wiggins appeals to Aristotle’s account because, in addition to these thoughts about causation, there is another strand of anti-reductionist thought. Brutishly put, an organism is a genuine unity because the existence of the parts is seen to ontologically depend (in a *non-causal* way), on the whole.

‘Ontological dependence’ was introduced, briefly, in §1.3. It is, as Fabrice Correia puts it,

...a term of philosophical jargon which stands for a non-well delineated, rich family of properties and relations which are usually taken to be among the most fundamental ontological properties and relations... A dependent object, so the thought goes, is an object whose ontological profile, e.g. its existence or its being the object that it is, is somehow

⁶⁹⁸ Wiggins 2001: 143 fn.5 (and, elsewhere, 2001: 80) It is important – in light of the ‘pluralistic’ reading above – that in the same passage he goes on to state: ‘Its failure does not entail, however, that science has shown that every explanation in any way worth having of anything worth knowing must eventually find expression at the level of the science that has displaced the human world view.’

derivative upon facts of certain sorts – be they facts about particular objects or not.⁶⁹⁹

It was shown above that, in discussing the metaphysical character (or ‘ontological profile’) of *substances*, Wiggins deploys notions of ontological dependence (or ‘posteriority’) borne from the Aristotelian tradition. Properties *depend on* the substances in which they inhere (this is how Wiggins articulates the metaphysical relevance of the subject/predicate distinction). ‘Real unity’ was also mentioned above as an aspect of the pre-theoretical *substance* concept, and this too was seen to be explicable in terms of dependence. In cases of genuine or real unity, the parts of an item are understood to be *ontologically dependent on*, or *posterior to*, the whole. The time has come to present a more precise rendering of this Aristotelian claim – and in *ISTC*, Wiggins helpfully offers an introduction:

Now the reason why the material parts of x , p , are accounted posterior to x by Aristotle seems to be something like this. Suppose we take the example of parts of the body. They have to be picked out or individuated in some way or other, and any correct way of picking them out will have to make clear *what* exactly we are picking out. But this involves making clear the existence and persistence conditions (for Aristotle slightly peculiar) of the bodily parts we do pick out... These can only be entirely correctly given if we pick these parts out *as parts of this or that living body*. (That anyway is Aristotle’s view of bodily parts. For him such are really living-bodily-parts. The generalizable point is that the picking out of p must *somehow* make clear what p are...) So Aristotle writes:

‘And the finger is defined by the whole body. For a finger is a particular kind of part of a man. Thus such parts are material, and into which the whole is resolved as into matter, are posterior to the whole; but such as are the parts in the sense of parts of the formula and of the essence as expressed in the formula [*ton logou kai tes ousias tes kata ton logon*], are prior.

⁶⁹⁹ Correia 2008: 1013

Either all or some of them.’ (*Metaphysics* 1035^b following, trans. Tredennick.)⁷⁰⁰

Wiggins is describing a form of *essential dependence*. It is part of the essence of a finger – hand, organ, etc... – to be a part of an organism. Put slightly differently, the statement of the essence (the ‘logos’ or ‘real definition’) of that thing will make reference to the whole of which it is a part (or, the whole is a ‘constituent’ of that real definition). Thus, as Kathrin Koslicki presents the Aristotelian model:

An entity, Φ , ontologically depends on an entity (or entities), Ψ , just in case Ψ is a constituent (or are constituents) in a real definition of Φ .⁷⁰¹

An illustration may help here. Consider Aristotle’s various discussions of the essence of *eyes*. Where body-parts are concerned, Aristotle takes their essence to relate to their *function* – this is the thought captured in the *Meteorology*, where he writes:

What a thing is is always determined by its function: a thing really is itself when it can perform its function; an eye, for instance, when it can see.⁷⁰²

Aristotle, note, is not stating that the eye must be always performing its function to be an eye. Rather, it must be such that it *can* perform its function. For an eye to be an eye it must have the potential (*dunamis*) to see; our eyes do not cease to be eyes when we sleep, since they retain that potential to function (though it is not actualized).

The crucial point is that eyes cannot properly be said to see by themselves. People see. The function an eye performs is the function for the whole, so an eye must be integrated into an organized whole for it to have the capacity to perform its essential function. The eye, like the finger, is ‘defined by the whole body’; the real definition of an eye essentially refers to the organism of which it is a part. Eyes, then, cannot exist separated from the whole.

⁷⁰⁰ Wiggins 1967: 77

⁷⁰¹ Koslicki 2012: 197

⁷⁰² Aristotle *Meteorology* 390^a10–13

Evidently, even of the things that are thought to be substances, most are only potentialities – e.g. the parts of animals (for none of them exists separately, and when they *are* separated, then they too exist, all of them, merely as matter)...⁷⁰³

For Aristotle, when an organ is separated from the organism, it is only an organ ‘homonymously’.⁷⁰⁴ That is, though the word ‘eye’ is used equally to refer to the living eye in my head, and to the detached and decomposing eye on the surgical plate, ‘the definition of being which corresponds to the name is different’.⁷⁰⁵ One exists as a part of a whole, with a particular function – the other ‘merely as matter’.

[W]hen seeing is removed the eye is no longer the eye, except in name – no more than the eye of a statue or of a painted figure.⁷⁰⁶

On the reading presented here, there are two sides to Aristotle’s anti-reductionism. On the one hand he claims that organisms are genuine unities because of the *causal power* they have over their parts. On the other, he explains their substancehood in terms of *priority* and *posteriority*: organisms are real unities because their parts are *ontologically dependent* upon them. And while in Aristotle these strands interweave, the suggestion implicit in Wiggins – being drawn out here – is that they need not necessarily.

Wiggins is reluctant to associate himself with Aristotelian final causality. Yet he finds in Aristotle a way of capturing our thoughts about organic unity without invoking that problematic principle. The causal story and the claims about dependence are separable. Thus Wiggins writes, in ‘Substance’:

The extent that anything is not *in* other things... it enjoys a certain autonomy. Something that has this autonomy may be causally dependent on other things in the way in which the infant depends on the mother; but ontologically speaking, it is still independent.⁷⁰⁷

⁷⁰³ Aristotle *Metaphysics* 1040^b5–10

⁷⁰⁴ Munzer 1993: 112

⁷⁰⁵ Aristotle *Categories* 1a–12

⁷⁰⁶ Aristotle *De Anima* 412b20–22

⁷⁰⁷ Wiggins 1995: 216

The proposal here is that Wiggins takes Aristotle's discussion of dependence to enrich our understanding of a central element of our conceptual scheme.⁷⁰⁸ In our everyday experience we treat some things – organisms not least – as possessing principles of activity, as being subjects of predication, and as being *real unities*. This latter aspect of substancehood – where an item is seen to be 'more than the sum of its parts' – is captured well by Aristotle's thoughts about dependence. An item is a real unity when its parts are *ontologically* – but not necessarily *causally* – dependent upon it – i.e. when the capacity to perform their essential function depends on their being integrated into an organized whole.⁷⁰⁹

⁷⁰⁸ I have Alex Douglas to thank for helping me better my understanding of ontological dependence.

⁷⁰⁹ Note that we need not have a refined idea of the essence – we can, as Wiggins points out, leave it for biologists to fill in. See also Wiggins 2001: 87 n.10

§3.5. Conclusion

The aim of this chapter has been to set out a particular dialectic between biological reductionists and anti-reductionists, and to show how Wiggins may provide a sophisticated alternative to the emergentists' position. The standard discussion was seen to be characterized by the question *Are organisms real?* There was found to be a sound scientific basis for picking out these everyday living things – in Pradeu's physiological-immunological account – but that theory did not assay opinions either way as to their *reality*. Dupré, and other emergentists, were seen to hold that organisms *are* real, divining in them novel causal properties. Yet the focus on causation, and the appeals to science, were taken to be at odds with Wiggins' general methodological approach.

Wiggins' anti-reductionism is *neo-Aristotelian*, not in any *causal* sense, but because he takes the dependence relation found in the *Metaphysics* to illuminate our pre-theoretical understanding of living things as *genuine unities*.⁷¹⁰ This unity, which Kant considers to be an ineliminable phenomenological fact, can be theorized in terms of dependence: the parts of a genuine unity are *ontologically dependent* upon it. This, it has been suggested, stands a genuine, alternative anti-reductionism to the emergentist picture.⁷¹¹

There are two consequences of this analysis that bear particularly in the chapter that follows. Firstly, we must take seriously the idea that we cannot conceive of organs (the parts of natural substances) as *separate* from the organized whole – a thought we find in Aristotle, but echoed also by Hegel (a philosopher who makes a notable, but over-looked, epigrammatic appearance in *S&SR*):⁷¹²

The limbs and organs for instance, of an organic body are not merely parts of it: it is only in their unity that they are what they are...⁷¹³

⁷¹⁰ Not only does this analysis offer a clearer picture of Wiggins' use of Aristotle, but it provides an extrapolation of Wiggins' view of organs, which – as he notes in *S&SR* – is summary at best. Wiggins 2001: 86–87

⁷¹¹ This is one instance where greater interdisciplinary discussion between philosophy of biology and metaphysics (and the history of metaphysics) is obviously valuable (see also Dupré 2008b/2012: 99). In addition, discussion between those spheres will guard against the confusions that arise in animalist accounts of personal identity. Olson, like van Inwagen, is avowedly 'mechanistic' when it comes to descriptions of biological processes (in the causal sense described in chapter 4), and yet, simultaneously, his animalist account is determinately 'Aristotelian'. There is a tension here, drawn out in the work below, which Wiggins' position can effectively combat.

⁷¹² Wiggins 1980: 148

⁷¹³ Hegel 1817/1975: 191–2 See also Claude Bernard's comment: 'If we decompose the living organism into its various parts, it is only for the sake of experimental analysis, not for them to be understood separately.' Bernard 1865/1984, II, ii, §1, §137

Secondly, if Wiggins elucidates our pre-theoretical *substance* concept along these lines then he will hold that organisms, as natural substances, cannot conceivably be dismantled. It is beyond our conceptual limits to think of organized wholes as suffering *disassembly*. Organisms – as natural substances, and exemplifying the elements of that category – are ontologically prior to their parts. They cannot, then, be separated into their parts, because their parts can only exist in the integrated unity. In the next chapter it is discussed how these thoughts about natural substances are disturbed by the logic of transplantation.

BRAIN TRANSPLANTATION

The time has come to consider Sydney Shoemaker's infamous 'brain transplantation' narrative. The story is one that Wiggins frequently revisits – yet despite prolonged discussion he fails to provide a satisfactorily clear ruling on whether or not a person could survive such a procedure. Brown's peculiar adventures seem somehow to resist his analysis. The aim of this chapter is to investigate why they do so, whether he can give a principled response to the story, and what the implications for such a response might be.

In §4.1, Wiggins' various (unsatisfactory) attempts to deal with the story are set out. Following this, the story is re-examined. Drawing on the work in chapter 3 it is argued (in §4.2) that the idea of a brain transplantation subtly shifts our metaphysical focus from an *organism* onto a biological item whose parts are *ontologically independent* of the whole. Shoemaker's scenario is, in a relevant sense, *mechanistic* (the different senses of 'mechanism' are drawn out below). In §4.3 this mechanistic reading is supported by a historical review of the origins of the story in Locke; it is argued that the Lockean discussion of personal identity is a response to tensions between the doctrine of the resurrection, and corpuscularian forms of biological mechanism.

Shoemaker's narrative moves one's focus from the *organism* onto a 'living something-or-other' or – to build on the discussions in chapter 1 – onto a *biological artefact*. Unaware of this shift, Wiggins' analyses are confounded. The contention here, following the neo-Aristotelian treatment offered in §3.4, is that he has strong grounds for holding that the organism cannot suffer the sort of disassembly described by Shoemaker. Thus Brown does not survive. This assessment will lead to some concerns. More anodyne cases of transplantation – like heart transplantation – exhibit similar kinds of disassembly. Does the organism survive heart transplantation? And if not, does the *person*? These questions return us to the worries with the *human being theory* assayed in chapter 2, and in the conclusion a resolution to these concerns is proposed.

§4.1. Changing perspectives

Sydney Shoemaker's story about the unfortunate Brownson appeared in 1963 in his *Self-Knowledge and Self-Identity*. The story, which describes the transplanting of Brown's brain into Robinson's body, is analysed in greater detail below (and the famous passage is reproduced); the aim of this section, meanwhile, is to present an overview of Wiggins' response to this peculiar narrative.

Wiggins' initial reading is found in his *Identity and Spatio-Temporal Continuity* (1967) and since then his view has fluctuated: at times he doubts Brown's survival, at other times he seems drawn ineluctably to suppose it. This overview will mainly refer to eight of Wiggins' texts, spanning his philosophical career: *Identity and Spatio-Temporal Continuity* (1967) 'Locke, Butler and the Stream of Consciousness' (1976), *Sameness and Substance* (1980), 'The Person as Object of Science...' (1987), 'Reply to Snowdon' (1996), *Sameness and Substance Renewed* (2001), 'Reply to Shoemaker' (2004), and 'Identity, Individuation and Substance' (2012).

In 1963, Shoemaker takes his story to support a neo-Lockean reading of personal identity; it seems to us that Brown survives the operation, and *is* Brownson, because of psychological continuity. Four years later, Wiggins agrees that Brown is Brownson, but not exclusively because of psychological continuity – the important point, made in *ISTC*, is that Brown's *life* goes along with his brain:

[W]hat matters... is the continuity of Brown's life and vital functions as they are planted in one body and recognizably and traceably transposed in another body.⁷¹⁴

In Wiggins' early texts the brain is the 'seat' of the vital *and* psychological functions – and it is because of both that brain transplantation yields survival. The brain is the 'individuating nucleus' of the person or rather – to use the Aristotelian terminology of 1967 – the *psuche* (the term 'human being' does not enter Wiggins' technical vocabulary until 1976). Thus, reviewing his earlier work (in *SC&SR*), Wiggins writes:

[Brownson] was the functional inheritor and continuator of all of Brown's vital faculties. *This* was the reason why Brownson counted as the

⁷¹⁴ Wiggins 1967: 51

unique inheritor of the title to be Brown, the reason why Brownson was Brown, that very substance. Neither Brown nor Robinson nor Brownson *was* a brain. But the brain being the seat of memory and consciousness was not just any old part of the body among others. It was the essential nucleus of a person (of a human being)...⁷¹⁵

When Wiggins *does* present a positive reading of brain transplantation in his work, this is the general reason he gives: Brown survives because his *life* continues.⁷¹⁶

Even in 1967, however, Wiggins expresses doubts about the story. The most significant of these is his concern that transplantation, combined with the live possibility of ‘hemispherectomies’, will introduce *fission*. Mammalian brains are roughly symmetrical and can be separated ‘with only minimal disturbance of normal function’.⁷¹⁷ If transplantation *were* possible, the two hemispheres could be separated and transplanted into two separate husks – resulting in splinters of the original Brown: Brownson (1) and Brownson (2). As was discussed in chapter 2, Wiggins’ adherence to Leibnizian identity means he cannot read both splinters to be identical with Brown – nor does he see a principled reason for privileging one over the other,⁷¹⁸ so Brown cannot, on pain of logical transgression, survive fission.⁷¹⁹ And since there is no relevant difference between the procedure that produces Brownson, and the one that produces the splinters, the worry is that Brown *does not* survive as Brownson.

Wiggins answers this worry, in 1967, with his ‘one parcel stipulation’ – intended to rule against cases of fission, but not (whole) brain transplantation. He writes:

It would be better, after a conceptual analysis of the essential and characteristic vital functions, to analyse *person* in such a way that coincidence under the concept *person* logically required the continuance in one organized parcel of all that was causally sufficient and causally

⁷¹⁵ Wiggins 2001: 207

⁷¹⁶ See e.g. Wiggins 2001: 207 (n. 17) Rory Madden develops this line (in his ‘The Persistence of Animate Organisms’ (draft)). Madden similarly states that the brain carries with it a sufficient number of capacities for human animal characteristic activity (15) and thus holds that we would travel with it (in cases of brain extraction). In contrast, the claim in this chapter is that if a biological item survives transplantation, etc., it cannot be an organism.

⁷¹⁷ Wiggins 1967: 52

⁷¹⁸ Note however, that in *ISTC* he writes that the brain is not nearly so symmetrical as the thought experiment suggests, and that, ‘in the case of a man’s brain the two halves of it are not equal in status and that if a surgeon separated them one half would be clever and the other moronic’ (52). This point is reiterated and reinforced in an interesting footnote in his 2001 (208 n.21).

⁷¹⁹ Or, as Parfit pointed out (in his 1971), on pain of separating the concepts of survival from that of identity.

necessary to the continuance of essential and characteristic functioning, no autonomously sufficient part achieving autonomous and separate existence.⁷²⁰

In his later work, this one parcel stipulation is seen to be an unstable resting point (though, following the reading of his work assayed below, it may begin to seem more robust).⁷²¹ He claims (in *SeSR*) that more is required to show *why* this condition inevitably and naturally arises from the proper understanding of *person* and *human being*.⁷²² Without further philosophical analysis the stipulation seems arbitrary – and in 2001, he returns to this worry, and tries to flesh it out by reference to a ‘guarantee’ (discussed below).

Ultimately, the reading in 1967 is a positive one: Brown goes along with the brain because the brain *contains* – in some way – everything that is essential to the person (though the person is not the brain). However Wiggins’ initial account is saddled with doubts; in addition to being obscure how the brain ‘contains’ or ‘seats’ or ‘houses’ an individual’s life,⁷²³ there is the worry concerning fission.

⁷²⁰ Wiggins 1967: 55

⁷²¹ Wiggins 2001: 208

⁷²² Ibid: 209

⁷²³ How exactly, do the vital functions ‘sit’ in the brain? In 1967 this metaphor of the ‘seat’ is explained in distinctly Aristotelian terms. Indeed, Wiggins sees his response to transplantation to have been anticipated in the *Metaphysics*, and in a significant footnote he imagines Aristotle’s response to Shoemaker’s story. At *Metaphysics* 1035^{b14}, Aristotle describes certain parts of organisms, ‘which are neither prior nor posterior but logically simultaneous with the *psyche* itself, such as are conceptually indispensable to its existence (*kuria*) and in which the whole formula itself, the essential substance, is immediately present... e.g. perhaps the heart or the brain.’ (quoted in Wiggins, 1967: 78) Wiggins applies this, by saying that the brain is not the *psyche* (person) but that it is ‘logically simultaneous’ with it. Its *logos* (formula) is the *logos* of the *psyche* (form), which is to say that ‘its functional mission embraces *everything* [that is, all the relevant human capacities] which is integral to the *psyche* itself.’ (Wiggins 1967: 77–78). The brain is the ‘seat’ of these various capacities because it is casually integral and indispensable to them (in a way that no other body part is). The formula that outlines its function incorporates all those vital functions essential to the *psyche*. And for this reason – because its ‘formula’ is co-extensive with the ‘formula’ of the form, *psyche* (person) – Wiggins reads the brain as the individuating nucleus of Brown. (This line of argument seems to foreshadow that found in Madden (draft): 15ff.)

However, Wiggins’ interpretation of Aristotle is more than a little controversial, and his elucidation obscure (see Ackrill 1997). More will certainly be said by those with a surer grasp of Aristotle’s position – but of interest here is how the distinction between formula and form translates to the latter distinction in Wiggins’ work between ‘principle of activity’ and ‘activity’. The same line is being drawn, and it reveals an interesting ambiguity in Wiggins’ account. Does the activity itself need to continue uninterrupted for the individual to survive – or is it enough that the specific determination of the principle of activity (the *logos*) is preserved in some way, with the possibility of it being ‘re-activated’? The 1967 text does not offer up an immediate answer. Nor is much gleaned from Wiggins’ comments in 2001 that what is needed is the ‘inheritance’ of the ‘perfected epistemic and other capacities’ (2001: 226), and that the human being requires ‘the operation of the same principle of activity’ (2001: 207). On an optimistic interpretative note, there seem to be *some* grounds for saying that he *does* hold that the activity must be seamlessly continuous. When considering brain transplantation, for example, he writes that the recipient must ‘inherit’ the epistemic and other capacities ‘in the manner in which any ordinary person who has suffered no such adventures is constantly inheriting from himself’ (Wiggins 2001: 226). In the

It is likely because of these worries that Shoemaker's story largely disappears from Wiggins' work over the following decade. Indeed, in his 1976 paper, and in *Self*, Wiggins' main additions to his thoughts about brain transplantation are two further doubts. In an almost incidental footnote in 'Locke, Butler and the Stream of Consciousness', Wiggins criticizes Shoemaker's narrative along the following lines (and in this, as he notes, he follows Bernard Williams' thoughts in 'Personal Identity and Individuation'):⁷²⁴

How do we fix the brain to the physiognomy of the new body which is to receive it? ...How is the existing character expressed in the new body? We are deceived by the quality of the actors and mimics we see on the stage if with the help of greasepaint and props they have made us think this is as (relatively) simple as the transposition of music from one instrument to another.⁷²⁵

This point about the relevance of physiognomy is reiterated in *Self*⁷²⁶ along with a general complaint about the comprehensibility of brain transplantation:

[W]e should take nothing for granted about how well we really understand brain transfers of the kind described by Shoemaker.⁷²⁷

Wiggins entertains suspicions. And in both 1976 and 1980 texts he withholds judgment about the identity of Brown with Brownson. It is notable too, that while he discusses fission (which, as indicated, gave rise to earlier worries) he does not do so in relation to hemispherectomies and subsequent transplants, but rather Lamarckian inheritance and branching.⁷²⁸ The publication of Parfit's 'Personal Identity' in 1971 – in which survival is read as an identity-free concept – put considerable pressure on Wiggins' 'one parcel stipulation',⁷²⁹ and this, in addition to the issues outlined above, may well explain why in

normal run of things we 'inherit' these faculties through their continued activity (not 'exercise' necessarily, but 'actualization'). Further, he writes that a human being's persistence requires 'the participation of the same *continued* life' (2001: 207, my emphasis) – though admittedly 'participation' is not wholly transparent here.

⁷²⁴ Williams 1956

⁷²⁵ Wiggins 1976: 158

⁷²⁶ Wiggins 1980: 189

⁷²⁷ Ibid: 188

⁷²⁸ E.g. Wiggins 1980: 156 (see also Wiggins 1979)

⁷²⁹ As Wiggins describes it, in his 2001: 209

his 1987 paper ‘The Person as Object of Science...’ there is no explicit mention of brain transplantation or Shoemaker at all, despite his review there of past works, and his discussion of neo-Lockeanism.

It is Paul Snowdon’s ‘Persons and Personal Identity’ that encourages Wiggins, in his ‘Reply’ (1996), to re-engage with Shoemaker’s story. And following the development of his ‘Animal Attribute Theory’ in his 1980 and 1987 texts, Wiggins has a new resource to draw on when dealing with the narrative. He reiterates past doubts, but writes that if the neo-Lockeans *are* right that the person goes with the brain, since the concept *person* is concordant with the *human being* concept, the human being will necessarily go as well:

[I]f I *must* allow survival, I am not sure why I am committed to denying that the survivor who emerges from all these goings on is the same *human being* or the same *animal* as the one who entered them... I have insisted on the dependence of the concept person upon the concept human being... [O]nce you understand what a *human being* is and what the *seat of consciousness* is, surely you will not too readily assume that you know what it would be for a human being to be given a new seat of consciousness. If transplantation really were possible, then would not the person follow the seat of consciousness? In that case, does not the animal that the survivor is follow it too?⁷³⁰

Of course, there is no clear ruling here; Wiggins does not state that Brown would actually be identical with Brownson. On reflection, it is probable that this reluctance is due to the previous doubts about the physiognomic differences between donor and recipient, and the problematic possibility of fission. It is notable that in *SC&SR* – the first extended treatment of transplantation since 1967 – he specifically addresses these issues, and suggests how these obstacles to a positive reading of transplantation may be overcome.

In the final chapter of that 2001 text, Wiggins re-emphasizes Williams’ worry with physiognomy – writing, of his earlier self:

⁷³⁰ Wiggins 2001: 246

I ought to have been much more troubled by the point that, even if Brownson could talk like Brown... he could scarcely have stood and walked and run and jumped and smiled and sulked and earnestly entreated and frowned and laughed like Brown.⁷³¹

However, here (and later, in discussion with Shoemaker in *The Monist*), he considers the possibility of brain transplantation between *twins*, from one identical twin to another (this is latterly supplemented by talk of transplantation between clones).⁷³² Although reservations remain,⁷³³ they are shelved, and Wiggins takes transplantation between twins to overcome Williams' physiognomic objection.

With respect to fission, Wiggins re-emphasizes, in *Self and Soul*, the need for a principled reason to distinguish the procedures that resulted in Brownson and in Brownson (1) and (2). He writes (of his analysis in 1967):

Further philosophical reflection was badly needed to explain, and explain on the basis of the sort of thing a person is or a human being is, what distinguished the relation Brownson bore to Brown, if that case was to be allowed as an identity and a true survival, from the relation that the splinters Brownson (1) and Brownson (2) bore to Brown.⁷³⁴

A considerable portion of the final chapter *Self and Soul* text is aimed at developing such an explanation. Following his discussion of Butler and Locke (see §2.1.), Wiggins attempts to provide a principled reason for distinguishing cases based on the Butlerian claim that memory presupposes (and thus cannot constitute) identity. Taking Butler's line allows him to say that in fission cases, the splinters, while seemingly remembering Brown's life, cannot actually be said to do so. The memories presuppose identity, and since the splinters are not identical with Brown, theirs cannot be real memories. (The particular emphasis on memory here may seem to sit awkwardly in relation to the *human being theory* – but Wiggins' thought is that memory is a prominent faculty among our other vital

⁷³¹ Wiggins 2001: 208

⁷³² Ibid: 234–5, Shoemaker 2004a, Wiggins 2004a. Wiggins should perhaps be more wary than he is about these *clones*. In line with the suggestions in the pages that follow, one might think the very idea of a clone has already shifted our thoughts away from the biological items we are pre-theoretically interested in.

⁷³³ 'My preliminary reply... will be to voice my doubt whether making Brownson's face *very like* Brown's face can fully overcome the disquiet that attaches to the very idea of 'wearing' a face. Off-stage, one does not simply wear a face, only an expression of the face.' Wiggins 2001: 236

⁷³⁴ Wiggins 2001: 209

faculties, and has the added and peculiar feature of being a *self-recording* faculty, in a way that our other vital faculties are not.⁷³⁵) Because Brownson genuinely remembers Brown's life, and the fissioning procedure that produced the splinters prevents them from doing so, the two stories may be said to be relevantly different.

Insofar as Wiggins attempts to overcome these obstacles, it appears that he is leaning towards a favourable analysis of the transplantation case. As in 1967, a preliminary reading of *SC&SR* suggests that he *does* take Brown to survive as Brownson.

This, however, is not the end of the story. Having dismissed these objections, he immediately raises two further doubts in *SC&SR*. The first was alluded to in 1980 and in 1996, and concerns the *conceivability* of these kinds of narratives. In Shoemaker's story (as will become clear in the next section), there is no real examination of the kinds of revolutionary technological advancements that would be required by the procedure. Thus, Wiggins points out:

[P]hilosophers are still apt to underestimate the preternatural dexterity and knowledge that the imaginary surgeon and [their] equally imaginary team of anaesthetists, suturists, radiographers, laser-technicians, physiotherapists, psychotherapists, counsellors and the rest, would have to bring to bear...⁷³⁶

Having outlined this general concern, he raises another, more specific point. It relates to the notion of a *guarantee*. Brain transplantation might seem, he suggests, to violate the lawful dependability of the natural biological process, and thus individuals like us cannot be said to survive such procedures:

A genuine guarantee relating to this or that process must relate to the nature of the process itself rather than a mere description of it. Moreover, genuine guarantees exist. However you describe it, the process of jam-making can be guaranteed not to produce heavy-water out of ordinary water... Another process that comes with a certain guarantee is the natural process, sustained by the operation of numerous laws of biochemistry, physiology and the rest, by which a human being comes into existence and matures, and eventually ceases to be, by

⁷³⁵ Wiggins 2001:199

⁷³⁶ Ibid: 207 n.18

‘natural death’. That process is *not* of course guaranteed to save a human being from murder or from premature death by asbestosis, say, or irradiation. But it is certainly guaranteed not to produce multiples, not to transplant brains or half-brains, and not (if that were the better way to think of Brownson) to furnish new bodies to living, continuing brains. That is what makes this familiar process and the principle associated with it one part of the basis for the making of judgments of identity...⁷³⁷

It is on the basis of the *dependability* of the process that we can distinguish between judgments of identity, and judgments ‘to the effect that the object *b* is the proper replacement/surrogate/proxy for object *a*’. The suggestion is that brain transplantation violates this guarantee, and that the process is thereby undermined.

Yet even here, Wiggins’ position remains somewhat unclear. He himself points out that violations of the guarantee do not always stop the process, or imperil identity. For example, there are those small procedures – orthopaedic, osteopathic, etc – in which ‘the substance’s organic independence can still be conceived as undiminished.’⁷³⁸ At the other end of the spectrum, interferences – like teletransportation – violate the guarantee to such an extent that we lose track of the original process. In such instances ‘we have lost hold altogether of the notions we began with of what Brown is’;⁷³⁹ the natural substance has become ‘artefact-like’, ‘something not so much to be encountered in the world as putatively made or produced by us, something that it is really up to us (individually or collectively) not merely to heal or care for or protect but also to repair, to reshape, to reconstruct... even to reconceive.’⁷⁴⁰

‘The thing that is so unsettling about the surgeon’s experiment as I see it is that it spans the divide between, on the one hand, natural substances (which have their own inherently orderly ways of enforcing some individuating decisions... while forbidding others), and, on the other hand, artifacts, where individuating thought is forced into an

⁷³⁷ Wiggins 2001: 238

⁷³⁸ Ibid: 241

⁷³⁹ Ibid: 241

⁷⁴⁰ Ibid: 241

opportunism that it has to strive constantly (and retrospectively sometimes) to make principled.⁷⁴¹

This denaturing of the natural substance is the topic of the sections that follow. Here, the point is that Wiggins raises a question he leaves unanswered: where exactly on the spectrum (of technological interference), does brain transplantation fit? He suggests that if we *do* think of Brownson as Brown, then the conceptual consilience between the *person* concept and the *human being* concept will have been undermined – that *human person* will converge more closely on the conception of an artefact. But again, he gives no definite ruling.

And reading the end of *SeSR* – where these passages figure – one gets the impression that Wiggins is just as dissatisfied with these equivocations as we may be. In the final few pages he performs a fascinating switch to a moral register; even if it *were* possible, we might think it shouldn't be:

If we cannot recognize our own given natures and the natural world as setting any limit at all upon the desires that we contemplate taking seriously; if we will not listen to the anticipations and suspicions of the artefactual conception of human beings that sound in half-forgotten moral denunciations of the impulse to see people or human beings as things, as tools, as bearers of military numerals, as cannon-fodder, or as fungibles... then what will befall us? Will a new disquiet assail our desires themselves, in a world no less denuded of meaning by our sense of own omnipotence than ravaged by our self-righteous insatiability? ...I frame the question and, having framed it, I grave it here.⁷⁴²

(This passage merits closer attention than it has received here. It is a warning – but of what? Of construing others as, in some sense, artefacts? As fungibles? A cursory glance at the feminist literature on the subject of objectification will show that these worries are occasioned by other things than technological advancements.⁷⁴³)

⁷⁴¹ Wiggins 2004a: 605

⁷⁴² Wiggins 2001: 242

⁷⁴³ E.g. Langton 2009. Is the confusion between the natural and the artefactual *necessarily* a bad thing? Much more may be said about this – but it will suffice here to direct attention to Donna Haraway's compelling thoughts about the political power of the notion of a *cyborg*. Disturbing the boundaries between natural and artefactual, the cyborg challenges problematic essentializing tendencies – see Haraway 1991.

Since giving his positive response in 1967, Wiggins has repeatedly iterated worries and doubts about Shoemaker's story. As demonstrated, *Self-SR* delivers a bumper crop. However it is only in 2004, in a fiery exchange with Shoemaker in *The Monist*, that Wiggins finally explicitly denies that Brown survives as Brownson.

If Brownson isn't Brown, then something peculiar must have happened. But it has. There has happened the intervention, as I am now imagining the case, of a mad surgeon. What shall we say the surgeon has done? ...Let us say that out of rather unpromising natural materials – for Brownson has little or no resemblance to Brown – the surgeon has tried to make a working model of Brown... He has created a living something-or-other which, in addition to its other sufferings, is a repository or receptacle for mental events that are downwind of an ordinary human life...⁷⁴⁴

A definite ruling... or so at first it seems. Even here there is ambiguity. The reasons Wiggins gives for this conclusion are those that in 2001 he explicitly disavowed. Specifically (and as is evident from the quotation), he cites the difference in physiognomy as a reason why Brown cannot survive in Robinson's shell. There is no talk of fission cases, or conceivability or of guarantees. Has he rescinded these later objections? Can the earlier ones be somehow bolstered? It is not clear.

His latest analysis of the case, in his Mark Sack's lecture in 2012, is again undecided. He reasserts his worry about guarantees,⁷⁴⁵ but his final considered opinion is... uncertainty:

In discussion of Brown and Brownson it is often assumed that, if there were later mental events that were downwind from Brown before brain surgery, then the person Brown – or some person Brown – must have persisted somehow. But how strongly can a well-founded conception of person support that assumption? Again I am unsure...⁷⁴⁶

⁷⁴⁴ Wiggins 2004a: 604–605

⁷⁴⁵ Wiggins 2012: 20

⁷⁴⁶ Ibid: 20

Reviewing Wiggins' texts one may fairly say that, despite the prolonged discussion, he is yet to state his position unambiguously.⁷⁴⁷ Perhaps this is as it should be. Yet, tying together strands from the previous chapters, one may also see a principled reason, not only for denying the identity of Brownson and Brown, but for reassessing Shoemaker's story more generally. It is to the task of tying together these analyses, and reassessing the narrative, that attention will now be turned.

⁷⁴⁷ This is a lack of clarity that Lowe also identifies (Lowe 2003: 819)

§4.2. Transplantation and mechanism

Let us start with a partial summary and a prospectus of what is to follow:

Wiggins holds that, in virtue of being the kinds of being we are, we carve up the biological realm in a particular way. We pick out ‘organisms’ – beings that are *genuine unities*. That is, when it comes to our everyday navigation of the world, we are *anti-reductionist* (in the manner explained in §3.4.). In the remainder of this chapter, it is claimed that Shoemaker’s brain transplantation story implicitly shifts the metaphysical focus from *organisms* onto another type of entity: in virtue of an underlying mechanism it directs our attention onto the kind of being that can be *disassembled and reassembled*. Reading the story, we pick out *something* – but not a biological being as ordinarily conceived (and here, ‘ordinarily’ has the full force of Wiggins’ descriptivism). Following his comments in *The Monist*, we may say – for the time being – that our focus has been shifted onto a ‘living something-or-other’.⁷⁴⁸

Some general methodological issues with thought experiments are considered below. Following this, it is demonstrated how Shoemaker’s story smuggles certain conceptual assumptions into the personal identity debate.

§4.2.a. Methodological concerns

Science-fiction thought experiments like Shoemaker’s ‘brain transplantation case’ are used to draw out intuitions and to investigate what we *mean* exactly by certain terms. By those who deploy them, they are seen to be relatively innocent philosophical tools. However, a growing number of theorists – among others, Michèle le Doeuff, Susan James and Margaret La Caze⁷⁴⁹ – have subjected these narratives to closer scrutiny, and argue that rather than simply being illustrative, or pedagogically useful devices, stories like Shoemaker’s often play significant roles in the argument within which they are deployed.⁷⁵⁰ They are, says La Caze: ‘extremely important to the expression of philosophical thought, to the way debates are structured, and assumptions are shared;

⁷⁴⁸ Wiggins 2004a: 605. Madden (in his 2011) focuses on a different kind of shift that occurs in Shoemaker’s scenario – a *referential shift*. The reference of ‘I’ shifts slowly and undetectably from Brown to Brownson – or, as he puts it, from the ‘Old Animal’ to the ‘New Animal’ (296). I am not sure what to say about this, but perhaps – given the arguments below – that shift might better be construed as one between an organism and an artefact. Madden’s discussion bears on the worries in footnotes 828 and 834.

⁷⁴⁹ Le Doeuff 2000, James 2000, la Caze 2002

⁷⁵⁰ Their approach can be contrasted with Kathleen Wilkes’ (1968) who dismisses thought experiments because she sees them to be little more than interesting diversions.

they can also work to persuade and provide support for a particular view and exclude alternative views and methods.⁷⁵¹ This should be borne in mind when considering the tale of Brown, Robinson, and the unfortunate Brownson (quoted here in the abridged form in which it appears in *SC&SR*):

Suppose that medical science developed a technique whereby a surgeon can completely remove a person's brain from his head, examine or operate on it, and then put it back in his skull (regrafting the nerves, blood-vessels, and so forth) without causing death or permanent injury... One day a surgeon discovers that an assistant has made a horrible mistake. Two men, a Mr Brown and a Mr Robinson, had been operated on for brain tumours, and brain extractions had been performed on both of them. At the end of the operations, however, the assistant inadvertently put Brown's brain in Robinson's head, and Robinson's brain in Brown's head. One of these men immediately dies, but the other, the one with Robinson's body and Brown's brain, eventually regains consciousness. Let us call the latter 'Brownson'... He recognizes Brown's wife and family (whom Robinson had never met), and is able to describe in detail events in Brown's life, always describing them as events in his own life. Of Robinson's past life he evidences no knowledge at all. Over a period of time he is observed to display all of the personality traits, mannerisms, interests, likes and dislikes, and so on that had previously characterized Brown, and to act and talk in ways completely alien to the old Robinson.

What would we say if such a thing happened? There is little question that many of us would be inclined, and rather strongly inclined, to say that while Brownson has Robinson's body he is actually Brown. But if we did say this we certainly would not be using bodily identity as our criterion of personal identity. To be sure, we are supposing Brownson to have *part* of Brown's body, namely his brain. But it would be absurd to suggest that brain identity is our criterion of personal identity.⁷⁵²

⁷⁵¹ La Caze 2002: 2. La Caze (and e.g. James 2000, 30–32) also point out that these thought experiments – and this naïve approach to them – are perhaps most common in analytic philosophy.

⁷⁵² Shoemaker 1968: 23–24

Since its debut in Shoemaker's *Self-Knowledge and Self-Identity*, this narrative has been the subject of considerable discussion, of numerous refinements, and varied critiques.⁷⁵³ Not least among the latter is a strand of feminist criticism, which questions the binary distinction that underpins the story. In her study, 'Feminism in philosophy of mind: The question of personal identity',⁷⁵⁴ Susan James shows how such 'character transplants' implicitly enforce a worryingly thin notion of, all but disembodied, personhood.

[T]he body is thought of as a container or receptacle for character. The brain figures as a container in which a person's psychological states can be preserved, and the body figures as a more elaborate receptacle for the brain.

...Properties which do not fit neatly into the category of the psychological are held to be marginal or irrelevant to character.⁷⁵⁵

Shoemaker's story reiterates the traditional division between the psychological and the bodily. Firstly, we see the marginalization of the *body* – historically, symbolically feminine – and the privileging of the *mind* – historically, symbolically masculine.⁷⁵⁶ Secondly, and simultaneously, we see how the anonymising of the body affirms a particular view of character; expressly *embodied* character traits – like one's dexterity, or sexuality – are held to be irrelevant.⁷⁵⁷ Shoemaker's story misses out what we may well see to be central aspects of our personhood, our experience of ourselves as distinctively *embodied* beings. (And this last point – as will be clear from the discussion above – is one with which Wiggins is certainly sympathetic.)⁷⁵⁸

⁷⁵³ Including – as noted in §4.1. – Wiggins'; see e.g. 2001, ch.7 §7, 1996: 246, 1980: 188–9, 1967: 53

⁷⁵⁴ James 2000

⁷⁵⁵ Ibid: 33

⁷⁵⁶ Ibid: 32ff (Nor is it irrelevant that the story's protagonists are all male.)

⁷⁵⁷ Ibid: 33

⁷⁵⁸ These thoughts bear on the discussion, among personal identity theorists, about how best to deal with 'thinking parts'. Rory Madden points out that the thesis that we have *human form* – central to both animalism and constitutionalism – is threatened by the commonplace thought that our conscious perspective could, in theory, be had by beings much smaller (less humanoid) than ourselves. (Madden *forthcoming*: 2–3) As 'phantom limbs' demonstrate, the possession of body-parts is not necessary for us to *experience* possessing them. Thus the conscious experience of a human being might well be had by a thinking part – a brain, say (and we have no way of telling which one we are). Madden ultimately rejects the presupposition that 'the local activity in parts significantly smaller than the whole humanoid is sufficient for the presence of a conscious perspective' (7, 23). His conclusion is supported by the arguments above (and those in §2.2), which emphasize the extent to which our conscious experience is an experience of an *embodied being* with particular limbs, organs, etc. Amputees may feel things in now lost limbs (what exactly? an itch? a pain? a thrill of excitement? And which limbs? Philosophers tend not to

These kinds of criticisms have resulted in various refinements to the story (as was seen in §4.1); now, rather than construing the donor and recipient's physiology as marginal, philosophers (including Shoemaker and Wiggins) specify that the transplantation occurs between identical twins, or clones.⁷⁵⁹ Yet one may think that worries remain, and the aim here is to expose – in a similar vein – another suppressed assumption contained within the narrative.

§4.2.b. A suppressed assumption

Consider the story again. Better yet, consider the standard procedure – ‘brain extraction’ – the corruption of which produces ‘Brownson’.

[It is] a technique whereby a surgeon can completely remove a person's brain from his head, examine or operate on it, and then put it back in his skull (regrafting the nerves, blood-vessels, and so forth) without causing death or permanent injury...⁷⁶⁰

The patient described here is the kind of thing that can be cut into pieces and then reassembled, *and not die* (or indeed suffer permanent injury). There is nothing but technical dexterity to stop Brown being split into still more pieces. The heart, the lungs, the kidneys, the stomach could be separated – and so long as they are reassembled, the story goes, the organism survives suffering neither ‘death or permanent injury’.

There is something strikingly reminiscent here of Wiggins' discussion of clocks (mentioned in §1.3.b.). He writes: ‘the repair of a clock... permits both disassembly and replacement of parts. We do not look back to the time when a clock was being repaired and say that the clock's existence was interrupted while it was in a dismantled condition.’⁷⁶¹ In Shoemaker's story we are invited to think of the patient in much the same way – as though Brown were a human-engineered machine, suffering disassembly.

elaborate) – but is a big step from this to the claim that a thinking part might think the things it thinks *in* a body when it is no longer *part* of that body. Relatedly, the problem of ‘remnant persons’ – animals pared down to e.g. cerebrums in vats – gains no purchase. Whatever such things might think, their thoughts will likely be nothing like our own conscious experience (see Wiggins 1996: 246, cf. Madden *forthcoming*: 31).

⁷⁵⁹ E.g. Shoemaker 2004a: 574

⁷⁶⁰ Shoemaker 1963: 23

⁷⁶¹ Wiggins 2001: 92

Bluntly put, Shoemaker's story seems to encourage a *mechanistic* analysis of the biological being.⁷⁶²

This thought is supported by Ian Hacking's broader discussion of transplant surgery. In his paper 'Our Neo-Cartesian Bodies in Parts',⁷⁶³ Hacking argues that the technological advancements that allow us to separate and reintegrate organs tangibly reinforce a mechanistic conception of the biological world. To see ourselves as the potential subjects of transplantation is to see ourselves as in some way *machinic*.

It is seldom noticed that we seem to be edging closer to fulfilling a simplistic version of a Cartesian dream, whereby bodies are just machines in space, composed of machine parts... Something like Descartes's two categories may be forced on us again as the result of our technological prowess.⁷⁶⁴

The bodily revolution may be a revolution in that sense – the reinstatement of a Cartesian attitude to the body as a machine. It has become a machine, subject to engineering projects large and small.⁷⁶⁵

Mechanism was introduced in general terms in §3.2.a. as a particular methodological angle on biological inquiry; the mechanist was seen to hold that items in the biological realm should be understood in the same way that we understand human-engineered machines. Yet, as with 'reductionism', 'mechanism' captures a variety of interrelated theses; epistemic and metaphysical claims collect around the powerful guiding metaphor of the *machine*. In line with the discussions in chapter 3, two related theses supported by that metaphor might be drawn out. Both are metaphysical; one focuses on *causation*, the other, on *ontological dependence*.

Mechanisms – clocks and cars and so on – seem to exemplify the kind of *causal* reductionism described in §3.2. A mechanism, as a whole, exerts no relevant, novel causal influence over its parts. There is no emergent causal property at the higher level;

⁷⁶² Note too that Brown exemplifies what Karl Deutsch sees to be the central features of the classical concept of a mechanism. A mechanism behaves 'in an exactly identical fashion no matter how often [its] parts [are] disassembled and put together again (Deutsch 1951: 233–234). Madden describes a tendency among philosophers to visualize living organisms along the lines of 'wooden block "anatomical toys"... a collection of interlocking wooden blocks, any one of which may be freely removed and returned' (*forthcoming*: 32). This is the picture I think can be helpfully articulated by reference to mechanism.

⁷⁶³ Hacking 2007

⁷⁶⁴ Ibid: 80

⁷⁶⁵ Ibid: 102–103

a clock (say) has its causal powers in virtue of the causal powers of its parts. This feature of mechanisms is commented on, in this connection, by Dupré (in his Spinoza lectures):

A good machine starts with all its parts precisely constructed to interact together in the way that they will generate its intended functions. The technical manual for my car specifies exactly the ideal state of every single component... failing components can be replaced with replicas, close to the ideal types specified in the manual... Reductionism is almost precisely true of a car. We know exactly what its constituents are – they are listed in the manual – and we know how they interact: we designed them to interact that way.⁷⁶⁶

How does this bear on the brain transplantation story? In Shoemaker's narrative, a successful 'brain extraction' causes neither death nor permanent injury; the patient is assumed to 'live through' the procedure. Peering into the operating theatre an imagined bystander might plausibly say that the 'dismantled' patient is still alive (indeed, that they are undergoing the operation).⁷⁶⁷ And understanding the patient thus is to see him or her as an entity that can survive disassembly, in much the same way that a mechanism can. Extending this thought, one might further claim that the whole (the patient) does not exert any relevant causal influence over its parts because it persists while these parts are separated. The reintegration of the parts may make things *quantitatively* more complex, but there will be no relevant *qualitative* difference.⁷⁶⁸

How persuasive is this reading? There is clearly a point where the metaphor breaks down. A mechanism's components – the springs of a clock, for instance – do not, when separated, deteriorate in the same way as do the bodily organs. A heart that has been extracted for transplantation does not survive for very long (even put on ice); a spring, by contrast, deteriorates in no qualitatively different a fashion to when it is

⁷⁶⁶ Dupré 2008a/2012: 71

⁷⁶⁷ This interpretation can be helpfully brought out by a comparison with Lowe's analysis of a dismantled watch, in 'On the Identity of Artifacts' (Lowe 1983: 222):

When Jones's watch goes to the watchmaker for repair and is taken to pieces by him, it doesn't *cease to exist*, does it? Someone entering the workshop and seeing the pieces laid out carefully on the watchmaker's bench would quite properly be told 'That is Jones's watch'; and if such a person were, say, to stamp on these delicate bits of machinery, he would clearly be guilty of *destroying* Jones's watch, i.e. terminating its existence.

Likewise, if someone was to go into the operating theatre and stamp on the relevant bits, one might also say it was at that point that they killed the patient.

⁷⁶⁸ The difference between *quantitative* and *qualitative* difference is set out, in relation to anti-reductionism, by Garland Allen (1975: 106)

integrated into a clock. And unless Shoemaker is happy to abandon even the veneer of plausibility, his surgeon will not be able to simply place the patient's brain on a sideboard to await reinsertion. It must be transfused with blood, or frozen (etc.). Given this, it remains open whether or not the biological whole exerts a relevant causal influence over its parts. It clearly sustains them. Perhaps it does so in virtue of a non-derivative causal power. Perhaps this power can be simulated (in the brain extraction process) by the doctors performing the procedure. The fact that medics can transplant organs does not commit one outright to *causal reductionism* (a cause for relief, no doubt, among emergentists).⁷⁶⁹

There is another related, but separable, thesis that is encouraged when we understand biological items *mechanistically*. In contrast to the view just described, it makes no claims about *causal powers*; it connects instead to the discussion of *ontological dependence* (as it was presented in §3.4.). Conceiving of living things mechanistically invites a particular thought about the dependence relation between living wholes and their parts.

It has been argued that Wiggins construes 'organisms' as entities that we cannot help but see as *genuine unities*, as beings whose parts are *ontologically dependent* upon them. This form of ontological dependence was articulated by reference to Aristotle's analysis of human eyes. For an eye to be an eye – Aristotle avers – it must have the capacity to perform a particular function (*seeing*). And it has this capacity only when it is integrated into a human organism (this claim was formulated, following Koslicki, in terms of essential dependence). This view of part-whole dependence noticeably contrasts with the way we typically understand the relation between a mechanism and its components. Thinking of a spring does not involve thinking of a clock; thinking of a screw does not involve thinking of a catapult or a computer (etc.). Screws and springs are parts that function in numerous, varying contexts – thus a statement of the essence of a screw does not have to make reference to a mechanism of which it is a part.⁷⁷⁰ Separated from a mechanism a spring does not lose its capacity to perform its essential function. The

⁷⁶⁹ Looking through the theatre window is it plausible to say that patient has *ceased* to exist? Perhaps one is committed to the thought that biological life occurs only when the relevant parts are united? On this reading the unified whole might be seen to exert a relevant causal power over its parts, and one might still resist reductionism. This interpretation leads one down a hazardous path, however; the thesis that existence may be, as Lowe puts it, 'intermittent', or 'interrupted' (Lowe 1983: 222), is a deeply controversial one. It stands in marked contrast to the view, assayed in Locke's *Essay*, that 'one thing cannot have two beginnings of existence' (Locke 1690: II.xxvii.1) – a compelling thought, and one which finds support, most notably, in Wiggins' work, ('a thing starts existing only once' (Wiggins 2001: 92)).

⁷⁷⁰ Of course, there are presumably some machinic parts that are particular to certain artefacts (e.g. watch batteries) – but not in nearly so fine-grained a way.

Aristotelian distinction between different part-whole dependence relations, is helpfully rendered by Robert Pasnau as follows:

[I]n the case of genuine substances, the parts are radically dependent on the substance for their continued existence. Take away a piece of flesh and it becomes something else. This is not the same for non-substances. Take a brick away from a house, and it remains a brick. So the substance is unified not because it can exist without its parts, but because its parts cannot exist apart from it.⁷⁷¹

One notable feature of biological mechanism is that it dissolves this distinction. For the mechanist, biological parts are understood to stand in the same dependence relation to biological wholes as a mechanism's components stand to the mechanism. That is, biological parts can be seen to exist even when separated from the organized whole. Consequently, biological items are conceived of – like mechanisms – as the kinds of things that can suffer disassembly.

The suggestion here is that in accepting that humans could, in principle, undergo the sort of disassembly described by Shoemaker, one is committed to this mechanistic view. In the transplantation narrative, the persistence of the brain does not depend on it being integrated into a biological unity, and this is tangibly at odds with the organismic, Aristotelian picture that was attributed to Wiggins in chapter 3. The intermediary conclusion then is this: Shoemaker's story smuggles in a particular view of biological entities – one that conflicts with Wiggins' – and the confusion described in §4.1 is the result.⁷⁷²

The metaphysical character of mechanisms – and thus, for the mechanist, of biological entities – is examined in greater depth in §4.4. There it is argued that Shoemaker's narrative effects a shift in *metaphysical focus* from an organism to a 'living something-or-other'. Before then, however, the extent of Shoemaker's mechanism is investigated – and in the next section it is shown how the roots of this mechanistic picture are interwoven with those of Shoemaker's neo-Lockean position.

⁷⁷¹ Pasnau 2004: 42–43 N.b. this is a more extreme, Aquinean interpretation of Aristotle, where artefacts are non-substances. But the point still stands.

⁷⁷² One result of the present work is to (hopefully) encourage other philosophers working within the personal identity debate (and beyond) to be similarly wary of this and comparable narratives. When 'neo-Aristotelians' like van Inwagen and Olson describe cases of frozen cats and draw analogies between human bodies and lumps of clay, they need to work out fully the suppressed commitments these stories contain (see e.g. van Inwagen 1990: 146, Olson 2007: 220).

§4.3. A history of the brain transplantation story

In this section it is argued that there is a non-accidental connection between Shoemaker's neo-Lockeanism and the mechanistic notion of a disassemblable human body. To support this claim, a speculative history of the brain transplantation story is presented, focussing on how shifts in seventeenth-century biology may have influenced Locke's development of his *person* concept.

There is a textual trail that connects Shoemaker to the mechanist debates of the seventeenth century. Shoemaker explicitly states that his story of Brown and Robinson is a modern retelling of Locke's 'Prince and Cobbler' narrative.⁷⁷³ Locke, in turn, states that his story presents a resolution to a problem caused by the Christian doctrine of the resurrection.⁷⁷⁴ In §4.3.a. Locke's endorsement of a causal form of biological mechanism – his corpuscularianism – is described. In §4.3.b. it is argued that the problem with resurrection is a problem for Locke *because of* his corpuscularianism (and his sidelining of immaterial substances). And in §4.3.c. it is suggested that Locke's corpuscularianism intersects with the parallel mechanist thesis that biological parts are conceivable in isolation from whole bodies. Lastly, it is claimed that the brain transplantation story – like Locke's story of the thinking finger – is mechanistic in this latter sense, since it is by thinking of situations where consciousness survives in separated body-parts that the *person* concept demonstrates its strengths.

§4.3.a. Locke's mechanistic/corpuscularian picture

Although Locke believes in the existence of immaterial substances – God, and souls⁷⁷⁵ – his view of biological life fits fairly neatly with a materialist interpretation.⁷⁷⁶ He does not invoke immaterial substances in explaining the natural world, except (as noted below) by appealing to God as a primary mover of the mechanical system.⁷⁷⁷ The relatively uncontroversial reading adhered to here is that, when it comes to animals, Locke thinks of them in 'corpuscularian' terms, as the products of the interaction of textured, indivisible particles, or 'corpuscles'. That is, in the *Essay* at least, he follows the *mechanical* view of nature advanced by Robert Boyle.

⁷⁷³ Shoemaker 2004a: 573, 1963: 21

⁷⁷⁴ Locke 1690: II.xxvii.15 (and Uzgalis 2012)

⁷⁷⁵ E.g. Locke 1690: II.xxvii.2

⁷⁷⁶ Thiel 1998

⁷⁷⁷ Walmsley 2000: 377

In the late seventeenth century, Boyle's brand of corpuscularianism was one of the dominant physical theories in England.⁷⁷⁸ In his 'Excellency and Grounds of the Mechanical or Corpuscular Hypothesis', and *Origin of Form and Qualities*, he defends the view that the natures of material objects (including biological ones) arise solely from 'the size, shape, motion (or want of it), texture and the resulting qualities of the small particles of matter'⁷⁷⁹ that make them up. For a corpuscularian, like Boyle, the world is composed of these basic units of matter – 'minima naturalia' – arranged in certain ways,⁷⁸⁰ which, in virtue of their textural and motive differences, impart the qualities and properties found in material objects. Thus, Jonathan Walmsley writes:

Boyle's view, as stated in the published works that we know Locke to have read, was that God had created the world as a uniform matter divided into variously shaped and textured particles. These pieces of matter interacted with each other according to mechanical laws. The only part of nature that Boyle held not to be mechanical was Man and his rational soul.⁷⁸¹

Locke, like Boyle, affirms the existence of God and rational souls – yet God is invoked only as a prime mover,⁷⁸² and the soul adds nothing to the explanation of organic life, but is a special addition in the case of humans. The biological picture that Locke endorses is thus, on its face, similar to the kind of mechanistic one endorsed by the Cartesians (and Gassendians),⁷⁸³ with their *bête-machine*.⁷⁸⁴ (The only notable point on which both Locke and Boyle differ from Descartes, is the question of plenism: they posit indivisible atoms, and void, rather than the plenum of matter, which Descartes identifies with extension.)⁷⁸⁵

Boyle's mechanistic materialist view of the natural world thus stands in opposition to the views of the Aristotelian scholastics and the vitalists.⁷⁸⁶ The

⁷⁷⁸ Kochiras 2009

⁷⁷⁹ Boyle 1666

⁷⁸⁰ Forstrom 2010: 104

⁷⁸¹ Walmsley 2000: 375

⁷⁸² Forstrom 2010: 104, Walmsley 2000: 377

⁷⁸³ Ibid: 102

⁷⁸⁴ E.g. Martin and Barresi 2000: 14. This is a rather simplistic reading of both Boyle and Descartes. It is, as Cottingham notes, not clear that Descartes himself ever really endorsed the thesis that animals are, metaphysically speaking, nothing more than clocks. Cottingham 1978 (Cf. Ferner 2008)

⁷⁸⁵ Kochiras 2009

⁷⁸⁶ It is, however, worth noting the blurriness of the boundaries between each of these groupings. At the start of chapter 3, the overlapping of the methodological, epistemic, and metaphysical was emphasized,

Aristotelians – who dominated Oxford at the time⁷⁸⁷ – advocated various forms of hylomorphism, and endorsed the kind of organicist picture described above in chapter 3.⁷⁸⁸ The vitalists – like Henry More, Francis Glisson, and Joan Baptista van Helmont⁷⁸⁹ – posited vital spirits to explain biological phenomena (van Helmont, for example, understood biological life by reference to ‘Archeus’, the active spiritual, or ‘seminal’ principle that guided the actions of organisms).⁷⁹⁰

Walmsley suggests that in Locke’s early work there are signs he may have subscribed to a form of vitalism – but he notes too, that by the time of writing of the *Essay*, Locke demonstrably endorses the Boylean brand of corpuscularianism.⁷⁹¹ In the *Essay* – which is the focus of the present discussion – he eschews talk of substantial forms, and teleology, and vital spirits, and conceives the biological realm as the product of the interaction of minute, moving particles.⁷⁹² There, at least, the organism is conceived of as ‘nothing more than the sum of its parts’: it is seen as a mechanism – exemplifying the causal thesis above, as something that derives its causal powers from its constituents.

§4.3.b. The problem of resurrection

It is in the second edition of the *Essay* that Locke presents the story of the prince and the cobbler. He does so in order to demonstrate how his position can combat a puzzle raised by the Christian doctrine of the resurrection.⁷⁹³ What is this puzzle, and why does it affect corpuscularians, but not their Scholastic, vitalist, or Cartesian contemporaries?

The worry with resurrection is raised in detail in Boyle’s ‘Some Physico-Theological Considerations About the Possibility of the Resurrection’. Boyle writes:

and this is clear in the different kinds of ‘corpuscularianism’. Consider, e.g. Daniel Sennert’s avowedly Aristotelian corpuscularianism (Walmsley 2000: 369).

⁷⁸⁷ Forstrom 2010: 6

⁷⁸⁸ Martin and Barresi 2000: 14

⁷⁸⁹ Walmsley 2000: 370

⁷⁹⁰ Boyle too spoke of a ‘seminal’ principle – but Walmsley states this was purely mechanical: ‘Boyle did not suppose the seminal principles to be anything other than textured matter in special relationships with their surroundings by the laws of the nature and the circumstances in which they are placed. There is no evidence that he believed these agents to act in anything other than a mechanical way.’ (2000: 378)

⁷⁹¹ Walmsley 2000. Walmsley argues that in his early ‘Essay on Disease’, Locke advanced something like Helmont’s vitalism. (2000: 381)

⁷⁹² Martin and Barresi 2006: 123

⁷⁹³ The account of the resurrection that Locke and his contemporaries focused on was that given in the epistles of St. Paul (Forstrom 2010: 2).

When a man is once really dead, divers of the parts of his body will, according to the course of nature, resolve themselves into multitudes of steams that wander to and fro in the air; and the remaining parts, that are either liquid or soft, undergo so great a corruption and change, that it is not possible so many scattered parts should be again brought together, and reunited after the same manner, wherein they existed in a human body whilst it was yet alive. And much more impossible it is to effect this reunion, if the body has been, as it often happens, devoured by wild beasts or fishes; since in this case... they are quite transmuted as being informed by the new form of the beast or fish that devoured them and of which they now make a substantial part.⁷⁹⁴

He continues:

And yet far more impossible will this reintegration be, if we put the case that the dead man was devoured by cannibals; for then, the same flesh belonging successively to two different persons, it is impossible that both should have it restored to them at once, or that any footsteps should remain of the relation it had to the first possessor.⁷⁹⁵

It is significant that these worries about cannibals will not arise for the Aristotelian-scholastics, or for the vitalists; both have some theoretical principle, *over and above* the material parts, by which humans can be individuated. The various parts of the body may well resolve into steams and disperse, but the Aristotelians will refer to the form, or *psuche* of living things,⁷⁹⁶ and the vitalists, like van Helmont, will refer to some vital spirit, to explain how an individual may be traced through the resurrection. The material mixing of parts will not result in the mixing or dissolution of *Archei* or seminal forces, or substantial forms.

The resurrection of the body becomes a problem once the emphasis, in individuation, is put exclusively on the material parts of which the body is made. And the difficulty of tracing human bodies through resurrection *without* endorsing these kinds of non-reductionist models is clear from Boyle's own unsatisfying responses to the

⁷⁹⁴ Boyle 1675: 198

⁷⁹⁵ Ibid: 198

⁷⁹⁶ Martin and Barresi 2000: 14

issue: His first recourse is to turn to the durability of certain body parts. While the body is in perpetual flux, he writes, there are some parts that are of a ‘stable and lasting texture’: specifically, the bones.⁷⁹⁷ Since bones can suffer fire and other assaults they may, Boyle suggests, provide a material basis for individuation.⁷⁹⁸ At other points he suggests that corpuscles can *retain* their original nature under various disguises, in the way that gold particles may be dissolved into solutions, and resolved at a later point into gold.⁷⁹⁹ As K. Joanna S. Forstrom notes, in her thorough study of the debate, all of these responses were seen to be largely unpersuasive. And Locke, while attending closely to Boyle’s discussion, pointedly takes a different route in accommodating the doctrine of the resurrection.

Locke diverges from Boyle in changing the focus of the question. He claims that what is at issue is the resurrection of the ‘dead’, and not necessarily of their bodies. This move is evident in his correspondence with Bishop Stillingfleet,⁸⁰⁰ and relies on the crucial distinction that Locke draws between *man* (human being) and *person*.⁸⁰¹ In chapter 27 of book II, Locke argues that ‘man’ and ‘person’, while sometimes used synonymously, do not refer to the same thing. On seeing a creature of our ‘own Shape and Make’, though it with ‘no more reason all its Life, than a *Cat* or a *Parrot*’ we would undoubtedly call it a ‘Man’ (human being), but (he says) not a ‘Person’. And finding a cat or a parrot, discoursing, reasoning and philosophizing, we would call them persons, though not men.⁸⁰² And – in line with the now familiar sortalism – both ‘Man’ and ‘Person’ have, according to Locke, distinct principles of individuation:

Locke distinguishes between the identity of the self as man (or human being) and the identity of the self as *person*. The identity of the self as man consists in the identity of the same bodily organism; the identity of the self as person, by contrast, is constituted by the consciousness of our thoughts and actions (Essay II.xxvii.16).⁸⁰³

⁷⁹⁷ See Forstrom 2010: 110ff

⁷⁹⁸ A second response, which refers to the original matter of the foetus, is along similar lines. Forstrom 2010: 110–111

⁷⁹⁹ Forstrom 2010: 111

⁸⁰⁰ Thiel 2011: 134–135

⁸⁰¹ Forstrom 2010: 112ff

⁸⁰² Locke 1690: II.xxvii.8

⁸⁰³ Thiel 1998: 61

This distinction allows Locke to bypass the questions about bodily continuity through the resurrection. He interprets the account in the Paul's epistles as concerning the *person* – because it is the person, and not the living body, which is the object of reward or punishment. He writes (quoting from Corinthians):

...the Apostle tells us, that at the Great Day, when every one shall *receive according to his doings, the secrets of all Hearts shall be laid open*. The Sentence shall be justified by the consciousness all Persons shall have, that they *themselves* in what Bodies soever they appear... are the *same*, that committed those Actions, and deserve Punishment for them.⁸⁰⁴

And it is this move that is illustrated, explicitly, by the story of the Prince and the Cobbler, in section 15 of chapter 27:

And thus we may be able without any difficulty to conceive, the same Person at the Resurrection, though in a Body not exactly in make or parts the same which he had here, the same consciousness going along with the Soul that inhabits it. But yet the Soul alone in the change of Bodies, would scarce to any one, but to him that makes the Soul the *Man*, be enough to make the same *Man*. For should the Soul of a Prince, carrying with it the consciousness of the Prince's past Life, enter and inform the Body of a Cobbler as soon as deserted by his own Soul, every one sees, he would be the same Person with the Prince, accountable only for the Prince's Actions: But who would say it was the same Man?⁸⁰⁵

There may be (insignificant) vestiges of scholasticism here – in the description of the Soul *informing* (that is, being the *form* of) the body – but more importantly, the story seems overtly Cartesian in tone: the emphasis is being put on an immaterial soul, which, it is implied, is the thinking substance, *res cogitans*. This, certainly, is a well-travelled route for circumnavigating the problem raised by the resurrection. As Udo Thiel puts it:

For most of those thinkers who believe that the soul is an immaterial substance, there is no real problem of personal identity at all. They would

⁸⁰⁴ Locke 1690: II.xxvii.26

⁸⁰⁵ Ibid: II.xxvii.15

argue that personal identity consists in the identity of a mental substance or soul and that the identity of a mental substance is a direct consequence of its immaterial nature; it is because of its immateriality that the mind is not subject to change and remains the same through time.⁸⁰⁶

Locke, however, crucially *denies* that personal identity consists in the identity of the soul, and argues specifically against the elision of the person and a mental substance. The story of the Prince and the Cobbler is *not* an illustration of a Cartesian response to the resurrection. Alongside the distinction between man and person, Locke distinguishes between person and soul. This is the focus of his discussion in chapter 27 of the ‘rational Man’ who believed himself the reincarnation of Socrates, but could remember none of Socrates’ actions:

Let him also suppose it to be the same Soul, that was in *Nestor* or *Thersites*... which it may have been, as well as it is now, the Soul of any other Man: But he, now having no consciousness of any of the Actions either of *Nestor* or *Thersites*, does, or can he conceive himself the same Person with either of them? Can he be concerned in either of their Actions? Attribute them to himself, or think them his own more than the Actions of any other Man, that ever existed?⁸⁰⁷

While Locke believes in the existence of the soul he also argues that its principle of continuity differs from the principle of continuity for persons. There is room for interpretation here, depending on whether or not Lockean ‘persons’ are understood as genuine substances, or modes of other substances (or virtual substances).⁸⁰⁸ But on one prominent reading, Locke takes consciousness to be a property of another substance while remaining determinately neutral as to whether it will be a material or immaterial one.⁸⁰⁹ Thus, though he holds it to be the ‘more probable Opinion’ that consciousness is ‘annexed’ to the soul,⁸¹⁰ he writes pointedly that it involves ‘no contradiction’ to think that *matter* might have been made by God fitly disposed to think.⁸¹¹ Despite its

⁸⁰⁶ Thiel 1998: 62 See also Martin and Barresi 2000: 13–14

⁸⁰⁷ Locke 1690: II.xxvii.14

⁸⁰⁸ See Martin and Barresi 2000: 24–25 for an outline of the controversy.

⁸⁰⁹ Thiel 2011: 144

⁸¹⁰ Locke 1690: II.xxvii.25

⁸¹¹ Ibid: IV.iii.6 For the widespread influence of this suggestion, see Yolton 1983, and Thiel 1998

description of soul transference, the Prince and the Cobbler story is not a Cartesian one. It is because of the transfer of consciousness that the prince wakes to find himself in the cobbler's quarters.⁸¹²

Locke's response to resurrection is novel. Because of his advocacy of Boylean corpuscularianism he cannot explain the identity of the pre- and post-resurrection individual by reference to a common vital spark, or substantial form. And because he denies the soul is identical to the person, and sidelines the immaterial from his account, he will not explain it by reference to a common mental substance. His method – which has become one of the most influential in Anglophone philosophy⁸¹³ – is to focus on the *consciousness* of persons.⁸¹⁴ Resurrection involves the resurrection of persons, and the identity of persons is constituted by continued consciousness, rather than organic continuity, or continuity of an immaterial substance.

§4.3.c. A connection

Locke's position is a subtle one and difficult to situate: he needs to highlight the distinctiveness of the person's persistence conditions in contrast to those of the man/human being and the soul. Dialectically, then, he is moved to present a situation where the animal does not continue, and where the persistence of the immaterial soul can also be called into question. This is exactly the kind of situation he describes in section 17 of chapter 27:

[E]very one finds, that whilst comprehended under that consciousness, the little Finger is as much a part of it *self*, as what is most so. Upon separation of this little Finger, should this consciousness go along with the little Finger, and leave the rest of the Body, 'tis evident the little Finger would be the *Person*, the *same Person*; and *self* then would have nothing to do with the rest of the Body. As in this case it is the consciousness that goes along with the Substance, when one part is

⁸¹² Thiel 1998: 61

⁸¹³ There will be multifarious reasons for this, but not least among them is the analytic canonization of Locke by Russell and Ryle. (See Akehurst 2010 – in which he quotes Russell's comment to Ryle: 'By God... I believe you are right. No one ever had Common Sense before John Locke – and no-one but Englishmen have ever had it since.' Akehurst 2010: 1)

⁸¹⁴ Uzgalis 2012

separated from another, which makes the same *Person*, and constitutes this inseparable *self*...⁸¹⁵

The story of the *thinking finger* demonstrates the strengths of the *person* concept, and by linking personhood to a *material part of the body* it distinguishes continuity of consciousness from organic continuity, and from the continuity of an immaterial substance. Significantly, Locke's 'though experiment' also demonstrates the interplay between a causal form of mechanism – corpuscularianism – and the mechanist thesis (described in §4.2), which relates to ontological dependence. For the causal mechanists, the biological whole exerts no novel causal influence over its parts. Holding this they are not *necessarily* committed to the view that body-parts are *ontologically independent* of the animal – but it is a view with which they may well be sympathetic. If one thinks that biological phenomena result from uni-directional causal chains reaching up from constituent corpuscles one can readily accept that animal parts may exist when separated from animal wholes. Indeed, taking the causal thesis to its extreme, one finds the kind of reductionist scenario described by Empedocles (discussed in §3.4.) – that peculiar stage in cosmic history where heads and trunks and limbs are produced independently, and roll around to produce bizarre, chimerical, 'scrambled' animals.⁸¹⁶ The point is simply that two forms of mechanism intersect, and both seem at play in Locke's story of the *thinking finger*. His description of that body-part contrasts notably with Aristotle's description of the same (also presented in §3.4.):

[T]he finger cannot exist apart from a living animal...⁸¹⁷

Locke's *thinking finger* is a somewhat forgotten item of the philosophical imaginary – but it points to an important way in which issues of personal identity are bound up with particular notions of biology. The Lockean concept of a person – developed to cope with puzzles encouraged by causal mechanism – demonstrates its strengths in a situation where the body is construed *mechanistically*. Such a situation involves the transmission of consciousness in a material body-part, like a thinking finger – or, equally, a brain.⁸¹⁸

⁸¹⁵ Locke 1690: II.xxvii.17

⁸¹⁶ Furth 1987: 44

⁸¹⁷ Aristotle *Metaphysics* 1036^b. Also '...the finger is defined by the whole body. For a finger is a particular kind of part of a man.' (*Metaphysics* 1035^b)

⁸¹⁸ The aim here has been to highlight certain important disagreements between Aristotle's picture and Locke's. Yet there are important agreements too; the neo-Lockean account of personal identity is not so inimical to an Aristotelian framework as some suppose (for more on this see Whiting 2008).

§4.4. Wiggins' approach to brain transplantation

In Shoemaker's brain transplantation story, Brown is conceived of as a living thing that can be *dismantled* – i.e., as something with a different metaphysical character from an organism's (a *genuine unity* in the neo-Aristotelian sense outlined above). The story thus subtly shifts our attention from one metaphysical entity onto another, and so our thoughts (and Wiggins') about what persists and how are confounded.

Wiggins describes this kind of shift in metaphysical focus in another context – in relation to fission cases. In the following section the comparison between fission and transplantation is drawn out. The ontological profile of the biological entity found in Shoemaker's story is elucidated alongside the maturation of the thoughts assayed in chapter 1, about the distinct metaphysical character of *artefacts*. Implications of the proposed reading are discussed. One consequence is that Wiggins might be read as denying that organisms can suffer heart transplantation. And if organisms cannot survive heart transplantation, as a *human being* theorist he will deny that *we* can survive heart transplantation. This counter-intuitive conclusion is discussed, and a response is outlined.

§4.4.a. A shift in metaphysical focus: 'human persons as artefacts?'

Wiggins sees fission cases as serving to shift our attention from one sort of metaphysical entity onto another. In *S&SR* he describes the shift thus:

[After fission], one very easily falls into thinking of Brown as a thing that persists in Brownson (1) *and* Brownson (2). One conceives of Brown as a thing that persists in its/his instantiations, a thing that is wherever they are – just as the sail that lies over you, over me, and over a friend of ours, is where I am, where you are, *and* where he is... In short, one thinks of Brown as a concrete universal. Nothing need be wrong with that... Nevertheless, Brown reconceived as such a concrete universal is not the sort of thing whose survival was to have been described in the case of Brownsons (1) and (2). Nor is this how we conceive of subjects of experience when posing the questions of personal identity.⁸¹⁹

⁸¹⁹ Wiggins 2001: 229

As a result of technological interference our metaphysical focus drifts from the *substance* that we take Brown to be (and which we typically refer to when judging persistence) and onto a *concrete universal*. The shift is not a shift in our conception of the substance, Brown: we are not conceiving of the same thing in a new way. Rather, we have latched onto an entity of a different sort⁸²⁰ (which may, at a moment, inhabit exactly the same space as the substance, as is consistent with the pluralistic picture described in §3.3.b.).

The proposal here is that the brain transplantation story should be read along similar lines. It jogs our focus; our attention moves from a *substance* onto the sort of thing that can be *disassembled and reassembled*. This ‘living something-or-other’ has parts that are *ontologically independent* of the whole. In this respect it is like a mechanism. We might also say, returning to the discussion in chapter 1, that it is like an *artefact*. Consider again the short passage, from *SeSR*,⁸²¹ where Wiggins discusses the effects of massive transplanting of organs.

[T]he conception of a human person will diverge further and further from that of a self-moving, animate living being exercising its capacity to determine, within a framework not of its own choosing and replete with meanings that are larger than it is, its own direct and indirect ends. The conception will converge more and more closely upon the conception of something like an *artefact* – of something not so much to be encountered in the world as putatively made or produced by us, something that it is really up to us (individually or collectively) not merely to heal or care for or protect but also to repair, to reshape, to reconstruct... even to reconceive.⁸²²

In this passage, Wiggins suggests that transplantation leads us to think of persons – and thus human beings – *artefactually*. And while there are various readings of his view of artefacts, one line, advanced above, is that he can construe them as having a

⁸²⁰ Wiggins, unfortunately, does not describe the metaphysical character of concrete universals in any real depth. He seems to suggest that the notion of a multiply-instantiated object is a part (though a less prominent part) of our conceptual scheme (1980: 166–7), so they appear to be entities that can be elucidated within his descriptivist framework. However, in line with the metaphysical pluralism described above, one might think that one’s metaphysical focus can be jogged onto entities described by e.g. Lewisian four-dimensionalism as well.

⁸²¹ Tellingly entitled: ‘One Last Variant – and the Philosophical Moral of the Same. Finally, *Human Persons as Artefacts?*’ Wiggins 2001: 236 (my emphasis)

⁸²² Wiggins 2001: 241 (my emphasis)

determinately different ontological profile from substances. At points he appears to shoehorn them into that metaphysical category, stating that they are definitionally unable to exemplify the central elements of our pre-theoretical *substance* concept – but it was suggested that the fecundity of his metaphysics allows him to go beyond this negative verdict.

Working within the descriptivist tradition, Wiggins turns to our everyday navigation of the world to guide his metaphysics. It is not unimportant, therefore, that we interact with, and think about, artefacts in unique and distinctive ways.⁸²³ We do not treat them in the same way that we treat living things (it is around our interaction with the latter that the *substance* concept crystallizes). It is no accident that there is such emphasis in the phenomenological tradition on our pre-theoretical engagement with tools, or ‘objects of use’. (Martin Heidegger is one who sees there to be something profoundly important about our interaction with *zeug*, as equipment.)⁸²⁴ Nor is it inconsequential that in the sphere of behavioural and brain sciences, tool-use and manufacture is classically positioned as a marker of cognitive discontinuity. Creatures that can use (and make) tools think about the world differently from those that cannot.⁸²⁵

Though vague, these considerations, and those assayed in the previous chapters, support the thought that another central element of our conceptual scheme – alongside our concept of a unified *substance* – is the idea of an *artefact*, an entity that is composed of ontologically independent parts.^{826, 827} This proposal will bear refinement.⁸²⁸ Yet even in

⁸²³ See e.g. Simons 1987: 197 and, indeed, Wiggins 2001: 10, 87, 91, and his 2004a: 605

⁸²⁴ ‘In our dealings we come across equipment for writing, sewing, working, transportation, measurement. The kind of Being which equipment possesses must be exhibited. The clue for doing this lies in our first defining what makes an item of equipment – namely its equipmentality...’ Heidegger 1927/1962: I.3 (97) I have Charlotte Knowles to thank for making this aspect of Heidegger clear to me.

⁸²⁵ Vaesen 2012 And of course, humans are not the only animals that use tools – higher primates and ravens do as well.

⁸²⁶ These central concepts are clearly closely connected – but we treat artefacts and living things in sufficiently different ways for the descriptivist to find a metaphysical distinction between them.

⁸²⁷ What is the relationship between having a principle of functioning and having ontologically independent parts? The following suggestion may be proffered: Wiggins states that one correlate of having a principle of functioning, is that when picking out artefacts, one need make no claims about their specific constitution (2001: 87) Having a nomologically shallow essence *clock* picks out items that work in radically different ways and are made of radically different things. There is thus no intimate connection between our understanding of the *parts* of a clock, and our understanding of what a clock is.

⁸²⁸ One will immediately wonder at what point the living artefact comes into existence. Is it only *after* the technological interference? Or is the artefact’s birth the same as the organism’s? This question is just as pressing, for Wiggins, in the case of the concrete universal produced/revealed by fission, and bears too on his brief discussion of *objet trouvé* (contained in a footnote in chapter 4 of *Se&SR* (2001: 134 fn.38). At what point does Duchamp’s *Fountain* – metaphysically distinct from the urinal – come into existence? The onus is on Wiggins to explain these cases. Perhaps he has strong grounds for stating that the surgeon has ‘created a living something-or-other’ (and not unmasked one) but he has yet to explain them. He may be

its unpolished state it sheds light on the present discussion. Looking at the biological realm mechanistically – as the brain transplantation narrative invites us to – we pick out entities with the metaphysical character of *artefacts* and not organisms (*substances*). This explains why Wiggins finds Shoemaker’s story so difficult to interpret – and it tenders a principled response to it. The idea of brain transplantation is underwritten by a mechanistic logic whereby biological items can be *disassembled and reassembled*. Organisms – natural substances – cannot be dismantled in this way, and thus the *human being theorist*, who sees personhood to be intimately connected to the idea of a natural substance, cannot hold that Brown survives. This is not necessarily to deny that *something* survives. But here Wiggins might echo his response to the fission story and say that the *biological artefact* is not the sort of thing we are normally interested in when posing the questions of personal identity. This reading is fully consonant with Wiggins’ texts (indeed, at times, it seems almost to be implicit in his comments about the effects of transplantation),⁸²⁹ and it is explanatorily generative.

§4.4.b. Final worries

The proposed reading is not without its difficulties. Pursuing this neo-Aristotelian line, Wiggins may end up ruling against survival in more commonplace transplantation cases. If, for instance, *heart* transplantation constitutes the disassembly of an organism then, on the above interpretation, it will also mark its destruction.

There is a question here about what exactly constitutes ‘disassembly’. It cannot simply be the detaching of parts, since that happens routinely and unproblematically (e.g. skin cells, or hairs). Nor is it the separation of living body-parts; the organism is not disassembled when it loses an eye, for example, because such a loss does not critically undermine the living activity, though it impairs it. The human being can happily suffer minor dental, ortheopaedic or osteopathic procedures without any real effect on the distinctive living activity.⁸³⁰ ‘Disassembly’ might best be construed as the removal of *vital* organs (where what is ‘vital’ to the minimal success of the living activity can be refined by reference to, e.g. the physiological-immunological view described in §3.1.).

The important point is that however ‘vital’ is finally cashed out, the heart is clearly among the vital organs. Consequently, heart transplantation may plausibly be

helped here by Madden’s discussion of ‘creation and exposure’ in his *forthcoming* (32ff). See also footnotes 748 and 834

⁸²⁹ Wiggins 2001: 241, 1976: 154

⁸³⁰ Ibid: 240–241

seen to constitute disassembly. And if one follows the line of interpretation suggested above, then it seems that Wiggins will have to rule against the survival of organisms that undergo this apparently ‘life-saving’ procedure. Moreover, taking Wiggins’ *human being theory* seriously, one will say that the *person* has ceased to exist as well. Despite powerful intuitions to the contrary, the claim will be that we cannot have our hearts removed and reinserted.⁸³¹

Wiggins’ texts suggest two lines of response to this worry. The first – which we might label the *severe response* – is radical with respect to our thoughts about transplant surgery. The second – the *sensible response* – is radical in relation to the interpretation of Wiggins’ work. As should be clear from the labels, it will be suggested here that it is the second of these that Wiggins should adopt.

Let us start with the first, the *severe response*. There are textural grounds for thinking that Wiggins will *accept* the counter-intuitive claim that persons cannot survive heart transplantation. In ‘Locke, Butler and the Stream of Consciousness’, he appears to prefigure this conclusion (and hints too, towards a similar metaphysical analysis of artefacts). He argues there that extensive technological manipulation of the natural substance will cause the person to go out of existence. Importantly, he states that this kind of technological manipulation may be realized in a science-fiction thought experiment, or ‘even a kind of practical experiment’:⁸³²

[It] literally denatures the subject. In place of an animal or organism with a clear principle of individuation one finds an artefact whose identity may be a matter of convention or even caprice. Certainly we do not, at this limit, find a person, if my account of the concept *person* is correct.⁸³³

Wiggins does not think we need go too far into the realms of science-fiction to find examples of this kind of technological interference. In this passage at least he seems open to the possibility that heart transplantation may stand as a limit to personhood.

⁸³¹ Still, we can have our spleens and appendices, one (but not both) kidneys removed (and any number of teeth, hairs, and eyeballs...).

⁸³² Wiggins 1976: 154

⁸³³ Ibid: 154 The term ‘denaturing’ is interesting – and nowhere replicated in his work. The idea of ‘denaturing’, of one individual losing its distinctive mode of being and gaining another is inimical to Wiggins’ sortal thesis **D** – another reason why it the proposed reading of artefacts (whereby substances do not *become* them, but *coincide* with them) is an improvement.

How might critics respond to this conclusion? Perhaps they will point to the first-person accounts of those who have undergone these procedures; we will find it hard [the critics will say] to persuade this or that patient that she is not the same person as the one who entered the operating theatre. Yet – pursuing the *severe response* – one might refer back to Wiggins’ analysis of fission. The Brownson splinters provide convincing, seemingly first-personal accounts of the fission process. Both think they survived the operation – but (as was shown in §4.1) Wiggins holds that testimony in these instances is contestable.⁸³⁴

One might find further support for this *severe response* in Wiggins’ broader critique of thought experiments (also described in §4.1). Throughout his texts he emphasizes the importance of taking technological interventions seriously, and recognising how intrusive such procedures can be. And while it may be surprising to suggest that persons cannot undergo heart transplantation, perhaps it is not *that* surprising. One of the problems with the kinds of science-fiction stories sold by Shoemaker is that they distract us from deeply peculiar realities. A heart transplant is a profoundly strange process. Is it any more surprising to think that a person goes out of existence when her heart is removed than when an individual’s brain is taken out and cut in half?⁸³⁵ Perhaps it is only a matter of degree.

So stands the *severe response* – what about the *sensible* one? It is less counter-intuitive, but it marks a significant departure from Wiggins’ official position on personal identity. Persuaded by the argument above, Wiggins may concede that the organism – as a natural *substance* – ceases to exist when it is dismantled; yet disturbed by the harsh

⁸³⁴ Do we see the appearance here of something like Olson’s ‘thinking animal puzzle’ (2007: 29–39)? The patient who emerges from the operating room after a successful heart transplant has clear memories of entering the theatre – does this mean that prior to the operation there were two thinking things in the same place at the same time? The person (a natural substance, on the *human being* view) and some other one? Olson identifies two relevant worries with this kind of ‘cohabitation’ (35–36): the *overcrowding problem* – whereby the number of thinkers in the world is greater than we intuitively think – and the *epistemic problem* – where one cannot tell which entity one is. There is not the space to go into these issues in the requisite depth here, but some brief thoughts may be entered. (i) The worry depends on whether the biological artefact comes into existence after the transplant (this line is suggested by Wiggins’ comments in his 2004a, where he sees the surgeon to *create* a living something-or-other). Other comments suggest he seems open to the possibility that the artefact dates back to the genesis of the organism (this line is prompted by his analogous discussion of the *concrete universal* Brown in 1980 – which dates from Brown’s birth, not his fissioning). If one takes the first line there will be no problem. If the latter, then the onus is on Wiggins to answer the worry (to explain how a thinking concrete universal and a thinking substance may cohabit). (See also notes 748 and 828) (ii) One might offer a deflationary response on Wiggins’ behalf. The *overcrowding problem* is not a problem for pluralists of his ilk. The *epistemic problem* is a problem, but one that should be embraced as accurately capturing the unease we actually feel when faced, for example, with the prospect of extensive radiotherapy, gene therapy, drug therapy, transplantation, etc. We genuinely worry that we may not survive such procedures, that the thing that has suffered these intrusions will no longer be ‘me’.

⁸³⁵ Or, e.g. when an individual is teletransported to Mars? (e.g. Parfit 1984: part 3)

rulings on heart transplant survivors, he may ultimately overrule the claims of the *human being theory* and hold that the person continues.

Notably, this response is also encouraged by the critique presented above in §2.3.b. It was argued there that the conceptual connection Wiggins traces between the pre-theoretical *person* concept and the concept *human being* (the concept of a natural substance) is weaker than he envisages. *Person*, it was suggested, need not be construed as a substance sortal. It may instead be seen to be a *phase* of a kind of biological being (putatively human beings). *Person* might thus encapsulate persistence conditions different from those of *human being*.

The considerations above put even greater strain on the supposed bond between the two concepts. We feel considerable discomfort at the thought that persons cannot undergo heart transplantation, yet there are strong reasons for denying that *human beings* – natural substances – survive them. Furthermore, reflecting on the *Strawsonian argument*, and the *argument from interpretation* (presented in §2.2.), one will wonder whether they really support the claim that the concept *person* must be tied to the notion of a genuinely unified *substance*. What stops us interpreting, and being interpreted by, entities whose parts do not ontologically depend upon them?⁸³⁶ The discussions above suggest that we already do so.

The thought here is that the conceptual connection, the heart-string of the *human being theory*, may be severed. And turning to Wiggins' more recent work, it seems that he too has begun to doubt the concordance of *person* and *human being*. Recall the dark portents entered at the end of *Self and Soul*: '...the conception of a human person will diverge further and further from that of a self-moving, animate living being... The conception will converge more and more closely upon the conception of something like an artefact...'⁸³⁷ These comments certainly seem to suggest that he is no longer as sure

⁸³⁶ Wiggins may point to the necessary open-endedness of our pre-theoretical *person* concept. As discussed in chapter 2 he denies that we can list the psychological and physical features that are relevant to interpretation. Or rather, he holds that the list is necessarily 'open-ended'. The sense of 'person', then, cannot be stipulated. It must, in some way, be attached to a natural kind, with a sufficiently nomologically profound *principle of activity*. If artefacts are items with *principles of functioning* – nominally stipulated – then they cannot be persons (understood by reference to the notion of a subject of interpretation) – or so the argument will go. Three brief points in response: Firstly, Wiggins' association of *aposiopesis* and a notion of a subject of interpretation (discussed in §2.2.) is cursory at best; Secondly, as Wiggins himself points out (e.g. 2001: 242) the artefactual view of persons is open-ended anyway (though worryingly so); Thirdly, Wiggins frequently (though only implicitly) considers the possibility that our concept of *person* may attach to the concept of an *artefact* – so cannot himself be fully persuaded by this response.

⁸³⁷ Wiggins 2001: 241. It is notable that Wiggins writes 'conception' here, and not 'concept'. This is more than a little confusing. As discussed above, 'conception' relates to a particular construal of a concept (compare '*equus*' and 'horse' – two conceptions of the same natural kind (putatively)). Whatever the conception, it still picks out the same concept, which picks out the same thing in nature. Is this what Wiggins is describing? Not according to the analysis presented above – artefacts are metaphysically

as he once was that the idea of a *person* – a subject of interpretation – is, or must be, the idea of a natural substance.

Yet, loosing these concepts from one another, Wiggins need not utterly disown his *human being theory*. Here, in closing, a tentative proposal may be entered. While *human being* and *person* are no longer concordant, they might once have been. We may think that conceptual schemes can *change*, and that following both biological and cultural evolution and fluctuation, different connections may be made between concepts.⁸³⁸ We might further think that our understanding of the world, and of ourselves, changes in response to technological advances.⁸³⁹ The possibility of organ transplantation makes us see the world differently; it makes us see ourselves *artefactually*.⁸⁴⁰ The *human being theory* then, which is built around the concordance of *human being* and *person*, may be seen to capture – and capture beautifully – a particular moment in the history of our conceptual scheme. But that moment has passed – new connections are being forged. Transplantation, grounded in a mechanistic logic, encourages us to connect the *person* concept with the concept of a biological *artefact*, and no longer the concept of an *organism*.⁸⁴¹

distinct from natural substances. To see persons artefactually is to associate them with a different metaphysical kind.

⁸³⁸ This is one way of interpreting Wiggins' own comments in his 1976 paper, that 'as human beings have come to the point where their powers of reason and analogy make it possible for some of them to transcend mere species loyalty, the sense of *person* has been very slightly modified.' Wiggins 1976: 152

⁸³⁹ This, indeed, seems to be suggested by Wiggins' comments at the end of *SeSR* (quoted above).

⁸⁴⁰ This thought is assayed again in his discussion with Shoemaker (2004a: 605)

⁸⁴¹ How does this tentative suggestion relate to the discussion of conceptual invariance (discussed in chapter 1 and 2)? Not only is there conceptual variation over time, one might say, but this analysis suggests there is conceptual variation over cultures (those that are exposed to transplantation surgery, perhaps, and those that are not). Nothing need be wrong with this. In addition to everything else, the chapters above have intended to emphasize the parochial nature of metaphysical projects. Given what has been said by Bakhurst (following Vygotsky), and Burt and Mei, we might think that the human mind develops in different ways depending on the process of enculturation. And while we may doubt that different humans pick out entirely different entities, we might think that different links are made between the fundamental elements of the human conceptual scheme. Some minds may pre-theoretically construe persons as substances, others as artefacts.

CONCLUSION

I have got the subject into something of a mess...

So wrote David Wiggins, in the conclusion to his first published paper, ‘The Individuation of Things and Places’ (1963). As the title suggests, the subject then was one that became a staple of his studies – and over the subsequent fifty years he has organized and reorganized his thoughts about identity, individuation and substance, in the hope of untangling the knotty problems contained within. In a way, perhaps, things remain just as messy; yet one cannot deny that his dealings with these matters enthrall and enrich those who attend to them. His is a glorious mess – and to try and ensure that the present work has not rendered it ingloriously messy, an overview of the various conclusions reached above is now presented.

One aim of this thesis has been to demonstrate exactly *why* Wiggins’ work is so difficult to read. His investigations intersect and interrelate more closely than most – his account of personal identity is carefully developed alongside, and in conjunction with, his thoughts about the logic of identity, our individuating procedures, his pluralism, and his sober brand of conceptualist-realism. In this – his *systematicity* – he resists the dominant impulse in English-language philosophy, for Russellian piece-meal analysis; as a result, his work is hard to grasp... but hard to grasp for the right reasons. The fine-spun links he draws between these different issues represent the real and important connections he sees to hold between our pre-theoretical concepts. That is, the complexity in his texts mirrors the complexity he divines in our minds.

It was the work of chapter 1 to demonstrate the close connections Wiggins finds between our thoughts about *identity*, *individuation* and *substance*. He holds that our everyday ability to navigate the world is underwritten by these concepts, and it was argued that his critics and commentators fail when they fail to appreciate how his analyses of these notions relate to one another. Corrections were duly entered.

Another central aim of chapter 1 was to assess his view, and the various interpretations of it, of the distinction between *natural things* and *artefacts*. Misinterpretations were identified, and a reading was offered whereby he was seen to hold that artefacts – stipulatively defined – are substances, but never paradigms of that category. The suggestion then offered, which has grown in importance, was that

Wiggins has the resources to better analyse the ontological profile of artefacts, such that they may be differentiated from natural substances.

This proposal was temporarily shelved, and in chapter 2, attention was turned to Wiggins' *human being theory*. In line with his sortalism, he holds that to answer the puzzles of the personal identity debate we must turn to the sortals under which we fall, and interrogate the *principle of activity* they encapsulate. The ingenuity of his *human being theory* is to argue for a conceptual consilience of *person* (which, despite long-standing discussion, remains elusive) and *human being* (a notion with which we seem to be much more familiar). Having argued for this concordance, Wiggins claims that both concepts have the same underlying *principle of activity*, to which we should defer when ruling on persistence.

The conceptual connection is grounded in three lines of argument: the *Strawsonian argument*, the *semantic argument*, and the *argument from interpretation*. Following a genealogical critique, the semantic argument was rejected, and the other two arguments appeared to weaken as a result. In §2.4, it was argued that the conceptual consilience that Wiggins finds between *person* and *human being* is less substantial than he envisages.

Another concern that arose in chapter 2 was that the *human being principle* might be more difficult to explicate than one might suppose. In chapter 3 – following comments by Wiggins – it was suggested that one should turn to *biology* to investigate the *living activity* in greater depth. Yet biological individuation was found to be a controversial affair and it was argued that Wiggins must consult Thomas Pradeu's *immunological–physiological account* to set the parameters for an investigation into the principle of activity for the human being.

These thoughts about principles of activity led onto broader questions about the metaphysical character of the *natural substances* that realize them. It was argued that, while not explicitly stated, Wiggins' position rests on a distinctive neo-Aristotelian view of organisms. Organisms exemplify the category of substance because they are *genuine unities*. They are genuine unities because, when we latch on to them, we cannot but see them as *ontologically prior* to their parts.

Chapter 3 thus showed how Wiggins' work could benefit from the insights of philosophers of biology, and – by presenting an alternative form of anti-reductionism to the emergentist mainstream – contribute to their discussions as well. Beneath the fields of biology and metaphysics are deep, living roots – roots that are no less strong for being hidden – and one thought this study has intended to promote is that inter-

disciplinary discussion here can be mutually beneficial (a thought further encouraged by the connection, described in §4.3., between the neo-Lockean account of personal identity and seventeenth-century mechanism).

It was in chapter 4 that the various loose ends, and intermediary conclusions, were drawn together. The analysis of the metaphysical character of organisms assayed in chapter 3 was seen to bear on the distinction, discussed in chapter 1, between natural things and artefactual things. The tentative suggestion entered there – that one may draw a principled line between *substances* and *artefacts* – was revisited, and prompted a re-examination of Shoemaker's notorious *brain transplantation story*. Fleshing out the distinction between the ontological profile of artefacts and substances provided an explanation of why Shoemaker's narrative has always seemed to unsettle Wiggins; the notion of brain transplantation shifts our metaphysical focus from a biological *substance* onto a biological *artefact*.

In turn, this thought was seen to connect to the conclusion in chapter 2, that the conceptual consilience of *person* and *human being* is not as strong as Wiggins supposes. The concordance of concepts that stands as the core of his *human being theory* was taken to be undermined. Yet rather than disavow his theory *tout court*, it was suggested that one should instead say that it marks a significant moment in the history of our conceptual scheme. The methods and framework that underpin his analysis are in no way challenged by the arguments above – but being sensitive to our everyday thoughts, and the fluctuations of our conceptual scheme, they now license a different conclusion to the one encapsulated by the *human being theory*.

At the end of this study, I find I can echo another sentiment voiced by Wiggins in his first published paper. It is an expression of a dissatisfaction, verging on a hope – one that will resonate with all those who take as their subject rich and elusive works. It is a promise of the changes one could make, and the limitations of what one has written – a conditional too often disappointed, but one which Wiggins has thoughtfully fulfilled, and one which I will leave unfinished in the happy expectation of comments to come:

If I had time to rewrite my contribution...

BIBLIOGRAPHY OF WORKS REFERRED TO OR CONSULTED

- Ackrill, J.L. (1997) 'Aristotle's Definitions of *Psyche*' in *Essays on Plato and Aristotle* (Oxford: Oxford University Press)
- Adeofe, L. (2004) 'Personal Identity in African Metaphysics' in *African Philosophy: New and Traditional Perspectives* (ed.) L. Brown (Oxford University Press)
- Akehurst, T. (2010) *The Cultural Politics of Analytic Philosophy: Britishness and the Spectre of Europe* (Continuum)
- Andersson, L. (1990) 'The Driving Force: Species Concepts and Ecology', *Taxon* **39**: 375–382
- Allen, G. (1975) *Life Science in the Twentieth Century* (New York: Wiley and Sons)
- Allen, N.J. (1985) 'The Category of the Person: A Reading of Mauss's Last Essay', in *The Category of the Person: Anthropology, Philosophy, History*, (eds) M. Carrithers, S. Collins, and S. Lukes (Cambridge University Press)
- Aristotle. *Categories* (ed. and trans.) H.P. Cooke, H. Tredennick (Harvard University Press, 1938)
- Aristotle. *De Anima* (ed. and trans.) W.D. Ross (Oxford: Clarendon Press, 1961)
- Aristotle. *Metaphysics (Books Z and H)* (ed.) D. Bostock (Oxford: Clarendon Press, 1994)
- Aristotle. *Meteorology* (trans.) H.D.P. Lee (Harvard University Press, 1952)
- Aristotle. *Physics* (ed. and trans.) W.D. Ross (Oxford: Clarendon Press, 1936)
- Avisé J.C. (2001) 'Evolving genomic metaphors: a new look at the language of DNA', *Science* **294**: 86–87.
- Ayers, M. (1991) *Locke*, vol.2 (London: Routledge)
- Bakhurst, D. (1991) *Consciousness and Revolution in Soviet Philosophy: From the Bolsheviks to Evald Ilyenkov* (Cambridge University Press)
- Bakhurst, D. (2005) 'Wiggins on Persons and Human Nature', *Philosophy and Phenomenological Research* **71**(2): 462–469
- Ballie, J. (1990) 'Identity, Survival, and Sortal Concepts', *The Philosophical Quarterly* **40**: 183–194
- Baldwin, T. (1982) 'Review of *Sameness and Substance*', *Philosophy* **57**(220): 269–272
- Bechtel, W. and R. Richardson (1993), *Discovering Complexity: Decomposition and Localization as Strategies in Scientific Research* (Princeton: Princeton University Press)
- Bedau, M. (2003) 'Downward Causation and Autonomy in Weak Emergence', *Principia* **6**: 5–50
- Benson, K.R. (1989) 'Biology's "Phoenix": Historical Perspectives on the Importance of the Organism', in *American Zoologist*, **19**(3): 1067–1074
- Bernard, C. (1865/1984) *Introduction à l'étude de la médecine expérimentale*, preface de F. Dagognet (Paris: Flammarion)
- Blackburn, S. (1998) 'Supervenience' in E. Craig (ed.), *Routledge Encyclopedia of Philosophy*. London: Routledge. Retrieved May 30, 2013, from <http://www.rep.routledge.com/article/N057>

- Bothwell, J.H.F. (2006) 'The Long Past of Systems Biology', *New Phytologist* **170**(1): 6–10
- Boycott, B. (1998) 'John Zachary Young: 18th March 1907 – 4th July 1997', *Biographical Memoirs of Fellows of the Royal Society* **44**: 486–509
- Boyd, R.N., 1973, 'Realism, Underdetermination, and a Causal Theory of Evidence', *Noûs* **7**: 1–12.
- Boyd, R. (1999) 'Homeostasis, Species, and Higher Taxa', in *Species: New Interdisciplinary Essays* (ed.) Robert Wilson (Cambridge MA: MIT Press): 141–186
- Boyle, M. (forthcoming) 'Essentially Rational Animals', *Rethinking Epistemology* (eds) Abel and Conant (DeGruyter)
- Brigandt, I. (2009) 'Natural Kinds in Evolution and Systematics: Metaphysical and Epistemological Considerations', *Acta Biotheoretica* **57**: 77–97
- Brigandt, I. and Love, A. 'Reductionism in Biology', *The Stanford Encyclopedia of Philosophy* (Fall 2008 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2008/entries/reduction-biology/>
- Broad, C.D. (1925) *The Mind and Its Place in Nature* (London: Routledge & Kegan Paul, first edition)
- Broad, C.D. (1933) *Examination of McTaggart's Philosophy* (Cambridge University Press)
- Butler, J. (1736) *First Dissertation to the Analogy of Religion Natural and Revealed to the Constitution of Nature*
- Butler, J. *The Whole Works of Joseph Butler* (London: Tomas Tegg, 1839)
- Burt, E.A. (1953) 'Descriptive Metaphysics', *Mind* **LXXLL**
- Buss, L. (1987) *The Evolution of Individuality* (Princeton: Princeton University Press)
- Byrne, P.H. (2001) 'Connective Analysis: Aristotle and Strawson', *British Journal for the History of Philosophy*, **9**(3): 405–423
- Carnap, R. (1934) *The Unity of Science*, London: Kegan Paul, Trench, Trubner and Co.
- Carnap, R. (1950) 'Empiricism, Semantics, and Ontology', *Revue Internationale de Philosophie* **4**: 20–40
- Carrara, M. and Vermaas, P. (2009) 'The fine-grained metaphysics of artefactual and biological functional kinds', *Synthese* **169**: 125–143
- Carter, W.R. (1989) 'How to change your mind', *Canadian Journal of Philosophy* **91**: 1–14
- Cartwright, H.M. (1965) 'Heraclitus and the Bath Water', *Philosophical Review* **74**: 25–42
- Cartwright, H.M. (1970) 'Quantities', *Philosophical Review* **79**: 25–42
- Cartwright, H.M. (1982) 'Review of Sameness and Substance', *The Philosophical Review* **91**(4): 597–603
- Cartwright, N., J. Cat, L. Fleck, and T. Uebel (1995) *Otto Neurath: Philosophy between Science and Politics* (Cambridge: Cambridge University Press)
- Cat, J., H. Chang, and N. Cartwright (1995) 'Political Philosophy of Science: Otto Neurath, Unity of Science, and Socialism', in *The Disunity of Science* (ed.) P. Galison and D. Stump (Stanford University Press)

- Charles, D. (2012) 'Teleological Causation' in *The Oxford Handbook of Aristotle* (Oxford University Press)
- Chisholm, R. (1976) *Person and Object* (La Salle, IL.: Open Court)
- Clarke, E. (*Forthcoming*) 'The multiple realizability of biological individuals', in *Journal of Philosophy*.
- Cohen, S. M. (2009) 'Aristotle's Metaphysics', *The Stanford Encyclopedia of Philosophy* (*Spring Edition*), Edward N. Zalta (ed.) URL = <<http://plato.stanford.edu/archives/spr2009/entries/aristotle-metaphysics/>>.
- Correia, F. (2008) 'Ontological dependence', in *Philosophy Compass*, **3**(5): 1013–1032
- Cottingham, J. (1978) "'A Brute to the Brutes?": Descartes' Treatment of Animals', *Philosophy* **53**(206): 551–559
- Craig, E. (1990) *Knowledge and the State of Nature: An Essay in Conceptual Synthesis* (Oxford University Press)
- Craver, C., and Bechtel, W. (2006) 'Top-down Causation without Top-down Causes', *Biology and Philosophy*
- Davidson, D. (1970), 'Mental events', in L. Foster and J.W. Swanson (eds), *Experience and theory* (London: Duckworth), 79–101.
- Davidson, D. (1973) 'Radical Interpretation', *Dialectica* **27**: 314–28
- Davidson, D. (1974) 'On the very idea of a conceptual scheme', reprinted in his *Inquiries into Truth and Interpretation* (Oxford: Oxford University Press, 1984)
- Davidson, D. (1989) 'Meaning, Truth and Evidence', in *Perspectives on Quine* (ed.) R. Gibson and R. Barrett (Oxford: Basil Blackwell)
- Dawkins, R. (1982/9) *The Extended Phenotype* (Oxford: Oxford University Press)
- Dawkins, R. (2006) *The God Delusion* (Bantam Books)
- De la Cruz, F. and Davies, J. (2000) 'Horizontal gene transfer and the origin of species: lessons from bacteria', *Trends Microbiol.* **8**: 128–33
- Delehanty, M. (2005) 'Emergent properties and the context objection to reduction', *Biology and Philosophy* **20**: 715–734
- Delaney, D. (2001) 'Making Nature/Marking Humans: Law as a site of cultural production' *Annals of the Association of American Geographers* **91**: 487–503
- Dennett, D. (1991) *Consciousness Explained* (The Penguin Press)
- Dennett, D. (1987) *The Intentional Stance* (Cambridge, Mass.: MIT Press)
- Deutsch, K.W. (1951) 'Mechanism, Organism, and Society: Some Models in Natural and Social Science', *Philosophy of Science* **18**(3): 230–52
- Devitt, M. (2008) 'Resurrecting Biological Essentialism', *Philosophy of Science* **75**(3): 344–382
- Devitt, M. (2010) 'Species Have (Partly) Intrinsic Essences', *Philosophy of Science* **77**(5): 648–661
- Deutscher, M., and Martin, C. (1966) 'Remembering', *Philosophical Review* **75**(April): 161–196

- Doepke, F. (1996) *The Kinds of Things: A Theory of Personal Identity Based on Transcendental Argument* (LaSalle, IL.: Open Court)
- Dorr, C. (2003) ‘Merricks on the existence of human organisms’, *Philosophy and Phenomenological Research* **67**(3): 711–718
- Driesch, H. (1908), I, B, ‘The Foundations of the Physiology of Development’: ‘Experiments on the Egg of the Sea-Urchin’, in Driesch (1908), *The Science and Philosophy of the Organism*, Gifford Lectures for 1907 (London: Adam & Charles Black)
- Dubnau, D. (1999) ‘DNA uptake in bacteria’, *Annu. Rev. Microbiol.* **53**: 217–244
- Dupré, J. (1981) ‘Natural Kinds and Biological Taxa’, *Philosophical Review* **90**: 66–90
- Dupré, J. (1993) *The Disorder of Things: Metaphysical Foundations of the Disunity of Science* (Harvard University Press)
- Dupré, J. (1999) ‘On the Impossibility of a Monistic Account of Species’, in R.A. Wilson (ed.) *Species* (MIT Press, Cambridge): 3–22
- Dupré, J. (2001) *Human Nature and the Limits of Science* (Oxford University Press)
- Dupré, J. (2008a/2012) ‘The Constituents of Life 1: Species, Microbes, and Genes’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2008b/2012) ‘The Constituents of Life 2: Organisms and Systems’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2008c/2012) ‘Against Maladaptationism: Or, What’s Wrong with Evolutionary Psychology’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2009/2012) ‘Varieties of Living Things: Life at the Intersection of Lineage and Metabolism’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2010a/2012) ‘The Polygenomic Organism’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2010b/2012) ‘It is not Possible to Reduce Biological Explanations to Explanations in Chemistry and/or Physics’, in *Processes of Life* (Oxford University Press)
- Dupré, J. (2010c/2012) ‘Causality and Human Nature in the Social Sciences’ in *Processes of Life* (Oxford University Press)
- Dupré, J. (2012) *Processes of Life* (Oxford University Press)
- Dyer, B.D. (1989), ‘Symbiosis and Organismal Boundaries’, *American Zoologist* **29**: 1085–1093
- Eddington, A. (1958) *The Philosophy of Physical Science* (Ann Arbor Paperbacks)
- Elder, C.L. (2003) ‘Alexander’s dictum and the reality of familiar objects’, *Topoi* **22**(2)
- Falcon, A. (2011) ‘Aristotle on Causality’, *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/fall2011/entries/aristotle-causality/>>.
- Ferner, A. (2008) ‘Review of Cottingham’s *Cartesian Reflections*’, *Philosophy* **85**(4): 580–584
- Fine, K. (1995) ‘Ontological Dependence’, *Proceedings of the Aristotelian Society*, New Series, **95**: 269–290
- Fine, K. (2001) ‘The Question of Realism’ *Philosophers’ Imprint*, **1**(1): 1–30
- Frankfurt, H. (1999) *Necessity, Volition and Love* (Cambridge: Cambridge University Press)

- Fodor, J. (1974) 'Special Sciences, or the Disunity of Science as a Working Hypothesis', *Synthese* **28**: 97-115.
- Forbes, G. (1985) *The Metaphysics of Modality* (New York: Oxford University Press)
- Forstrom, K.J.S. (2010) *John Locke and Personal Identity: Immortality and Bodily Resurrection in Seventeenth-Century Philosophy*, Continuum.
- Foucault, M. (1963) *The Birth of the Clinic: An Archaeology of Medical Perception*, Routledge
- Foucault, M. (1994) 'Nietzsche, la généalogie, l'histoire' in *Dits et Écrits*, vol. I (Paris: Gallimard).
- Freeland, C. (1987) 'Aristotle on bodies, matter, and potentiality' in Gotthelf and Lennox (eds), *Philosophical Issues in Aristotle's Biology* (Cambridge University Press)
- Furth, M. (1978) 'Transtemporal Stability in Aristotelian Substances' *The Journal of Philosophy*, **75**(11): 634–646
- Furth, M. (1987) 'Aristotle's Biological Universe: An Overview' in Gotthelf and Lennox (eds), *Philosophical Issues in Aristotle's Biology* (Cambridge University Press, 1987)
- Furth, Montgomery (1988) *Substance, Form and Psyche: an Aristotelian Metaphysics* (Cambridge University Press)
- Gaiman, N. (2013) *The Ocean at the End of the Lane* (William Morrow and Company)
- Gale, R. (1984) 'Wiggins' Thesis D(x)', *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* **45**(2): 239–245
- Ganeri, J. (2012) *The Self: Naturalism, Consciousness and the First-Person Stance* (Oxford University Press)
- Garrett, B. (2013) 'Vitalism versus Emergent Materialism', in C. Wolfe and S. Normandin (eds) *Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800–2010* (Springer)
- Gaukroger, S. (2000) 'The resources of a mechanist physiology and the problem of goal-directed processes', In Gaukroger, S., Schuster, J. & Sutton, J. (eds), *Descartes' Natural Philosophy* (London: Routledge): 383-400.
- Geach, P. (1962) *Reference and Generality* (Ithaca: Cornell University Press)
- Geach, P. (1973) 'Ontological Relativity and Relative Identity', in Milton K. Munitz (ed.) *Logic and Ontology* (New York University Press)
- Geuss, R. (1999) *Morality, Culture, and History* (Cambridge: Cambridge University Press)
- Geuss, R. (2001) *Public Goods, Private Goods* (Princeton University Press)
- Gibbard, A. (1975) 'Contingent Identity', *Journal of Philosophical Logic* **4**: 187–221
- Gilbert, S.F. and Sarkar, S. (2000) 'Embracing Complexity: Organicism for the 21st Century', *Developmental Dynamics* **219**: 1–9
- Gill, M. L. (1989) *Aristotle on Substance: The Paradox of Unity* (Princeton University Press)
- Gillett, G. (1987) 'Reasoning about Persons' in A. Peacocke and G. Gillett (eds) *Persons and Personality* (Oxford: Blackwell)
- Ginsborg, H. (2001) 'Kant on Understanding Organisms as Natural Purposes', in *Kant and the Sciences*, ed. Eric Watkins (Oxford University Press)

- Ginsborg, H. (2008) 'Kant's Aesthetics and Teleology', *The Stanford Encyclopedia of Philosophy* (Fall Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2008/entries/kant-aesthetics/>
- Glock, H-J. (2008) *What is Analytic Philosophy?* (Cambridge University Press)
- Goldstein, K. (1934/1995) *The Organism: a Holistic Approach to Biology Derived from Pathological Data in Man*, (New York: Zone Books / MIT Press)
- Goodison, L. (1986) *I am becoming my mother* (New Beacon Books)
- Goodwin, B. (1994) *How the Leopard Changed its Spots: The Evolution of Complexity* (New York: Scribner's)
- Gotthelf, A. (1987) 'Aristotle's Conception of Final Causality' in Gotthelf and Lennox (eds), *Philosophical Issues in Aristotle's Biology* (Cambridge University Press)
- Gould, S.J. (1984) 'A Most Ingenious Paradox', *Natural History* (December): 20–28
- Gould, S.J. and Lloyd, E. (1999) 'Individuality and adaptation across levels of selection: How shall we name and generalize the unit of Darwinianism?', *Proceedings of the National Academy of Science of the USA* **96**(21): 11904–11909
- Grandy, R. (2008) 'Sortals', *The Stanford Encyclopedia of Philosophy* (Fall 2008 Edition), E.N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2008/entries/sortals/>
- Green, J. (1929/1993) *Léviathan* (published in English as *The Dark Journey*) (Quartet Books)
- Grene, M. (1968), *Approaches to a Philosophy of Biology* (New York: Basic Books)
- Grene, M. (1972), 'Aristotle and Modern Biology', *Journal of the History of Ideas* **33**: 395–424
- Grene, M. (1987) 'Hierarchies in Biology', *American Scientist* **75**(5): 504–510
- Grene, Marjorie, and David Depew (2004) *The Philosophy of Biology: An Episodic History* (Cambridge: Cambridge University Press)
- Grice, H.P. (1941) 'Personal Identity', *Mind* **50**: 330–350
- Griffith, J.S. (1966) 'The Neural Basis of Conscious Decision' (Inaugural Lecture, Bedford College, London)
- Griffiths, P.E. (1999) 'Squaring the Circle: Natural Kinds with Historical Essences', in *Species: New Interdisciplinary Essays*, ed. Robert Wilson (Cambridge MA: MIT Press): 209–28
- Griffiths, P.E. (2001) 'Genetic Information: A Metaphor in Search of a Theory', *Philosophy of Science* **68** (3): 394–412
- Griffiths, P. (2011) 'Philosophy of Biology', *The Stanford Encyclopedia of Philosophy* (Summer Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/sum2011/entries/biology-philosophy/>.
- Haack, S. (1978) 'Descriptive and Revisionary Metaphysics', *Philosophical Studies* **35**: 361–371
- Hacking, I. (1968) 'A language without particulars' *Mind* LXXVII
- Hacking, I. (2007) 'Our Neo-Cartesian Bodies in Parts', *Critical Inquiry* **34**(1): 78–105

- Hamlyn, D. W. (1993) (introduction) *De Anima: Books II and III (with passages from Book I)*, translated with introduction and notes by D.W. Hamlyn (Clarendon Press: Oxford)
- Haraway, D. (1976) *Crystals, Fabrics, and Fields: Metaphors of Organicism in Twentieth-Century Developmental Biology* (Yale University Press)
- Haraway, D. (1991) 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Simians, Cyborgs and Women: The Reinvention of Nature* (Routledge)
- Hare, R.M. (1952) *The Language of Morals* (Oxford: Oxford University Press)
- Haslanger, S. (2003) 'Persistence Through Time', in M. Loux and D. Zimmerman (eds) *The Oxford Handbook to Metaphysics* (Oxford: Oxford University Press)
- Hawley, K. (2001) *How Things Persist* (Oxford: Clarendon)
- Hegel, G.W.F. (1817/1975) *The Encyclopedia of the Philosophical Sciences*. In *Hegel's Logic: Being Part One of the Encyclopedia of the Philosophical Sciences*, trans. William Wallace (Oxford: Clarendon Press)
- Heidegger, M. (1927/1962) *Being and Time* (trans. J. Macquarrie and E. Robinson) (Basil: Blackwell)
- Hein, H. (1969) 'Molecular Biology vs. Organicism: The Enduring Dispute between Mechanism and Vitalism', *Synthese* **20**(2): 238–253
- Hein, H. (1972), 'The Endurance of the Mechanism : Vitalism Controversy', *Journal of the History of Biology* **5**(1): 159–188
- Heller, M. (1984) 'Temporal Parts of Four-Dimensional Objects', *Philosophical Studies* **46**: 323–334
- Heller, M. (1990) *The Ontology of Physical Objects: Four Dimensional Hunks of Matter* (Cambridge: Cambridge University Press)
- Hill, R. K. (1998) 'Genealogy', in E. Craig (ed.), *Routledge Encyclopedia of Philosophy*. London: Routledge. Retrieved April 16, 2013, from <http://www.rep.routledge.com/article/DE024SECT1>
- Hilpinen, R. (1993) 'Authors and Artifacts', *Proceedings of the Aristotelian Society* **93**: 155–178
- Hobbes, T. (1839–45) *De Corpore*, pt II, ch. 11 in W. Molesworth (ed.) *The English Works of Thomas Hobbes* (London: John Bohn), vol. 1
- Hoffman, J. and Rosenkrantz, G. (1997) *Substance: Its Nature and Existence* (London: Routledge)
- Hollis, M. (1985) 'Of Masks and Men' in *The Category of the Person: Anthropology, Philosophy, History*, (eds) M. Carrithers, S. Collins, and S. Lukes (Cambridge University Press)
- Hull, D. (1972) 'Reductionism in Genetics – Biology or Philosophy?' *Philosophy of Science* **39**: 491–499
- Hull, D. (1974) *Philosophy of Biological Sciences* (Prentice-Hall, Englewood Cliffs, N.J.)
- Hull, D. (1979) 'Discussion: reduction in genetics', *Philosophy of Science* **46**, 316–320
- Hull, D.L. (1981) 'Philosophy and biology', in Fløistad, G. (ed.), *Contemporary philosophy: a new survey*, vol. 2 (The Hague: Martinus Nijhoff)

- Hull, D.L. (1992) 'Individual', in Fox Keller, E. & Lloyd, E. (eds) *Keywords in Evolutionary Biology* (Cambridge, Mass.: Harvard University Press): 180–187
- Hull, D.L. (1994) 'Contemporary Systematic Philosophies', in E. Sober (ed.), *Conceptual Issues in Evolutionary Biology* (2nd Edition, MIT Press): 295–330
- Hull, D.L. and Ruse, M. (eds) (1998) *The Philosophy of Biology* (Oxford University Press)
- Ishiguro, H. (1980) 'The Primitiveness of the Concept of a Person', in *Philosophical Subjects: Essays Presented to P.F. Strawson*, (ed.) Z. Van Straaten (Clarendon Press: Oxford)
- Jacob, F. (1973) *The Logic of Life: A History of Heredity* (Allen Lane)
- Jain, J., et al (2005) 'Oocyte cryopreservation', *Fertility and Sterility* 86: 1037–1046
- James, S. (2000) 'Feminism in Philosophy of Mind: The Question of Personal Identity' in M. Fricker and J. Hornsby (eds.) *The Cambridge Companion to Feminism in Philosophy* (Cambridge: Cambridge University Press)
- Janzen, D. (1977) 'What are dandelions and aphids?', *The American Naturalist* 111(979): 596–589
- Jiang, S.C. and Paul, J.H. (1998) 'Gene transfer by transduction in the marine environment', *Appl. Environ. Microbiol.* 64: 2780–2787
- Johnston, M. (1987) 'Human Beings', *Journal of Philosophy* 84: 59–83
- Joll, N. (2010) 'Contemporary Metaphilosophy', *Internet Encyclopedia of Philosophy* <http://www.iep.utm.edu/con-meta/>
- Jonas, H. (1966) *The Phenomenon of Life: Towards a Philosophical Biology* (New York: Harper and Row/Dell)
- Jones, D. (1987) *Manufacturing Humans: The Challenge of New Reproductive Technologies* (Leicester: Intervarsity Press)
- Jones, N. (forthcoming) 'From Individuation to Essentialism'
- Joseph, M.A. (2011) 'Davidson's Philosophy of Language', *Internet Encyclopedia of Philosophy*, <http://www.iep.utm.edu/dav-lang/>
- Jubien, M. (1993) *Ontology, Modality and the Fallacy of Reference* (Cambridge: Cambridge University Press)
- Kant, I. (1790/1987), *Critique of Judgment*, trans. W. Pluhar (Indianapolis: Hackett)
- Kass, L.R. (1999), *The Hungry Soul: Eating and the Perfecting of Our Nature* (Chicago: University of Chicago Press)
- Kauffman, S. (1971), 'Articulation of Parts Explanations in Biology and the Rational Search for Them', *Boston Studies in the Philosophy of Science* 8: 257–272
- Khalidi, M.A. (1993) 'Carving Nature at the Joints', *Philosophy of Science* 60: 100–113
- Kim, J. (1992) "'Downward Causation" in Emergentism and Nonreductive Physicalism' in Beckermann, Flohr, Kim, (eds) *Emergence or Reduction? Essays on the Prospects of Nonreductive Physicalism* (Berlin and New York: Walter de Gruyter.): 119–138
- Kim, J. (1993) 'The Non-Reductivist's Troubles with Mental Causation' in Heil and Mele (eds.) (*Mental Causation*, Oxford: Clarendon Press): 188–210
- Kim, J. (1998) *Mind in a Physical World* (Cambridge, Massachusetts: MIT Press)

- Kitano, H. (2002) 'Systems Biology: A Brief Overview', *Science* **295**: 1662–1664
- Kripke, S. (1972) 'Naming and Necessity', in G. Harman, and D. Davidson (eds) *Semantics of Natural Languages* (Dordrecht: Reidel)
- Kripke, S. (1980) *Naming and Necessity* (Oxford: Blackwell, revised edition)
- Kochiras, H. (2009) 'Locke's Philosophy of Science', *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/fall2009/entries/locke-philosophy-science/>>.
- Kolakowski, L. (1968) *Towards a Marxist Humanism* (New York: Gove Press)
- Kornblith, H. (1980) 'Referring to Artifacts', *Philosophical Review* **89**: 109–114
- Koopman, C. (2012) *Genealogy as Critique: Foucault and the Problems of Modernity* (Fordham University Press)
- Koslicki, K. (2012a) 'Essence, Necessity, and Explanation', in Tuomas E. Tahko (ed.) *Contemporary Aristotelian Metaphysics* (Cambridge University Press)
- Koslicki, K. (2012b) 'Varieties of ontological dependence', in *Metaphysical Grounding: Understanding the Structure of Reality* (eds) F. Correia and B. Schnieder (Cambridge University Press): 186–213
- Koslicki, K. (2013) 'Substance, Independence, and Unity', in *Aristotle on Method and Metaphysics* (ed.) E. Feser (Palgrave-MacMillan): 169–195
- Kosman, L.A. (1987) 'Animals and other beings in Aristotle' in Gotthelf and Lennox (eds), *Philosophical Issues in Aristotle's Biology* (Cambridge University Press)
- La Fontaine, J.S. (1985) 'Person and individual: some anthropological reflections' in *The Category of the Person: Anthropology, Philosophy, History*, (eds) M. Carrithers, S. Collins, and S. Lukes (Cambridge University Press)
- Langton, R. (2009) *Sexual Solipsism: Philosophical Essays on Pornography and Objectification* (Oxford University Press)
- LaPorte, J. (1997) 'Essential Membership', *Philosophy of Science* **64**(1): 96–112
- Leibniz, G. (1765/1981) *New Essays Concerning Human Understanding* (trans.) P. Remnant and J. Bennett (Cambridge University Press)
- Leibniz, G. (1695/1978) *Système Nouveau de la nature et de la communication des substances aussi bien que de l'union de l'âme avec le corps*, in Leibniz, *Die Philosophischen Schriften*, (ed.) G.J. Gerhardt (vol. 4, reprint, Hidesheim: Georg Olms): 471–504
- Lewis, D. (1971) 'Counterparts of Persons and their Bodies', *Journal of Philosophy* **68**: 203–211
- Lewis, D. (1976) 'Survival and Identity' in A. Rorty (ed.) *The Identities of Persons* (Berkeley: University of California Press)
- Lewis, D. (2002) 'Tensing the Copula', *Mind* **111**: 1–14
- Lewontin, R. (1993) *The Doctrine of DNA: Biology as Ideology* (London: Penguin Books)
- Locke, J. (1690/1975) *An Essay Concerning Human Understanding* (Oxford: Oxford University Press)
- Loeb, L. (1937) 'The Biological Basis of Individuality', *Science* **86**(2218): 1–5
- Losonsky, M. (1990) 'The Nature of Artefacts', *Philosophy* **65**: 81–88

- Lovibond, S. (1996) 'Ethical Upbringing: from Connivance to Cognition' in Lovibond and Williams (eds) *Essays for David Wiggins: Identity, Truth and Value* (Blackwell Publishing)
- Lovibond, S., and Williams, S. (1996) *Essays for David Wiggins: Identity, Truth and Value* (Blackwell Publishing)
- Lowe, E.J. (2002) 'Material Coincidence and the Cinematographic Fallacy: A Response to Olson' (Discussion), *The Philosophical Quarterly* **52**: 369–372
- Lowe, E.J. (2003) 'Review of *Sameness and Substance Renewed*', *Mind*, New Series, **112**(October): 448
- Lowe, E.J. (2005) 'Is Conceptualist Realism a Stable Position?' in *Philosophy and Phenomenological Research* **LXXI**(2): 456–461
- Luarner, F. and Malagelada (2003) 'Gut flora in health and disease', *Lancet* **361** (9356): 512–9
- Mach, E. (1905) *Erkenntnis und Irrtum: Skizzen zur Psychologie der Forschung* (J.A. Barth)
- Mackie, P. (2006) *How Things Might have Been: Individuals, Kinds, and Essential Properties* (Oxford: Clarendon Press)
- Madden, R. (forthcoming) 'Thinking Parts' in *Essays on Animalism* (eds) S. Blatti and P. Snowdon (Oxford University Press)
- Madden, R. (draft) 'The Persistence of Animate Organisms'
- Malaterre, C. (2013) 'Life as an Emergent Phenomenon: From an Alternative to Vitalism to an Alternative to Reductionism', in C. Wolfe and S. Normandin (eds) *Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800–2010* (Springer)
- Malpas, J. (2013) 'Donald Davidson', *The Stanford Encyclopedia of Philosophy* (Summer 2013 Edition), Edward N. Zalta (ed.), forthcoming URL = <<http://plato.stanford.edu/archives/sum2013/entries/davidson/>>.
- Mann, T. (1948/1999) *Doctor Faustus: The Life of the German Composer Adrian Leverkühn, As Told By A Friend* (New York: AA Knopf)
- Margulis, L. (1993a) 'Origins of Species: Acquired Genomes and Individuality', *Biosystems* **31**: 121–5
- Margulis, L. and Sagan, D. (1993b) *The Garden of Microbial Delights: A Practical Guide to the Subvisible World* (Kendal/Hunt)
- Margulis, L. and Sagan, D. (2001) 'The Beast With Five Genomes', *Natural History Magazine*, online at : www.naturalhistorymag.com/htmlsite/master.html?http://www.naturalhistorymag.com/htmlsite/0601/0601_feature.html
- Martin, R., and Barresi, J. (2000) *Naturalization of the Soul: Self and Personal Identity in the Eighteenth Century* (Routledge)
- Martin, R., and Barresi, J. (2006) *The Rise and Fall of Soul and Self: An Intellectual History of Personal Identity* (Columbia University Press: New York)
- Mauss, M. (1938/1985) 'A Category of the human mind: the notion of person; the notion of self' in M. Carrithers, S. Collins, and S. Lukes (eds) *The Category of the Person: Anthropology, Philosophy, History* (Cambridge University Press)
- Mayr, E. (1942) *Systematics and the Origin of Species* (Columbia University Press)

- Mayr, E. (1969) *Principles of Systematic Zoology* (McGraw-Hill, New York)
- Mayr, E. (1982) *The Growth of Biological Thought* (Cambridge: Harvard University Press)
- Mayr, E. (2004) *What Makes Biology Unique? Considerations on the Autonomy of a Scientific Discipline* (Cambridge: Cambridge University Press)
- McDowell, J. (1994) *Mind and World* (Cambridge, MA: Harvard University Press)
- McLaughlin, B., and Bennett, K. (2014) ‘Supervenience’, *The Stanford Encyclopedia of Philosophy* (Spring Edition), E.N. Zalta (ed.) forthcoming URL = <<http://plato.stanford.edu/archives/spr2014/entries/supervenience/>>.
- McMichael, A. (1986) ‘The Epistemology of Essentialist Claims’, *Midwest Studies in Philosophy* **11**: 35–52
- Mei, Tsu-Lin (1961) ‘Subject and Predicate: a Grammatical Preliminary’, *Philosophical Review* LXX
- Merricks, T. (2001a) ‘How to live forever without saving your soul: Physicalism and immortality’, in K. Corcoran (ed.) *Soul, Body and Survival* (Ithaca: Cornell University Press)
- Merricks, T. (2001b) *Objects and Persons* (Oxford: Clarendon Press)
- Metchnikoff, E. (1907) *Immunity in Infective Diseases* (Cambridge: Cambridge University Press)
- Mill, J.S. (1843) *A System of Logic: Ratiocinative and Inductive* (Harper and Brother: New York)
- Miller, J. (1978) *The Body in Question* (New York: Random House)
- Minic, Z. and Hervé, G. (2004) ‘Biochemical and enzymological aspects of the symbiosis between the deep-sea tubeworms *Riftia Pachyptila* and its bacterial endosymbionts’, *Eur. J. Biochem.* **271**: 3093–102
- Moore, A.W. (1996) ‘On There Being Nothing Else to Think, or Want, or Do’, in Lovibond, S., and Williams, S. (eds) *Essays for David Wiggins: Identity, Truth and Value* (Blackwell Publishing)
- Munzer, S. (1993) ‘Aristotle’s Biology and the Transplantation of Organs’, *Journal of the History of Biology* **26**(1): 109–129
- Nagel, E. (1961) *The Structure of Science: Problems in the Logic of Scientific Explanation* (New York: Harcourt, Brace & World)
- Nagel, T. (1998) ‘Reductionism and Anti-reductionism’ in G.R. Bock and J.A. Goode (eds) *The Limits of Reductionism in Biology* (Chichester: John Wiley & Sons): 3–10
- Nicholson, D., and Gawne, R. (2013) ‘Rethinking Woodger’s Legacy in the Philosophy of Biology’ *Journal of the History of Biology* (Springer)
- Nietzsche, F. (1887/1996) *On the Genealogy of Morality* (Oxford: Oxford World Classics)
- Noonan, H. (1976) ‘Wiggins on Identity’, *Mind* **85**
- Noonan, H. (1978) ‘Sortal Concepts and Identity’, *Mind* **87**
- Noonan, H. (1981) ‘Review of *Sameness and Substance* in *The Philosophical Quarterly*, **31**(124)
- Noonan, H. (1989) *Personal Identity* (London: Routledge)

- Noonan, H. (1998) 'Animalism versus Lockeanism: A Current Controversy', *The Philosophical Quarterly* **48**: 302–318
- Normandin, S., and Wolfe, C.T. (eds) (2013) *Vitalism and the Scientific Image in Post-Enlightenment Life Science, 1800–2010* (Springer)
- Nozick, R. (1981) *Philosophical Explanations*, (Cambridge: Harvard University Press)
- O'Brien, F. (1939) *At Swim-Two-Birds* (Longman Green and Co.)
- Ochman, H., Lawrence, J.G. and Groisman, E.A. (2000) 'Lateral gene transfer and the nature of bacterial innovation', *Nature* **45**
- O'Connor, T. (1994) 'Emergent Properties', *American Philosophical Quarterly* **31**: 91–104
- O'Connor, T. and Wong, Hong Yu (2012) 'Emergent Properties', *The Stanford Encyclopedia of Philosophy (Spring 2009 Edition)*, Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/spr2009/entries/properties-emergent/>>
- Odegard, D. (1972) 'Identity through Time', *The American Philosophical Quarterly* **9**
- O'Hara, A.M. and Shanahan, F. (2006) 'The gut flora as forgotten organ', *EMBO Rep.* **7**: 688–93.
- Okasha, S. (2002) 'Darwinian Metaphysics: Species and the Question of Essentialism', *Synthese* **131**(2): 191–213
- Olson, E. (1997) *The Human Animal: Personal Identity Without Psychology* (Oxford: Oxford University Press)
- Olson, E. (2001) 'Material Coincidence and the Indiscernibility Problem', *The Philosophical Quarterly* **51**: 337–355
- Olson, E. (2003a) 'Lowe's Defence of Constitutionalism' (Discussion), *The Philosophical Quarterly* **53**: 92–95
- Olson, E. (2003b) 'Was Jekyll Hyde?', *Philosophy and Phenomenological Research* **66**: 328–348
- Olson, E. (2007) *What Are We? A Study in Personal Ontology* (Oxford: Oxford University Press)
- O'Malley, M., and Dupré, J. (2005) 'Fundamental Issues in Systems Biology', *Bioessays* **27**(12): 1270–1276
- Owen, G.E.L. (1986). 'Aristotle on the Snares of Ontology', in *Logic, Science, and Dialectic: Collected Paper in Greek Philosophy*: 259–78.
- Paracer, S. and Ahmadjian, V. (2000) *Symbiosis: An Introduction to Biological Associations*, 2nd Edition (Oxford: Oxford University Press)
- Parfit, D. (1971) 'Personal Identity', *Philosophical Review* **80**: 3–27
- Parfit, D. (1984) *Reasons and Persons* (Oxford University Press)
- Pasnau, R. (2004) 'Form, Substance, and Mechanism', *The Philosophical Review* **113**(1): 31–88
- Paterson, H. (1985) 'The Recognition Concept of Species' in E. Vrba (ed.) *Species and Speciation*, Transvall Museum Monograph **4**: 21–29
- Perry, J. (1972) 'Can the self divide?', *Journal of Philosophy* **69**: 463–488
- Poplawski, N. and Gillett, G. (2009) 'Ethics and Embryos' in J.P. Lizza (ed.) *Defining the Beginning and End of Life* (John Hopkins University Press): 379–381

- Post, J. (1993) 'Review of Jaegwon Kim's *Supervenience and Mind*', *Philosophy of Science* **62**: 338–340
- Powell, A. and Dupré, J. (2009) 'From Molecules to Systems: The Importance of Looking Both Ways', *Studies in History and Philosophy of Biological and Biomedical Sciences* **40**: 54–64
- Pradeu, T. and Carosella, E. (2006) 'The Self Model and the Definition of Biological Identity in Immunology', *Biology and Philosophy* **21**: 235–252
- Pradeu, T. (2010), 'What is an organism? An immunological answer', in *History and Philosophy of the Life Sciences*, special issue on *The Concept of Organism: Historical, Philosophical, Scientific Perspectives*, Huneman, P., Wolfe, C.T. (eds)
- Putnam, H. (1967) 'Psychological Predicates', *Art, Mind, and Religion*, Capitan and Merrill (eds) (University of Pittsburgh Press)
- Putnam, H. (1973) 'Meaning and Reference', *Journal of Philosophy* **70**: 699–711
- Putnam, H. (1975) *Mind, Language, and Reality: Philosophical Papers* (Cambridge University Press)
- Putnam, H. (2004) *Ethics Without Ontology* (Harvard University Press, Cambridge, Mass.)
- Quine, W.V.O. (1960) *Word and Object* (Cambridge Mass.: MIT Press)
- Quine, W.V.O. (1963) 'On What 'There Is' in *From a Logical Point of View*: 1–19 (Harper and Row)
- Quine, W.V.O. (1971) 'Speaking of Objects' in *Ontological Relativity and Other Essays* (New York: Columbia University Press)
- Quine, W.V.O. (1980) *From a Logical Point of View* (Harper and Row)
- Quinton, A. (1975) 'The Soul', in J. Perry (ed.) *Personal Identity* (Berkeley: University of California Press)
- Rea, M. (1997) 'Supervenience and Co-Location', *American Philosophical Quarterly* **34**: 367–375
- Reid, T. (1785) *Essays on the Intellectual Powers of Man* (Edinburgh: John Bell)
- Rescher, N. (1982) *Empirical Inquiry* (London)
- Ricchetti, M., Fairhead, C., and Dujon, B. (1999) 'Mitochondria DNA repairs double-strand breaks in yeast chromosomes', *Nature* **402**: 96–100
- Robinson, H. (2014) 'Substance', *The Stanford Encyclopedia of Philosophy* (Spring Edition), E.N. Zalta (ed.), forthcoming URL = <<http://plato.stanford.edu/archives/spr2014/entries/substance/>>
- Roe, S. (1996) 'The Life Sciences' in *The Cambridge History of Science: Volume 4: Eighteenth-century Science*, Roy Porter (ed.) (Cambridge: Cambridge University Press): 397–4091
- Roll-Hansen, N. (1984) 'E.S. Russell and J.H. Woodger: The Failure of Two Twentieth-Century Opponents of Mechanistic Biology', in *Journal of the History of Biology*, **17**(3): 399–428
- Rorty, A.O. (1990) 'Persons and Personae' in C. Gill (ed.) *The Person and the Human Mind: Issues in Ancient and Modern Philosophy* (Clarendon Press: Oxford)
- Rose, S., R.C. Lewontin, and L.J. Kamin, (1984), *Not in Our Genes: Biology, Ideology and Human Nature* (London: Penguin Books)

- Rosenberg, A. (2006) *Darwinian Reductionism: Or, How to Stop Worrying and Love Molecular Biology* (University of Chicago Press)
- Rosenberg, A. (2003) 'Reductionism in a Historical Science', in van Regenmortel and Hull (eds) *Reductionism in the Biomedical Sciences* (Wiley-Blackwell)
- Rosenberg, A. (1985) *The Structure of Biological Science* (Cambridge: Cambridge University Press)
- Rosenthal, D. (2009) 'Aristotle's Hylomorphism' (via Philpapers)
- Ross, D. (1923/1995) *Aristotle* (Routledge)
- Rudder Baker, L. (2000) *Persons and Bodies: A Constitution View* (Cambridge, Cambridge University Press)
- Rudder Baker, L. (2002) 'On Making Things Up: Constitution and Its Critics', *Philosophical Topics* **30**: 31–52
- Rudder Baker, L. (2004) 'The Ontology of Artifacts', *Philosophical Explorations* **7**: 99–112
- Rudder Baker, L. (2008), 'The Shrinking Difference Between Artifacts and Natural Objects', in *Newsletter on Philosophy and Computers*, Piotr Boltuc (ed.), *American Philosophical Association Newsletters* **7**:2: 1–10
- Ruse, M. (1973) *The Philosophy of Biology* (London: Hutchinson & Co.)
- Ruse, M. (1987/1992) 'Biological Species: Natural Kinds, Individuals, or What?' *British Journal for the Philosophy of Science* **38**: 225–42, repr. in *The Units of Evolution: Essays on the Nature of Species*, ed. Marc Ereshefsky, 343–61. (Cambridge, MA: MIT Press)
- Russell, B. (1925) *Mysticism and Logic* (London: Longman's, Green & Co.)
- Rykwert, J. (1992) 'Organic and Mechanical', *Anthropology and Aesthetics*: 11–18
- Salmon, W. (1971) 'Statistical Explanation', in *Statistical Explanation and Statistical Relevance*, W. Salmon, (ed.), 29–87 (Pittsburgh: University of Pittsburgh Press)
- Salmon, W. (1989) *Four Decades of Scientific Explanation* (Minneapolis: University of Minnesota Press)
- Sarkar, S. (1992) 'Models of Reduction and Categories of Reductionism', *Synthese* **91**, 167–194
- Sarkar, S. (1998), *Genetics and reductionism* (Cambridge: Cambridge University Press)
- Schaffer, J. (2003) 'Is there a fundamental level?', *Nôus* **37**(3): 498–517
- Schaffer, J. (2009) 'On What Grounds What', in *Metametaphysics*: 347–83 (eds) Chalmers, Manley and Wasserman (Oxford University Press)
- Schaffer, J. (2010) 'Monism: The Priority of the Whole', *Philosophical Review* **119**(1): 31–76
- Schaffer, J. (2013) 'The Metaphysics of Causation', *The Stanford Encyclopedia of Philosophy* (Winter 2013 Edition), E.N. Zalta (ed.) URL=<<http://plato.stanford.edu/archives/win2013/entries/causation-metaphysics/>>.
- Schaffner, K. (1969), 'The Watson-Crick model and reductionism', *British Journal for the Philosophy of Science* **20**, 325–348
- Schlanger, J. (1971), *Les métaphores de l'organisme* (Paris: Vrin)
- Schofield, M. (2002), *Empedocles* in E. Craig (ed.) *Routledge Encyclopedia of Philosophy*, Routledge – <http://www.rep.routledge.com/article/A046SECT5>

- Schwartz, S. (1978) 'Putnam on Artifacts', *Philosophical Review* **87**: 566–574
- Scriven, M. (1962) 'Explanations, Predictions, and Laws', in Minnesota Studies in the Philosophy of Science, vol 3 *Scientific Explanation, Space, and Time*, H. Feigl and G. Maxwell (eds), 170–230. (Minneapolis: University of Minnesota Press)
- Sears, C.L. (2005) 'A dynamic partnership: celebrating our gut flora', *Anaerobe* **11**: 247–51
- Shapiro, R. (1986) *Origins: A Skeptic's Guide to the Creation of Life on Earth* (New York: Bantam Books)
- Shoemaker, S. (1963) *Self-Knowledge and Self-Identity* (Ithaca: Cornell University Press)
- Shoemaker, S. (1970) 'Persons and their pasts', *American Philosophical Quarterly* **7**: 269–285
- Shoemaker, S. (1984) 'Personal Identity: A Materialist's Account' in S. Shoemaker and R. Swinburne (eds.) *Personal Identity* (Oxford: Blackwell): 69–132
- Shoemaker, S. (1999) 'Self, body, and coincidence', *Proceedings of the Aristotelian Society*, supp. **73**: 287–306
- Shoemaker, S. (2004a) 'Brown-Brownson Revisited', *The Monist* **87**(4): 573–593
- Shoemaker, S. (2004b) 'Reply to Wiggins', *The Monist* **87**(4): 610–613
- Sider, T. (1993) 'Van Inwagen and the Possibility of Gunk' in *Analysis* **53**: 285–289
- Sider, T. (2001) *Four Dimensionalism* (Oxford: Clarendon Press)
- Sider, T. (2011) *Writing the Book of the World* (Oxford University Press)
- Simons, P. (1987) *Parts: A Study in Ontology* (Oxford University Press)
- Skinner, Q. (2002) *Visions of Politics: Vol. 1: Regarding Method* (Cambridge University Press)
- Smith, J.S. (2000) 'The Concept of Information in Biology', *Philosophy of Science* **67**(2): 177–194
- Snowdon, P. (1990) 'Persons, animals and ourselves' in C. Gill (ed.) *The Person and the Human Mind* (Oxford: Clarendon Press)
- Snowdon, P. (1996) 'Persons and Personal Identity' in S. Lovibond and S. Williams (eds.), *Essays for David Wiggins: Identity, Truth and Value*, (Blackwell Publishing)
- Snowdon, P. (1998) 'Strawson, Peter Frederick', in E. Craig (ed.), *Routledge Encyclopedia of Philosophy*. London: Routledge. Retrieved September 18, 2013, from <http://www.rep.routledge.com/article/DD066SECT5>
- Snowdon, P. (2009) 'Peter Frederick Strawson', in *The Stanford Encyclopedia of Philosophy* (Fall 2009 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2009/entries/strawson/>
- Snowdon, P. (2009) 'On the Sortal Dependency of Individuation Thesis' in *From Truth to Reality: New Essays in Logic and Metaphysics* (ed.) H. Dyke (Routledge)
- Soames, S. (2003) *Philosophical Analysis in the Twentieth Century*, vol.1 (Princeton University Press)
- Sober, E. (2000) *Philosophy of Biology* (2nd Edition) (Boulder, Colorado: Westview Press)
- Sosa, E. (1987) 'Subjects among other things', in J. Tomberlin (ed.) *Philosophers' Perspectives*, I (Atascadero, CA: Ridgeview)
- Sperry, R.W. (1966) *Brain and Conscious Experience* J.C. Eccles (ed.) (New York)

- Spinoza, B. (1883/1955) *On the Improvement of the Understanding / The Ethics / Correspondence* (vol. 2) R.H.M. Elwes (trans.) (Dover Publications)
- Sterelny, K., and Griffiths, P. (1999) *Sex and Death: An Introduction to Philosophy of Biology* (University of Chicago Press)
- Steward, H. (2012) *A Metaphysics for Freedom* (Oxford University Press)
- Steward, H. (2013) 'Processes, Continuants, and Individuals', *Mind* **122**
- Strathern, M. (1992) *Reproducing the Future: Essays on Anthropology, Kinship, and the New Reproductive Technologies* (London: Routledge)
- Strawson, P.F. (1959) *Individuals: An Essay in Descriptive Metaphysics* (Methuen)
- Strawson, P.F. (1962) 'Freedom and Resentment', *Proceedings of the British Academy* **48**: 1–25
- Strawson, P.F. (1974) *Subject and Predicate in Logic and Grammar* (Oxford University Press)
- Strawson, P.F. (1981) 'Review of *Sameness and Substance*', *Mind*, New Series, **90**(360): 603–607
- Strawson, P.F. (1992) *Analysis and Metaphysics: An Introduction to Philosophy* (Oxford University Press)
- Swinburne, R. (1984) 'Personal Identity: The Dualist Theory', in Sydney Shoemaker and Richard Swinburne (eds.) *Personal Identity* (Blackwell Publishing): 22–34
- Taylor, C. (2003) 'Ethics and Ontology', *The Journal of Philosophy* **100**(6): 305–320
- Tamny, M. (1990) 'Atomism and the Mechanical Philosophy', in *Companion to the History of Modern Science*, R.C. Olby, G.N. Cantor, J.R.R. Christie, and M.J.S. Hodge (eds) (Routledge: London and New York): 597–609
- Theurer, K.L. (*forthcoming*) 'Seventeenth-century Mechanism: An Alternative Framework for Reductionism'
- Thiel, U. (1998) 'Locke and Eighteenth-Century Materialist Conceptions of Personal Identity', *The Locke Newsletter* **29**: 59–83.
- Thiel, U. (2011) *The Early Modern Subject: Self-Consciousness and Personal Identity from Descartes to Hume* (Oxford University Press)
- Thomas, L. (1974) *The Lives of a Cell: Notes of a Biology Watcher* (Harmondsworth: Penguin Books)
- Thomson, J.J. (1983) 'Parthood and Identity Across Time', *Journal of Philosophy* **80**: 201–220
- Thomson, J.J. (1997) 'People and their Bodies' in J. Dancy (ed.) *Reading Parfit* (Blackwell Publishers): 202–229
- Thomson, J.J. (1998) 'The Statue and the Clay', *Noûs* **32**: 149–173
- Toulmin, S. and Goodfield, J. (1962) *The Architecture of Matter* (University of Chicago Press)
- Tur, R. (1987) 'The "Person" in Law', in A. Peacocke and G. Gillett (eds) *Persons and Personality* (Oxford: Blackwell)
- Unger, P. (1979a) 'I do not exist' in G. Macdonald (ed.) *Perception and Identity* (Ithaca, NY: Cornell University Press)

- Unger, P. (1979b) 'There are no ordinary things', *Synthese* **41**: 117–154
- Unger, P. (1990) *Identity, Consciousness and Value* (New York: Oxford University Press)
- Uzgalis, W. (2012) 'John Locke', *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/fall2012/entries/locke/>>.
- Vaesens, K. (2012) 'The cognitive bases of human tool use', *Behavioral and Brain Sciences* **35**: 203–262
- Van Inwagen, P. (1981) 'The Doctrine of Arbitrary Undetached Parts', *The Pacific Philosophical Quarterly* **62**: 123–137
- Van Inwagen, P. (1990) *Material Beings* (Ithaca: Cornell University Press)
- Van Inwagen, P. (1997) 'Materialism and the Psychological-continuity view of Personal Identity', *Noûs*, supp. *Philosophical Perspectives* **11**: 305 – 319
- Van Valen, L. (1976) 'Ecological Species, Multispecies, and Oaks', *Taxon* **25**: 233–239
- Vutyavanich, T., Piromlertamorn, W., and Nunta, S. (2010) 'Rapid freezing versus slow programmable freezing of human spermatozoa', *Fertility and Sterility* **93**: 1921–8
- Walmsley, J. (2000) "'Morbis" – Locke's Early Essay on Disease', *Early Science and Medicine* **5**(4): 366–393
- Wasserman, R. (2004) 'The Constitution Question' *Noûs* **38**: 693–710
- Waters, C.K. (1990), 'Why the antireductionist consensus won't survive the case of classical Mendelian genetics', in A. Fine, M. Forbes and L. Wessels (eds), *Proceedings of the biennial meeting of the Philosophy of Science Association 1* (East Lansing, MI: Philosophy of Science Association), 125–139
- Whiting, J. (2008) 'The Lockeanism of Aristotle', *Antiquorum Philosophia*
- Wiggins, D. (1963) 'The Individuation of Things and Places' (a Symposium with M.J. Woods), *Proceedings of the Aristotelian Society*, supplementary volumes, **37**: 177–216
- Wiggins, D. (1967) *Identity and Spatio-Temporal Continuity* (Oxford: Blackwell)
- Wiggins, D. (1968) 'On Being in the Same Place at the Same Time', *Philosophical Review* **70**: 90–95
- Wiggins, D. (1973) 'Towards a Reasonable Libertarianism' in Ted Honderich (ed.) *Essays on Freedom of Action* (London: Routledge and Kegan Paul)
- Wiggins, D. (1976) 'Locke, Butler and the Stream of Consciousness: And Men as a Natural Kind', *Philosophy* **51**: 131–158
- Wiggins, D. (1978) 'Are the Criteria of Identity that hold for a Work of Art in Different Arts Aesthetically Relevant? Reply to Richard Wollheim', *Ratio* **20**: 52–68
- Wiggins, D. (1979) 'Mereological Essentialism: Asymmetrical Dependence and the Nature of Continuants', in E. Sosa (ed.) *Essays on the Philosophy of Roderick Chisholm* (Grazer Philosophische)
- Wiggins, D. (1980) *Sameness and Substance* (Cambridge, MA: Harvard University Press)
- Wiggins, D. (1982) 'Heraclitus' conceptions of flux, fire and material persistence' in M. Schofield and M. Nussbaum (eds) *Language and Logos: Studies in Ancient Greek Philosophy presented to G.E.L. Owen* (Cambridge: Cambridge University Press)

- Wiggins, D. (1987) 'The Person as Object of Science, as Subject of Experience, and as Locus of Value', in A. Peacocke and G. Gillett (eds) *Persons and Personality* (Oxford: Blackwell)
- Wiggins, D. (1987/1991) *Needs, Values, Truth* (Oxford, Blackwell)
- Wiggins, D. (1996) 'Replies' in S. Lovibond and S. Williams (eds), *Essays for David Wiggins: Identity, Truth and Value* (Blackwell Publishing)
- Wiggins, D. (1997a) 'Sortal Concepts: a Reply to Fei Xu', *Mind and Language* **12**: 413–21
- Wiggins, D. (1997b) 'Languages as Social Objects', *Philosophy* **72**(282): 499–524
- Wiggins, D. (1998) *Needs, Values, Truth* (Oxford University Press)
- Wiggins, D. (1999) 'Substance' in A.C. Grayling (ed.) *Philosophy 1: A Guide Through the Subject* (Oxford: Oxford University Press)
- Wiggins, D. (2000) 'Sameness, substance and the human animal', *The Philosophers' Magazine*.
- Wiggins, D. (2001) *Sameness and Substance Renewed* (Cambridge: Cambridge University Press)
- Wiggins, D. (2004a) 'Reply to Shoemaker', *The Monist* **87**(4): 594–609
- Wiggins, D. (2004b) 'Reply to Shoemaker's Reply', *The Monist* **87**(4): 614–615
- Wiggins, D. (2005a) 'Reply to Bakhurst', *Philosophy and Phenomenological Research* **17**(2): 442–448
- Wiggins, D. (2005a) 'Précis of "Sameness and Substance Renewed"', *Philosophy and Phenomenological Research* **17**(2) 442–448
- Wiggins, D. (2012) 'Identity, Individuation and Substance', *European Journal of Philosophy* **20**(1): 1–25
- Williams, B. (1956–7) 'Personal Identity and Individuation', *Proceedings of the Aristotelian Society* **57**
- Williams, B. (1973) *Problems of the Self* (Cambridge: Cambridge University Press)
- Williams, B. (1974) 'The Truth in Relativism', *Proceedings of the Aristotelian Society*, New Series **75**: 215–228
- Williams, B. (1978) 'Hylomorphism', Princeton Classical Philosophy Colloquium, December 7th
- Williams, B. (2002) *Truth and Truthfulness: An Essay in Genealogy* (Princeton University Press)
- Williams, G.C. (1992) *Natural Selection: Domains, Levels, and Challenges* (Oxford University Press)
- Wilson, J. (1999), *Biological Individuality* (Cambridge: Cambridge University Press), and Dyer, B.D. (1989), 'Symbiosis and Organismal Boundaries', *American Zoologist* **29**: 1085–1093
- Williams, S.G. (2006) 'David Wiggins' in the *Continuum Encyclopedia of British Philosophy*, (eds) Goulder, N., Grayling, A.C., and Pyle, A. (London: Thoemmes Continuum).
- Wilson, E.O. (1975) *Sociobiology: The New Synthesis* (Cambridge, MA: Harvard University Press)

- Wilson, R. (1999) 'Realism, Essence, and Kind: Resuscitating Species Essentialism?' in *Species: New Interdisciplinary Essays*, ed. Robert Wilson (Cambridge MA: MIT Press): 187–208
- Wilson, R., M. Barker, and I. Brigandt (2007) 'When Traditional Essentialism Fails: Biological Natural Kinds', *Philosophical Topics* **35**: 189–215
- Wimsatt, W. (1976) 'Reductive Explanation: A Functional Account', in R.S. Cohen and A. Michalos (eds) *Proceedings of the 1974 meeting of the Philosophy of Science Association*, (Dordrecht: D. Reidel): 671–710
- Wimsatt, W. (1980) 'Reductionistic research strategies and their biases in the units of selection controversy', in T. Nickles (ed.), *Scientific Discovery: Case Studies* (Dordrecht: D. Reidel): 213–259
- Wolfe, C.T. (2010) 'Do Organisms have an Ontological Status?', *History and Philosophy of the Life Sciences* **32**(2)
- Wollheim, R. (1989) *The Thread of Life* (Cambridge: Cambridge University Press)
- Woodger, J.H. (1930–31) 'The "concept of organism" and the relation between embryology and genetics.' *Quarterly Review of Biology* **5**:1–22
- Woodger, J.H. (1937) *The Axiomatic Method in Biology* (Cambridge University Press)
- Woodger, J.H. (1952) *Biology and Language* (Cambridge University Press)
- Wright, R. (1994) *The Moral Animal: Evolutionary Psychology and Everyday Life* (New York, Pantheon Books)
- Yablo, S. (2003) 'Tables Shmables: Review of David Wiggins, *Sameness and Substance Renewed*', in the *Times Literary Supplement* (July)
- Yolton, J. (1983) *Thinking Matter: Materialism in Eighteenth-Century Britain* (Minneapolis).
- Young, J.Z. (1971) *An Introduction to the Study of Man* (Oxford: The Clarendon Press)
- Zemach, E.M. (1974) 'In Defence of Relative Identity' *Philosophical Studies* **26**: 3–4