

**Novel Sensations: Modernist Fiction
and the Problem of Qualia**

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What was Stephen's auditive sensation?

He heard in a profound ancient male unfamiliar melody the accumulation of the past.

What was Bloom's visual sensation?

He saw in a quick young male familiar form the predestination of a future.

James Joyce, *Ulysses*

Consider [...] a character whose adventures are related to me in a novel. The author may multiply the traits of his hero's character, may make him speak and act as much as he pleases, but all this can never be equivalent to the simple and indivisible feeling which I should experience if I were able for an instant to identify myself with the person of the hero himself.

Henri Bergson, *An Introduction to Metaphysics*

I get up, go out, and everything is changed. The blood drains from my head, the noise of things bursting, merging, avoiding one another, assails me on all sides, my eyes search in vain for two things alike, each pinpoint of skin screams a different message, I drown in the spray of phenomena. It is at the mercy of these sensations, which happily I know to be illusory, that I have to live and work. It is thanks to them I find a meaning.

Samuel Beckett, *Molloy*

Introduction: Modernist Fiction and the Problem of Qualia

Writing, however, stored writing – no more and no less.

Friedrich Kittler, *Discourse Networks 1800/1900*

Walter Pater's contention that 'all art constantly aspires to the condition of music'; Joseph Conrad's claim that his aim as a novelist was 'above all, to make you see'; D. H. Lawrence's appeal to the 'blood consciousness'; Clement Greenberg's call for an art designed for 'eyesight alone'; James Joyce's declaration that modern man 'has an epidermis rather than a soul': in these and many other modernist dictums, the senses are asserted to be crucial to both the production and consumption of art.¹ Modernism has frequently been characterised as an aesthetic of the human body; as a mode that pictured itself engaging directly with eyes, ears and hands, (even with the proximate senses: with tongue and nose).² At the same time, from the mid-nineteenth to the early-twentieth centuries the senses themselves became the fraught frontier of a philosophical reappraisal of the nature of consciousness itself, registered in the burgeoning disciplines of psychoanalysis, phenomenology and associated philosophies and sciences of mind.

Led by scientific developments in the study of the senses, and by technological innovations – telephone, gramophone, cinematograph – which allowed sense data to be stored in a neutral medium and disseminated seemingly without loss,

¹ Walter Pater, *The Renaissance Studies in Art and Poetry* (Oxford: Oxford University Press, 1986), p. 86; Joseph Conrad, preface to *The Nigger of the 'Narcissus'* (London: 1898), p. x; D. H. Lawrence, *Fantasia of the Unconscious* (London: M. Secker, 1930), p. 68; Clement Greenberg, 'Introduction to Exhibition of Barnett Newman' in *The Collected Essays and Criticism*, 4 vols., ed. John O'Brian (Chicago; London: University of Chicago Press, 1993), vol. iv, p. 59; James Joyce, qtd. in Louis Berroné, *James Joyce in Padua* (New York: Random House, 1977), p. 21.

² See, in particular, Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002).

theoretical approaches to the senses and their representation in language were often committed to the idea that literature made the human sensorium *legible*. As Friedrich Kittler argued in *Discourse Networks*, the emergence of such technologies led directly to profound reappraisals of the relationship between mind, sensation, and external world:

What is unthinkable today was once reality: no film stored the movements they made or saw, no phonograph, the noise they made or heard. For whatever existed failed before time. Silhouettes or pastel drawings fixed facial expressions, and scores were unable to store noise. But once a hand took hold of a pen, something miraculous occurred: the body, which did not cease to write itself, left strangely unavoidable traces.³

In *The Renaissance*, Walter Pater famously argued that the burden of criticism should be relocated from analysis of the external world to consideration of individual subjective perceptions. “‘To see the object as in itself it really is,’” has been justly said to be the aim of all true criticism whatever’, he wrote, ‘and in aesthetic criticism the first step towards seeing one’s object as it really is, is to know one’s impression as it really is, to discriminate it, to realise it distinctly.’⁴ After Pater, living in the moment, burning with a hard, gem-like flame, and attending to the minute particularities of subjective perceptual experience were enshrined at the heart of modernist aesthetics. But the privileging of the subjective also manifested its influence within philosophy, leading, as we shall see, to the identification of ‘consciousness’ itself as little more than the ‘having’ of fleeting and temporally disconnected sensory impressions.

At the same time, modernity’s preoccupation with hyper-subjectivity quickly raised some profound philosophical and aesthetic problems. In 1926 I. A. Richards declared:

³ Friedrich Kittler, *Discourse Networks 1800-1900*, tr. Michael Meteer and Chris Cullens (Stanford: Stanford University Press, 1990), p. 8.

⁴ Pater, *The Renaissance*, p. x.

Too great insistence upon the quality of the momentary *consciousness* which the arts occasion has in recent times been a prevalent critical blunder. The Epilogue to Pater's *Renaissance* is the *locus classicus*.⁵

Despite the often utopian aims of contemporary sciences of sensation, analytical philosophers from the period quickly recognised that, no matter how well mapped, sensory experiences remained stubbornly material, resisting translation into language of *any* kind. As we shall see, the novel models of consciousness provided by the descriptionist, localising projects of Hermann von Helmholtz and Ernst Mach led to a theoretical relocation of the Cartesian 'res cogitans' into individual instances of sense-perception and, within philosophy, to the identification and isolation of properties of consciousness subsequently labelled 'qualia'.

Qualia are defined in the *Oxford Dictionary of Philosophy* as:

The felt or phenomenal qualities associated with experiences, such as the feeling of a pain, or the hearing of a sound, or the viewing of a colour. To know what it is like to have an experience is to know its qualia.⁶

According to philosophers like Thomas Nagel, Frank Jackson and John Searle, qualia account for what David Chalmers calls the 'hard problem' of consciousness: the apparent impossibility of explaining just how it is that wet, grey brains can give rise to ineffable, irreducible, and ontologically subjective mental experiences.⁷ Chalmers argues that such phenomena are:

best characterized as 'the subjective quality of experience'. Conscious mental states have a *qualitative feel* – an associated quality of experience. These

⁵ I. A. Richards, *Principles of Literary Criticism* (London: Kegan Paul, Trench, Trubner, 1925), p. 132.

⁶ Simon Blackburn, *The Oxford Dictionary of Philosophy*, 2nd ed. (Oxford: Oxford University Press 2008), p. 302.

⁷ David Chalmers, 'Facing up to the Problem of Consciousness', *Journal of Consciousness Studies*, vol. ii, (1995), 200–219, p. 200.

qualitative feels are also known as phenomenal qualities, or *qualia* for short. The problem of explaining these phenomenal qualities is just the problem of explaining consciousness.⁸

In Thomas Nagel's terms qualia are the 'what is it likeness' of all conscious mental states.⁹ Frank Jackson defines them as 'certain features of the bodily sensations especially, but also of certain perceptual experiences, which no amount of purely physical information includes.'¹⁰ For those who subscribe to the thesis, qualia are said to account for what Joseph Levine terms the 'explanatory gap' between brain and mind: the seemingly uncrossable gulf between our knowledge of neurological states and the conscious experiences those states cause or, indeed, are identical with.¹¹ Thus the problem of qualia is one which engages with epistemological, aesthetic and ethical concerns.

This thesis is not a work of philosophy, and it must be acknowledged that qualia remain hugely controversial within contemporary philosophy of mind. While qualiaphile philosophers argue that qualia constitute phenomena that any explanation of consciousness *must* explain in order to be complete, qualiaphobes – the most influential of who is Daniel Dennett – argue that they are an incoherent notion founded on a metaphysical sleight of hand, and simply do not exist.¹² For these philosophers qualia represent the last vestiges of our Cartesian inheritance; they are

⁸ David Chalmers, *The Conscious Mind: In Search of a Fundamental Theory* (New York; Oxford: Oxford University Press, 1995), p. 4.

⁹ Thomas Nagel, 'What Is It Like to Be a Bat?' in *The Philosophical Review*, lxxxiii (1974) 435-450, p. 435.

¹⁰ Frank Jackson, 'Epiphenomenal Qualia' in *Philosophical Quarterly*, vol. xxxii (1982) 127-136, p. 137.

¹¹ See Joseph Levine, 'Materialism and Qualia, the Explanatory Gap' in *Pacific Philosophical Quarterly*, vol. lxiv (1983) 354-61. I discuss Levine's arguments at greater length in chapter four, 'Neuromodernism and the Explanatory Gap'.

¹² Dennett's most sustained argument along these lines is outlined in *Consciousness Explained* (London: Allen Lane, 1991), a book which Peter Carruthers argues should really be have been entitled 'consciousness explained away.' See Peter Carruthers, *Consciousness: Essays from a Higher-order Perspective* (Oxford: Oxford University Press, 2005), p. 32.

vaguely ethereal properties which are said to attend all conscious states whatever, but which actually obscure the real issues under discussion.

I will show that, whether or not qualia exist,¹³ the qualia-thesis represents a way of conceiving of the mind that rose to prominence alongside modernist narrative fiction, and, further, that the parallels between philosophical doctrines relating to qualia and modernist narrative fiction have gone on to inform contemporary debates over the novel's capacity to 'write the mind'. The question of qualia is a contested one within philosophy, one that had its origins, as I argue, in the modernist moment. But, like modernism itself, it is too often treated by those critics who do discuss it merely as a descriptive term. The ontological implications of qualia for fiction are often ignored. This thesis will therefore do two things. The first is to historicise the qualia debate, reading the emergence of the concept alongside works of fiction. The second is to ask what the consequences of a more rigorous understanding of qualia have for our reading of modernist fiction. What happens to our interpretation of such works, I will ask, when we historicise the epistemological questions attendant to them? And can the claims of contemporary neuroaesthetics and cognitive narratology – especially when applied to modernist fiction – survive an interpretation of consciousness which accepts the existence of qualia?

Though many of my arguments could apply equally to discussions of poetry in the period (especially those concerned with the role of synaesthesia and modernism's Symbolist inheritance), I focus on the novel as it is generally interpreted as a literary form which engages explicitly and in sustained fashion with the question of 'what it is

¹³ Much of the controversy over the existence of qualia is caused by the fact that philosophers find it very difficult to agree on whether, in 'denying the existence of qualia', one is denying the existence of perceptual mental experiences *as such* or merely denying the terminology of qualia and consequently denying the existence of properties of consciousness above and beyond those referred to with our folk-psychological terms 'sensation' and 'impression.' For some the debate over qualia represents an epistemological debate; for others, a debate over nomenclature.

like to be' another mind. In *Consciousness and the Novel* David Lodge states that the novel is 'arguably man's most successful effort to describe the experience of individual human beings moving through space and time' and although (as I shall show in the following chapter) Lodge's characterisation is deeply problematic, it remains a representative claim.¹⁴ Many literary critics continue to interpret the novel as a form that engages explicitly with questions of consciousness and the nature of the mind.¹⁵

As I shall argue in chapter two, qualia emerged directly from discussions over the nature of 'sense data' and 'sensibilia' in the analytical tradition during the early twentieth century, and thus as a philosophical entity the 'quale' is broadly contemporaneous with the artefacts of high modernism. Indeed the relationship between literary modernism and the emergence of qualia – traced through the Cambridge analytical tradition – is in some cases quite direct. Yet despite this parallelism, I shall argue that qualia create significant difficulties for the idea of sensory reification and for the notion of modernism as representing an 'inward turn' in any ontological sense. Though contemporary critics such as David Lodge, David Herman and Andrew Gaedkte have begun to invoke qualia in relation to literature, most have failed to appreciate the fundamentally anti-mimetic position which must obtain to any critical argument founded on recognition of them. Recent proponents of 'neuroaesthetic' or 'cognitive' approaches to narrative, such as Lisa Zunshine, Kay Young, Elaine Scarry, and Alan Palmer, are often committed to similarly

¹⁴ David Lodge, *Consciousness and the Novel* (London: Secker & Warburg 2002), p. 10.

¹⁵ See especially Ian Watt, *The Rise of the Novel: Studies in Richardson, Defoe, Fielding* (London: Chatto and Windus, 1957); Lodge, *Consciousness and the Novel*; and *The Emergence of Mind: Representations of Consciousness in Narrative Discourse in English*, ed. David Herman (Lincoln and London: University of Nebraska Press, 2011).

unsustainable paradigms, the origins of which, I shall argue, can be traced to the modernist moment itself.¹⁶

Typically accounts of modernism's engagement with sensation have concentrated on the 'explanatory gap' – between sensations and brain states, or sensations and language – in its material and scientific contexts. Many critics have attempted to 'read' the human sensorium in relation to the emergence of mnemonic and reproductive technologies, medical breakthroughs, or the trauma of war.¹⁷ Walter J. Ong and Marshall McLuhan both engaged provocatively with the notions of orality and literacy in the age of mass culture and a mass readership, arguing that the rise of print culture had long lasting (and generally deleterious) influences on the relationship between literature and the senses. Other accounts of the senses in modernism have drawn attention to the apparent 'fragmentation' of the human subject associated with the impressionist aesthetic project, often leading to a general critical engagement with what Sara Danius has termed modernism's 'crisis of the senses'.¹⁸

Approaches such as these have been accompanied by critical projects focussing on the presence (or absence) of 'the body' more generally in literature, a debate which itself developed out of many of the theoretical predilections of the early-twentieth century.¹⁹ Post-Heideggerian phenomenology implicitly rejected the qualial paradigm and the fragmented subjectivities such a paradigm suggested. Maurice

¹⁶ These critics are discussed in detail below, but see Lisa Zunshine, *Why We Read Fiction: Theory of Mind and the Novel* (Columbus, Ohio: Ohio State University Press, 2006); Kay Young, *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy* (Columbus, Ohio: Ohio State University Press, 2010); Elaine Scarry, *Dreaming By the Book* (Princeton: Princeton University Press, 2001) and Alan Palmer, *Fictional Minds* (Lincoln: University of Nebraska Press, 2004).

¹⁷ See Tim Armstrong, *Modernism, Technology, and the Body: a Cultural Study* (Cambridge: Cambridge University Press, 1998); Santanu Das, *Touch and Intimacy in First World War Literature* (Cambridge: Cambridge University Press, 2005); Ulrika Maude, *Beckett, Technology and the Body* (Cambridge: Cambridge University Press, 2009); Yoshiki Tajiri, *Samuel Beckett and the Prosthetic Body: the Organs and Senses in Modernism* (Hampshire; New York: Palgrave Macmillan, 2007); and Danius, *The Senses of Modernism*.

¹⁸ Danius, *The Senses of Modernism*, p. 3.

¹⁹ For a good introduction to these issues see Ulrika Maude, *The Body and the Arts* (Basingstoke: Palgrave Macmillan, 2009).

Merleau-Ponty in particular was scornful of the very notion of qualia, arguing (in terms strikingly anticipatory of Dennett's), that:

At the outset of the study of perception, we find in language the notion of sensation, which seems immediate and obvious: I have a sensation of redness, of blueness, of hot or cold. It will, however, be seen that nothing could in fact be more confused, and that because they accepted it readily, traditional analyses missed the phenomenon of perception. I shall therefore give up any attempt to define sensation as pure impression. Rather, to see is to have colours or lights, to hear is to have sounds, to sense (*sentir*) is to have qualities. To know what sense-experience is, then, is it not enough to have seen a red or to have heard an A?²⁰

'The sensation of blue', he went on to argue, 'is not the knowledge or positing of a certain identifiable *quale* throughout all the experiences of it which I have, as the geometer's circle is the same in Paris and Tokyo.'²¹ Merleau-Ponty argued that it made little sense to speak of a sensation as existing outside the phenomenological field, and subsequently that 'the pure *quale* would be given to us only if the world were a spectacle and one's own body a mechanism with which some impartial mind made itself acquainted.'²² Similar objections to the privileged isolation of sensory experience suggested by the category of the *quale* were offered by William James fifty years previously. 'No one ever had a simple sensation by itself' argued James when defining the 'stream of thought' in *Principles of Psychology*.²³ But as I shall show, such critiques do not seem to nullify the explanatory problem posed by a qualial analysis of consciousness. Both the phenomenological field *en toto*, and our supposedly 'non-sensory' thoughts – complex perceptions, emotions, or even consideration of abstract or analytical ideas, for instance – can be said to possess

²⁰ Maurice Merleau-Ponty, *Phenomenology of Perception*, tr. Colin Smith (London: Routledge & Kegan Paul, 1962), p. 3.

²¹ Merleau-Ponty, *Phenomenology*, p. 248.

²² Merleau-Ponty, *Phenomenology*, pp. 60-61.

²³ William James, 'The Stream of Thought' in *The Principles of Psychology*, 2 vols. (New York: Henry Holt, 1890), vol. i, p. 219.

qualia, whether or not it makes sense to speak of experiencing any single ‘quale’ by itself. To counter this conceptual fragmentation a familiar critical narrative has been established. It goes something like this: during the late-nineteenth and early-twentieth centuries an essential and unchanging entity – the mind – was finally captured in literature after five hundred years of experimentation, enabled by certain stylistic and technical developments in the craft of fiction that mirrored the technological contexts of modernity. In this thesis I will show that this critical narrative, whilst beguiling, is incoherent.

In spite of their insistence on the primacy of felt experience, therefore, all of these philosophies maintain an awkward relationship with the world of primary sensation which, following modernism’s own rubrics, they seem so keen to incorporate into critical discourse. Phenomenology itself is based on a paradoxically dematerialising impulse, as Michel Serres notes:

What you can decipher in this book [*The Phenomenology of Perception*] is a nice ethnology of city dwellers, who are hypertechnicalized, intellectualized, chained to their library chairs, and tragically stripped of any tangible experience. Lots of phenomenology and no sensation – everything via language.²⁴

And it is striking that this claim mirrors so provocatively the arguments raised by Merleau-Ponty himself against the analytical tradition and its insistence on reasoning about sensory experience rather than simply inhabiting the ‘phenomenon’ of experience itself. Serres suggests that phenomenology (at least in Merleau-Ponty’s terms) was itself primarily a reaction to the sensorial poverty its advocates were forced to endure in post-industrial society.

²⁴ Michel Serres with Bruno Latour, *Conversations on Science, Culture and Time*, trs. Roxanne Lapidus (Ann Arbor: University of Michigan Press, 1995), pp. 131-2.

More recently, discussions over the status of ‘affect’ in literary studies have sought to reinstate the body as a site of various competing mental experiences which are thought to have been left out of theoretical discourse.²⁵ Yet although the affective turn represents an intriguing parallel to some of the concerns discussed in this thesis, it has little to tell us about the implications of qualia. I am not disputing that novels can make us feel *anything*, but that they can make us feel the qualia associated with sensations. Redness can’t be conveyed to readers of novels; emotional states such as jealousy or sympathy can be. Clearly, the dividing line between a ‘sensation’ and an ‘emotion’ is a porous one, and, as we shall see in chapter one, the notion (proposed by C. I. Lewis) that an emotion can be analysed into a ‘complex’ of qualia is itself problematic. This is something I. A. Richards acknowledged also. ‘The fashion in which the term “feeling”’, wrote Richards in *Principles of Literary Criticism*, ‘shifts about in psychology is notorious [...] It would be convenient if it could be kept for pleasure-unpleasure, and used no longer as a synonym for “emotion”, since emotions can much more easily be regarded as built up from organic sensations.’²⁶ But policing the line between sensation and emotion is beyond the scope of this thesis.

The ‘problem’ of qualia referred to in this thesis, therefore, is the problem the concept poses for symbolic descriptions (either mathematic, psychological, or literary) of mental states, especially when those descriptions make special claims (or are interpreted as making special claims) of mimetic veracity. It is one thing to claim that the quale of ‘what it is like to read *Ulysses*’ is conveyed when we read *Ulysses*; quite another to claim, as I will argue in chapter five, that reading *Ulysses* allows us to

²⁵ For an overview of the field see *The Affect Theory Reader*, ed. Gregory J. Seigworth and Melissa Gregg, (Durham and London: Duke University Press, 2010).

²⁶ Richards, *Principles of Criticism*, p. 99.

feel what it is like to be Leopold Bloom.²⁷ Thus the problem of qualia I address is one that engages with the wider aesthetic debates of the twentieth century, specifically with those over narrative fiction's supposed 'inward turn'. The problem of qualia emerged in relation to symbolic representations of the world at precisely the point at which the representative claims of literature came under direct attack. This thesis argues, therefore, that it is a profoundly *literary* problem, and does not pertain to visual or auditory representations, for it is not really the case that these constitute (or that they *only* constitute) 'representations' at all. The absence of 'sensation' from the written is simply a manifestation of the inherent limitations of language. A critical tendency to re-insert sensory experience into the process of reading points to a general anxiety that manifests itself most forcefully in relation to taste, consumption, and the material needs of the body.

In my first chapter I will examine a critical trend that I have termed 'cognitive realism', which emerged in parallel with the modernist literary project and the qualia-thesis (indeed was the self-consciously constructed outcome of these projects). It is an approach now enshrined in neuroaesthetic approaches to narrative, but its origins lie in the conditions of modernity itself. I will argue that the philosophical origins of the qualia-thesis were equally conditioned by the material conditions of modernity, and by technological developments that threatened the unity of the human sensorium in the late-nineteenth and early twentieth centuries.

Following the work of S. P. Rosenbaum, Ann Banfield and David Herman, it is a central assumption of this thesis that modernist literary techniques influenced philosophical methodologies in the period in quite direct ways. '[S]ignificantly',

²⁷ What would a book look like which tried to replicate the qualia of what it is like to read a book without merely *being* the book the qualia of which it was trying to replicate? It is presumably as impossible to write a novel that would convey what it is like to read *Ulysses* (whilst not itself being *Ulysses*), as it is to write a novel in which direct access to Bloom's mind is given.

observes David Herman, it is also true that ‘many of the arguments about qualia in the philosophy of mind are couched in the form of stories or story-like thought experiments.’²⁸ As we shall see, in the period the introspectionist narratives (which were themselves taken to be the ‘data’ any theory of mind must be capable of explaining) generally took the form of short stories.

Thus three of my subsequent chapters are structured around some of the most influential thought experiments for the existence of qualia. Chapter two, ‘What Virginia Didn’t Know’, an analysis of Woolf’s epistemological inheritance and the status of literature as an object of knowledge, takes its title from Frank Jackson’s anti-functional thought experiment ‘What Mary Didn’t Know’ (itself named after Henry James’s *What Maisie Knew* – the epistemological inheritance runs deep).²⁹ Chapter three, ‘What is it Like to Be Leopold Bloom?’ reads Joyce’s *Ulysses* against Thomas Nagel’s ‘What is it Like to be a Bat?’ and explores what David Herman has called modernism’s ‘phenomenological ecologies’ in relation to the problem of qualia. Chapters four and five, ‘Neuromodernism and the Explanatory Gap’ and ‘Modernism’s Narratives of Reduction’, outline the neuroscientific contexts for these debates, and examine the aesthetics of modernism’s reductionist impulses. Finally Chapter six, ‘Hollow Men and Chinese Rooms’, considers the work of Percy Wyndham Lewis alongside John Searle’s ‘Chinese Room’ argument for qualia, reading what David Trotter terms modernism’s ‘will-to-automatism’ alongside debates over the notion of the ‘philosophical zombie’ and the difference between semantic and syntactic intentionality.

Chapter six represents something of an end point into my investigation of modernism’s relationship with philosophy of mind. In it I show how Lewis’s fiction

²⁸ David Herman, *Basic Elements of Narrative* (Chichester: Wiley-Blackwell, 2009), p. 154.

²⁹ Frank Jackson, ‘Why Mary?’ email to Jonathan Day, 7th May 2010.

proposes a radical solution to the qualial impasse, one which was endorsed by the behaviourists, but one which ultimately threatens the humanistic interpretations of the novel-form which are, perhaps paradoxically, often defended by the cognitive narratologists and neuroaestheticians. Behaviourism, as we shall see, denies qualia. Yet in doing so it allows the novel to claim for itself certain mimetic capabilities – the ability to represent mental states – that it would otherwise be denied. Cognitive or neuroaesthetic approaches to literature are therefore often forced to choose between an interpretation of consciousness which makes persons into machines, and one which makes it impossible to make any special mimetic claims for literature in relation to the mind.

This thesis considers some of the interactions between modernist literature, the senses and the philosophy of mind in an attempt to shift the focus of the debate from narratives of the sensorium's fragmentation under the weight of technological advances, to concentrate on broader theoretical issues concerning the interrelations of the senses and how they themselves contributed to the narratives of modernity. I thus employ the concept of qualia as a way of contextualising and problematising narratives of the mind – philosophical, literary and scientific – from the period. In doing so I hope to historicise modernism's 'crisis of the senses'; locating this argument in a broader theoretical space and questioning the relevance (and novelty) of contemporary approaches to reading the senses. Cultural equivocations on this point can be read as indicative of analytical philosophy's confused insistence on the reification of mind. Our need to assert, seemingly with every generation, that literature can make us see is the direct product of what Peter Hacker terms 'degenerate monism.'³⁰ As I shall argue, the 'inward turn', the 'phenomenological

³⁰ Peter Hacker, *Human Nature: The Categorical Framework* (John Wiley & Sons, 2007), p. 28.

turn', the 'affective turn' and the 'cognitive turn' can all be read as attempts to claim for literature a mimetic status that, if qualia exist, it cannot ever hope to occupy.

Chapter 1

Cognitive Realism, Qualia and the Myth of the Inward Turn

But the within, all that inner space one never sees, the brain and heart and other caverns where thought and feeling dance their Sabbath...

Samuel Beckett, *Molloy*

My task which I am trying to achieve is, by the power of the written word, to make you hear, to make you feel – it is, above all, to make you see. That – and no more, and it is everything.

Joseph Conrad, preface to *The Nigger of the 'Narcissus'*

I. Cognitive Realism

That the mind is a thing, and that modernist narrative fiction is particularly successful at representing that thing, has become a critical commonplace. The claim often derives from Eric Kahler's influential definition of the 'inward turn' in literature associated with the novel-form, and particularly with modernist fiction. In *The Inward Turn in Narrative* Kahler argued that during the twentieth century the novel demonstrated a 'progressive internalization of events, an increasing displacement of outer space by what Rilke has called inner space, a stretching of consciousness.'¹ The critical narrative of an inward turn – a narrative which took hold in the mid-twentieth century and which continues to exercise its influence – was fuelled in part by the rise of the psychological sciences, and was founded on the assumption that certain technical innovations in literary fiction were better able to address what Samuel

¹ Eric Kahler, *The Inward Turn of Narrative*, tr. Richard Winston and Clara Winston (Evanston, Illinois: Northwestern University Press, 1973), p. 5.

Beckett called ‘the within, all that inner space one never sees’ than other forms of fiction had been.

Arguing that the novel is a form uniquely able to write what James Joyce called, in *Finnegans Wake*, ‘the steady monologuery of the interiors’ is a thesis founded on what I shall call cognitive realism – a critical position endorsing the idea that it is both possible and desirable to describe the mind (conceived of as a stable and unchanging object) without loss through the development and judicious deployment of new literary techniques.² The myth of the inward turn in its various incarnations – the psychologised modernism described by many literary critics in the 50s and 60s, and the neuromodernism subscribed to by contemporary critics such as Alan Palmer, Lisa Zunshine and Kay Young – is, I will argue below, largely the result of a set of inter-linked misconceptions which attend the cognitive realist paradigm.

Historically, the thesis was addressed in discussions over the ‘stream of consciousness’, a phrase used both to describe a literary technique and as a metaphor for the mind itself. In *The Psychological Novel*, for instance, Leon Edel argued that ‘the most characteristic aspect of twentieth-century fiction [is] its inward turning to convey the flow of mental experience.’³ For Melvin Friedman the ‘stream of consciousness method’ allowed for ‘a direct, immediate presentation of consciousness.’⁴ According to Robert Humphrey, such narratives represent ‘a type of fiction in which strong emphasis is placed on exploration of the pre-speech levels of consciousness’ and as such constitute ‘attempt[s] to create human consciousness in fiction’.⁵ In Edward Bowling’s definition the stream of consciousness technique is ‘a

² James Joyce, *Finnegans Wake* (London: Faber & Faber, 1939), 119.32-33.

³ Leon Edel, *The Psychological Novel: 1900-1950* (London: Rupert Hart-Davis, 1955), p. 252.

⁴ Melvin Friedman, *Stream of Consciousness: A Study in Literary Method* (New Haven: Yale University Press, 1955), p. 27.

⁵ Robert Humphrey, *Stream of Consciousness and the Modern Novel* (Berkeley: University of California Press, 1954), p. 6.

direct quotation of the mind – not merely of the language area but of the whole consciousness’ [italics in original].⁶ Perhaps most influentially, Dorrit Cohn defines modernist narrative fiction as ‘the only literary genre, as well as the only kind of narrative, in which the unspoken thoughts, feelings, perceptions of a person other than the speaker can be portrayed.’⁷

Despite the manifold equivocations over the proper use of such terms as ‘stream of consciousness’ and ‘interior monologue’, many other voices could be added in support of the thesis that the stream of consciousness method and associated techniques amounted to a form of cognitive mimesis. Other narrative innovations associated with modernism such as free indirect discourse, the interior monologue, a focus on the sensorium and what Ian Watt termed ‘delayed decoding’ are as we shall see often held up as evidence of the novel’s dominance over poetry in terms of its ability to provide economic descriptions of the mind in the period.⁸ Generally these accounts trace the origins of such techniques from Édouard Dujardin’s *Les Lauriers Sont Coupés*, via Dorothy Richardson, Woolf and Joyce and onwards, culminating in what Marco Roth has termed the rise of the contemporary ‘neuronovel’.⁹ Yet many of the critical approaches addressed in this thesis tend to obscure precisely what is at issue when we speak of ‘writing the mind’ in this way. Introducing the metaphor of a stream, William James made it clear that he was speaking figuratively:

Consciousness [...] does not appear to itself chopped up in bits. Such words as ‘chain’ or ‘train’ do not describe it fitly as it presents itself in the first instance. It is nothing jointed; it flows. A ‘river’ or a ‘stream’ are the metaphors by

⁶ E. L. Bowling, ‘What is Stream of Consciousness?’, *PMLA*, vi (1950), 333-45, p. 335.

⁷ Dorrit Cohn, *Transparent Minds: Narrative Modes for Presenting Consciousness in Fiction* (Princeton: Princeton University Press, 1978), p. 7.

⁸ Ian Watt, *Conrad in the Nineteenth Century* (London: Chatto & Windus, 1980), p. 270.

⁹ See Marco Roth, ‘The Rise of the Neuronovel’ in *Say What You Mean: The N+1 Anthology*, ed. Christian Lorentzen (London: Notting Hill Editions, 2012), pp. 73-90.

which it is most naturally described. *Let us call it the stream of consciousness, or of subjective life.* [italics in original].¹⁰

We are now prisoners of the metaphor. As Galen Strawson notes, ‘[t]his seemed like a good move in 1890, given the dominant psychological atomism that inspired the metaphors of trains and chains, collections, bundles, and heaps. But perhaps we have now been misled in the opposite direction – into thinking that consciousness has a more fluent appearance than it does.’¹¹ As Strawson suggests, the metaphors by which we attempt to grasp consciousness often tend to pollute the object described, leading us to mistake the representation of the thing for the thing itself.

In all the accounts outlined above, what Humphrey calls the ‘pre-speech levels of consciousness’ are argued to be distinct from the considered and rational evocations of more psychologically naturalistic descriptions of character or behaviour. Such approaches therefore tend to divide personhood between the notion of character (reduced to a set of biographical idiosyncrasies – a life story which can be narrated without loss), and the stream of consciousness, composed of mental states themselves, which are considered to be simple, irreducible and universal features of all minds. We all have sensations and perceptions, this argument suggests, and modernism’s great innovation was to realise that it should be the aim of the novelist to bring to light these essential and, in the Woolfian sense, atomistic components of conscious experience, rather than to dwell on the biographical particularities of a life’s story. In many of these accounts therefore the abstract object, ‘mind’, is conflated with the techniques used to represent it. We have succumbed to James’s metaphor.

This raises some obvious problems. How can ‘pre-speech’ ever be spoken?

How can literature, an art composed of words and dependent on meaning, hope to

¹⁰ William James, *Principles of Psychology*, 2 vols. (New York: Henry Holt, 1890), vol. i, p. 239.

¹¹ Galen Strawson, ‘The Sense of Self’ in *From Soul to Mind*, ed. M. Crabbe (London: Routledge, 1999), p. 144.

acquaint us with non-verbal mental experiences, experiences which *mean* nothing in and of themselves? Applied to the novel, as Dorothy Richardson remarked, the stream of consciousness is a term characterized by its ‘perfect imbecility’.¹² But whereas Richardson thought the term too limiting, suggesting a linearity that the conscious mind simply lacks (she proposed, as did Freud, the idea of an ‘Oceanic’ consciousness) I will suggest that it is misleading not due to the inaccuracy of the metaphor, but due to its mistaken reification of consciousness. The cognitive realist presumes that the mind is an object, a stable and unchanging feature of the external world. Simply put, it is a central assumption of this thesis that the mind is not a ‘thing’ at all, but a set of capacities, and as such that it cannot be ‘shared’ with others in any direct sense.¹³

Similarly, the contents of novels are not things either, but ideas, and it makes little sense to think of the reading of the novel as a form of cognitive replication or multiplication. As Peter Hacker notes:

to communicate an idea, a concept, a proposition or a theory to another human is not to *replicate* anything. Einstein had a very good idea: he showed that $E = mc^2$, and he communicated this to other physicists. This did *not* multiply the number of ideas in circulation, only the number of people acquainted with the very same idea.¹⁴

Communication is not replication. Literary fiction, and all it signifies, is an *idea*, and enormous errors are made when we mistake the representation of character, for instance, for the creation of a person. The novel, a form constructed from descriptions of objects, suggested in the modernist period that the mind should be thought of as a

¹² Qtd in ‘Dorothy M. Richardson’, *Authors Today and Yesterday*, ed. Stanley J. Kunitz (New York: H.W. Wilson Co, 1933), p. 562.

¹³ Peter Hacker defines the mind in these terms in *Human Nature: The Categorical Framework* (John Wiley & Sons, 2007), p. 28.

¹⁴ M. Bennett and Peter Hacker, *Philosophical Foundations of Neuroscience* (Oxford: Blackwell, 2003), p. 434.

thing, and so it is unsurprising that we feel, when reading such works, that we are encountering a mind transcribed: for these authors taught us what a mind is. I return to this point below.

The reductive impulses of modernity – inculcated in such things as Ezra Pound’s Imagist project, which sought ‘[d]irect treatment of the “thing,” whether subjective or objective’¹⁵; or in the analytical philosophical tradition’s interest in ‘sense data’ and in Husserl’s phenomenological campaign which sought, via ‘epoché’ or ‘bracketing’, to get ‘back to things in themselves’ – was, as I shall argue in chapter five, internalised across the arts in the period to become something of an aesthetic principle.¹⁶ But it also led to a profound psychological and scientific reappraisal of what, precisely, those ‘things’ or ‘objects’ of the mind could or should be said to consist of.

The philosopher P. F. Strawson called the notion of a person ‘a conceptual primitive’ as it led to the mistaken combination of physical descriptions (‘has a big head’; ‘is located here’) with personal predicates (‘is sad’; ‘understands trigonometry’). As he argued:

the concept of a person is to be understood as the concept of a type of entity such that both predicates ascribing states of consciousness and predicates ascribing corporeal characteristics, a physical situation etc. are equally applicable to an individual entity of that type.¹⁷

Literary characters, of course, exist nowhere in space; neither do they possess propositional content. Literature, especially the novel-form, seems far better able to handle one side of Strawson’s divide – the broad brushstrokes; the biographical and

¹⁵ Ezra Pound, ‘Imagisme’ in *Modernism: An Anthology*, ed. Lawrence Rainey (Oxford: Blackwell, 2005), p. 94.

¹⁶ Edmund Husserl, *Logical Investigations*, tr. Dermot Moran and Michael Dummett (London: Routledge, 2001), p. 168.

¹⁷ P. F. Strawson, *Individuals* (London: Methuen, 1959), p. 104.

intentional predicates of a life; the narrative geometry of bodies moving through space – than it does the other; the minutiae of conscious experiences. And yet the cognitive realist thesis exemplifies Strawson’s diagnosis of a conceptual primitive at play when critics discuss the stream of consciousness as both technique and metaphor.

During the modernist moment, those minutiae themselves often came to be held as in some sense more important to personhood – more intimate and truthful – than mere biographical details. ‘At a certain point in history men became individuals’ argued Lionel Trilling in *Sincerity and Authenticity*. Before then, man (as well as, presumably, woman) ‘did not have an awareness of [...] internal space. He did not [...] imagine himself in more than one role, standing outside or above his own personality; he did not suppose that he might be an object of interest to his fellow man not for the reason that he had achieved something notable or been witness to great events but simply because as an individual he was of consequence.’¹⁸ Following Trilling, I would suggest that the emergence of the person as something other than the story of that person’s life reaches its apex with modernity. Attempts to reify consciousness are as old as Aristotle, but at issue in the modernist moment, as Michael Levenson has argued, is a more fraught negotiation between mind and world: ‘the disintegration of stable balanced relations between subject and object and the consequent enshrining of consciousness as the repository of meaning and value.’¹⁹

Modernism’s hyper-subjectivity sought to strip the person of story, therefore, and yet in doing so it brought about a notable paradox: the very things that were said by some to constitute the building blocks of human character turned out, both within the novel-form and in the philosophical and psychological traditions attendant to it, to be the most elusive and least shareable. For the fact is that the simpler a sensation

¹⁸ Lionel Trilling, *Sincerity and Authenticity* (London: Oxford University Press, 1972), p. 24.

¹⁹ Michael H. Levenson, *A Genealogy of Modernism: a Study of English Literary Doctrine, 1908-1922* (Cambridge: Cambridge University Press, 1984), p. 22.

appears to be, the greater the gulf between its symbolic representation and its felt reality seems. This, as I shall argue below, is a central tenet of the problem of qualia.

Often critics committed to the cognitive realist thesis fail to appreciate the stumbling block posed by literary representations of simple sensations. In her wide-ranging study of the sublimation of the cogito in late-nineteenth and early twentieth century literature, *The Vanishing Subject*, for instance, Judith Ryan differentiates between a character's 'psyche' – specific and individual, relating to the story of that individual's life – and 'consciousness' as a stable and, ultimately, generic (and therefore public) phenomenon:

to look in the works of these writers for attempts to delve into the psyches of their characters is to miss the point of this kind of literature entirely. More important to them was the presentation of consciousness and sensory perception.²⁰

Here 'consciousness and sensory perception' (it is not made clear how you could have one without the other) are presented as the neutral and universal building blocks of all minds. For Ryan it doesn't seem to matter quite what the presented consciousness is conscious *of*, or what those sensory perceptions are triggered *by*: attending to the story of a character's perceptual experiences, Ryan suggests, allows us to access a more fundamentally veridical portrait of character, if not of 'psyche', than more traditional modes of narration allow. Mental events, Ryan argues, can be 'presented' free of the mind and on their own terms.

Other critics read modernist narrative in terms of its endorsement of an impressionist aesthetics that sought, in Peter Stowell's terms, to create 'linguistic and

²⁰ Judith Ryan *The Vanishing Subject* (Chicago; London: Chicago University Press, 1991), p. 3.

rhetorical effects that render sensory impressions on eyes, ears, and consciousness.’²¹ Thus according to Sara Danius, in *Ulysses* ‘Joyce [...] aligns himself with a modernist aesthetic that aims to render what is perceived rather than what is known.’²² I will explore the epistemological questions raised by distinguishing between analytical knowledge and knowledge of sensory experiences in greater detail in chapter two, ‘What Virginia Didn’t Know’, but it is striking that Danius’s formulation invokes a distinction between types of knowledge which she elsewhere seems to deny. Again, this is a problem inherent to the very notion of ‘representing’ conscious states in literature, for although it is true that all perceptions constitute objects of knowledge, not all types of knowledge are analytical. If we grant, as do Frank Jackson and other qualia-philosophers, that sensory experiences constitute a special case of ‘knowing’ something, then, as will become apparent, it is clear that language is by definition incapable of ever containing such knowledge.²³

Cognitive realist accounts of the novel often tend to be essentialist and diachronic, therefore, aiming to read modernist narrative fiction as the culmination of the novel-form’s will-to-mimesis, particularly in relation to the representation of perceptual experiences and the object called mind. Thus the rather Whiggish idea that the narrative artefacts of high modernism realised a phenomenologically veridical potential available to all previous modes of literature, but never before exploited so comprehensively, tends nowadays to dominate accounts of modernism’s minds. In *Transparent Minds* Dorrit Cohn goes on to argue, in a move that has become typical, that the radical inward turning of modernism signified ‘a gradual unfolding of the

²¹ Peter H. Stowell, *Literary Impressionism: James and Chekhov* (Athens: University of Georgia Press), p. 26.

²² Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca, London: Cornell University Press, 2002), p. 156.

²³ See Frank Jackson, ‘What Mary Didn’t Know’, *The Journal of Philosophy*, lxxxiii (1986), 291-295. This will be discussed further in the following chapter.

genre's most distinctive potential, to its full Bloom in the stream-of-consciousness novel and beyond.'²⁴ For Cohn and others modernism didn't just provide a *new* way of representing consciousness, it provided a *better* one. So successful were modernist literary innovations, argues Mark S. Micale, that they were not confined to the literary sphere either, but were replicated across the arts and became the principle methodology within the psychological sciences:

Both psychiatric medicine and the creative arts during the late nineteenth and early twentieth centuries were marked by a massive 'turn inward' and a thoroughgoing psychologization of their methods, subjects and intentions. [...] Both [...] were vitally concerned with the nature and structure of the individual personality, and both pioneered new techniques of narration to capture the inner workings of the human mind and the moment-by-moment experience of individual consciousness.²⁵

This is a position taken up more recently by the 'neuroaesthetic' and 'cognitive' turns in literary criticism that have seen critics such as Alan Palmer, Lisa Zunshine, David Herman and Monika Fludernik promoting critical approaches to narrative fiction that aim to read the novel in light of the discoveries of neuroscience and theories derived from cognitive psychology. Cognitive approaches to narrative still promote the idea that the job of the novel is, in large part, to realistically portray consciousness. Thus what differentiates narrative fiction from other forms of discourse, according to Fludernik, is its ability to represent 'experientiality' as a dynamic process; its ability to present characters as cognitive centres in a world of flux.²⁶ Similarly, in *Why We Read Fiction: Theory of Mind and the Novel* Lisa Zunshine has argued that in its exploitation of 'Theory of Mind' – our supposedly unique ability to postulate the existence of another's consciousness – the novel-form

²⁴ Cohn, *Transparent Minds*, p. 8.

²⁵ Mark S. Micale, *The Mind of Modernism: Medicine, Psychology, and the Cultural Arts in Europe and America, 1880-1940* (Stanford: Stanford University Press, 2004), p. 2.

²⁶ Monika Fludernik, *Towards a 'Natural' Narratology* (London: Routledge, 1996), p. 245.

is geared toward the ‘metarepresentation’ of cognition.²⁷ As readers of the novel, according to Zunshine, we are always engaged in an active process of ‘mind reading.’²⁸

In *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy*, Kay Young follows Zunshine, arguing that ‘literature creates that which consciousness creates: experience’, and (somewhat opaquely) that ‘[t]he novel is a minded world brought into consciousness through our reading minds.’²⁹ Later she invokes brain-imaging scans to suggest that:

By actuating the frontal lobes of the brain – the neuroanatomic substrates of ‘other minds’ – the act of reading novels connects us with the emotional networks of the brain.³⁰

What Raymond Tallis identifies as contemporary culture’s tendency toward ‘neuromania’ – the misapplication and elevation of neurological explanations for cultural phenomena over historical or philosophical ones – is very evident here.³¹ Indeed a major shortcoming of cognitive narrative studies or neuroaesthetic approaches to fiction more generally is that they often tend towards a strategy of reductive materialism. As I shall argued in chapter four, ‘Neuromodernism and the Explanatory Gap’, when discussing modernist literary innovations, neuroaestheticians often address stylistic distinctions by speculating on the novelist’s special ability to trigger appropriate brain states, which are then confidently read off as evidence for the affective efficacy of the novel. Quite why it should be surprising that, as Young goes

²⁷ Lisa Zunshine, *Why We Read Fiction: Theory of Mind and the Novel* (Columbus, Ohio: Ohio State University Press, 2006), pp. 4, 47.

²⁸ Zunshine, *Why We Read Fiction*, p. 35.

²⁹ Kay Young, *Imagining Minds: The Neuro-Aesthetics of Austen, Eliot, and Hardy* (Columbus, Ohio: Ohio State University Press, 2010), p. x.

³⁰ Young, *Imagining Minds*, p. 5.

³¹ See Raymond Tallis, *Aping Mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity* (Durham: Acumen Publishing Ltd, 2011).

on to argue, ‘when we imagine seeing a scene, our visual cortex is active’ or that ‘[w]hen we imagine moving our bodies, the pre-motor cortex and motor cortex are active’ is never really made explicit.³² Clearly there must be *some* connection between imagined and actual perceptions, or we should not be able to identify the imagined state as being analogous to the physical process at all. We surely do not need the fMRI scanner to tell us that visual literary descriptions instruct us to imagine something seen. It is surely obvious, also, that a visual description differs fundamentally from a *real* perceptual experience. Despite Joseph Conrad’s call, novels simply *cannot* make us see; nor do they cause us to walk. We understand so little of the relationship between brain functions and mental states that the correlations uncovered by literary-critical interpretations of brain science are so broad as to be virtually meaningless.

Much neuroaesthetic criticism therefore endorses a doctrine that I would define as neo-behaviourist. Affect is sought in the fMRI scanner rather than in the reader’s response; rather than interpreting works of fiction as the products of complex historical and cultural forces (and as contributing to our formulation of these categories themselves) such approaches seek to uncover the ‘essential’ properties of literature by interpreting them solely in terms of brain-function. Generally these accounts are defiantly a-historical; unaware of, or uninterested in, the philosophical and cultural origins of their own methodology. This is a shortcoming I aim to correct in chapters four and five.

As I shall argue below, in relation to the ontology of consciousness and the question of qualia, distinguishing between literary representations of ‘behaviour’ and ‘thought’ is utterly meaningless. In this thesis I will argue that, if qualia exist,

³² Young, *Imagining Minds*, p. 5.

representations of behaviour and representations of consciousness exist on precisely the same level of representation – the literary. And if qualia do not exist, then I would suggest that the novel-form would likely provide a deeply inefficient, rather than our most successful, mechanism by which to grant access to the minds of others. The distinction between presenting character from the ‘outside’ and from the ‘inside’, between portraying ‘action’ rather than ‘thought’ is, I will argue, stylistic or formal rather than ontological in nature. To suggest otherwise whilst maintaining the existence of qualia is to commit a simple category mistake. This kind of slippage – mistakenly interpreting stylistic virtuosity or differences in narrative technique as ontologically significant in relation to the question of the mind – recurs with unnerving regularity across twentieth century literary criticism. It is a misinterpretation of the philosophical evidence that ill serves science, literary criticism and, most important, the novel-form itself.

As I shall argue in my final chapter, ‘Hollow Men and Chinese Rooms: the Aesthetics of Automatism’, what is striking about neuroaesthetic definitions of narrative is how historically indebted they are to the philosophy of the early twentieth century, and yet how historically unaware they remain of this inheritance. They share their methodology with the reductive impulses of behaviourism as a psychological doctrine, and face many of the problems associated with logical behaviourism as a theory of consciousness.³³ Such readings seem to invoke the notions of stimulus and response as a principle of reading: the novel-form, in many of these accounts, is functionally identical with the set of formal statements about dispositions to behave

³³ I differentiate here between ‘soft’ behaviourism, which suggests that the proper study of psychology is the actions of the human organism rather than introspective self-report, and ‘hard’ or logical behaviourism; the philosophical thesis that all mental states can be transcribed without loss into an indefinite (but not infinite) series of propositional statements or dispositions to behave. The first is a methodological thesis which still has much traction; the second a widely discredited philosophical fudge. This point will be expanded in Chapter six, ‘Hollow Men and Chinese Rooms’.

contained within it, and the job of the reader is to decode these descriptions and re-experience or re-imagine another mind in light of them. Thus, like many of the critical accounts of the inward turn in narrative fiction which preceded them, neuroaesthetic approaches to the novel often tend to argue that the mind is a stable and unchanging entity isolated from the influences of culture more generally, and that its essential nature can be conveyed through language.

In defence of the cognitive realist thesis, these critics often invoke vague notions of ‘reproduction’ or ‘rendering’ as the driving creative methodologies behind much literary modernism, explicitly linking these terms with the mnemonic technologies – camera, cinema, gramophone and radio – which threatened the unity of the sensorium in the late-nineteenth and early twentieth centuries. In *Axel’s Castle* Edmund Wilson argued that ‘Joyce has undertaken in *Ulysses* not merely to render, with the last accuracy and beauty, the actual sights and sounds among which his people move, but, showing us the world as his characters perceive it, to find the unique vocabulary and rhythm which will represent the thoughts of each.’³⁴ Melvin Friedman argues that ‘the interior monologue may reproduce any area of consciousness’³⁵. Of *Ulysses* Harry Levin wrote: ‘Bloom’s mind is neither a *tabula rasa* nor a photographic plate, but a motion picture, which has been ingeniously cut and carefully edited to emphasize the close-ups and fade-outs of flickering emotion.’³⁶ In *Bergson and the Stream of Consciousness Novel* Shiv K. Kumar argues that:

³⁴ Edmund Wilson, *Axel’s Castle: A Study in the Imaginative Literature of 1870-1930* (Harmondsworth: Penguin, 1993), p. 164.

³⁵ Friedman, *Stream of Consciousness*, p. 5.

³⁶ Harry Levin, *James Joyce: A Critical Introduction* (London: Faber & Faber 1960), p. 5.

the new prose-fiction does not imply a ‘withdrawal’ from objective reality but constitutes, on the contrary, a deliberate effort to render in a literary medium a new realization of experience as a process of dynamic renewal.³⁷

It is undoubtedly the case that many modernist writers were particularly interested in *describing* sensory experiences, or in elevating descriptions of sense-experience over the mechanistic narratives of more traditional plot. As I have suggested, a desire to accentuate the sensorium manifested itself across the arts in the period. Sara Danius calls *Ulysses* a ‘modernist monument to the eye and ear’, but really it is a monument to the entire sensorium, paying particular (and, at the time, scandalous³⁸) attention to the nose.³⁹ Roger Fry and Clive Bell argued that narrative or literary sense should be stripped from the arts, leaving us to engage only with the significant form of a painting – its shapes and colours – an idea developed by Clement Greenberg’s modernist aesthetics which called for an art designed for ‘eyesight alone’.⁴⁰ Yet it would be wrong to read this general impulse as the uncomplicated application of realist techniques to the portrayal of the human sensorium. Most of the authors I address in this thesis can be seen as contributing to a radical renegotiation of the relationship between the mind and literature, and the human sensorium became one of the most contested frontiers of this battle.

Many of the philosophical contradictions articulated by critics committed to the cognitive realist thesis are therefore based on the misapplication of technological metaphors of reproduction to the realm of the mental. A camera can recreate visual information, but it cannot recreate the experience of perceiving that information; the

³⁷ Shiv Kumar Kumar, *Bergson and the Stream of Consciousness Novel* (London: Blackie, 1962), p. 2.

³⁸ John Sutherland has argued that ‘one reason why *Ulysses* remained banned for so long in the English-speaking world (and was finally cleared in the US on the bizarre grounds that it was ‘emetic’) was its incidental references to Bloom’s breakfast of grilled mutton kidney, “which gave to his palate a fine tang of faintly scented urine”, and his sitting asquat the cuckstool a few minutes later, “calm above his own rising smell.”’ (John Sutherland, ‘French Air’, *London Review of Books*, ix (1987), 12-13.

³⁹ Danius, *Senses*, p. 160.

⁴⁰ See Caroline Jones, *Eyesight Alone: Clement Greenberg’s Modernism and the Bureaucratization of the Senses* (Chicago, Ill.; London: University of Chicago Press, 2008).

cinema does not present us with subjective mental experiences themselves, but with the data which can cause us to *have* those mental experiences. ‘At best,’ argues

Raymond Tallis in his *In Defence of Realism*:

the camera renders sensibilia, not experiences or perceptions. It reveals visual surfaces laid out in space and cannot directly display visual perceptions that are also deeply interconnected in time. Pictures, even moving ones, cannot of themselves depict the *sense* even of visible things, in which experience and knowledge are dovetailed. (Words, in contrast, are able to express *only* the sense or meaning of things, rather than the things themselves.)⁴¹

The slippery concept of ‘rendering’ that recurs so frequently in discussions such as this is attractive to critics, I will suggest, precisely because it leaves the nature of the relationship between the object being represented and its representation forever unclear. Rendering involves both a calling forth and an approximation, and to render a substance is to be left with a more concentrated, *yet not necessarily identical*, version of it. To render is not, or is not always, to recreate or mimic: it is to create.

Nevertheless, contemporary critical narratives of the mind in fiction often employ technological metaphors to argue for the possibility of complete and perfect copies of consciousness with no loss of clarity, endorsing an image of novelistic eidetic perfection by applying concepts derived from the mechanisms of reproducibility within the technological realm. As we shall see in the following chapter, these critics tell a story in which the unificatory ideals of the pre-modernist novel (equated with the Wagnerian *Gesamtkunstwerk* – a total art work able to engage with all the senses directly, and the direct inheritor of Symbolism’s desire for synaesthetic synthesis) break down along with the stability of the human subject. As

Eric Kahler summarises:

⁴¹ Raymond Tallis, *In Defence of Realism* (London: Edward Arnold, 1988), p. 34. I would disagree that the camera renders even ‘sensibilia’, at least as they are defined by Bertrand Russell. Properly speaking, the camera merely recreates sense data.

The arts, for example, in pursuing their own particular courses have arrived at the same disintegration and transcendental obliteration of the objective world of the senses as has physics – and at the very same time. The same evolution of consciousness and of the reality corresponding to that consciousness can be demonstrated in the most variegated kinds of human expression – and consequently in the transformation of art forms as well.⁴²

As Gillian Beer and Michael Whitworth have demonstrated, scientific discourse frequently provided metaphors which modernist aesthetics appropriated to its own ends.⁴³ Contemporary critics, too, have not been immune from employing the language of science to describe the techniques of imitation implicit to modernism. Thus Daniel Albright employs scientific metaphors to argue that T. S. Eliot's 'The Waste Land': 'aspires to a state of transubstantiation in which the pre-text is physically present in the text; a state of radioactivity in which the rays emitted by *symbols, images, ideograms* could register directly on the reader's sense-organs.'⁴⁴ The 'aesthetics of immediacy' that Danuius identifies as central to the work of James Joyce is essentially an applied modernist poetics that the cognitive realists see as emerging across the arts in the period. 'Modernist poets of the early twentieth century', she writes, 'strove to break down the walls that separate the text from its messy, pre-verbal origins and from its digestion in the mind of the reader.'⁴⁵ For many of these critics the big problem with literature, it seems, is that it must be written in words. They thus follow modernism's own manifestos which often called –

⁴² Kahler, *The Inward Turn*, pp. 4-5.

⁴³ See Gillian Beer, 'Physics, Sound and Substance: Later Woolf' in *Virginia Woolf: The Common Ground* (Edinburgh: Edinburgh University Press, 1996), pp. 112-125); and Michael H. Whitworth, *Einstein's Wake: Relativity, Metaphor, and Modernist Literature* (Oxford: Oxford University Press, 2001).

⁴⁴ Daniel Albright, *Quantum Poetics: Yeats, Pound, Eliot and the Science of Modernism* (Cambridge: Cambridge University Press, 1997), p. 7.

⁴⁵ Albright, *Quantum Poetics*, p. 1.

as in Symbolism's celebration of synaesthesia, or F. T. Marinetti's poetics of tactility – for an art composed of, and consumed by, the senses.

The recurring equivocations regarding the 'real' within analytical philosophy in the period demonstrate a parallel anxiety over the ontology and representability of perceptual experiences. In the Cambridge analytical tradition the new 'philosophical realism' espoused by G. E. Moore and Bertrand Russell was, as Ann Banfield argues, primarily a "“revolt” against Idealism".⁴⁶ In the visual arts, the Impressionist movement too presented itself as a form of extended or spilt realism. In his preface to *The Renaissance* Walter Pater famously instructed the critic not to follow Matthew Arnold and attempt to 'see the object as in itself it really is' but instead to know 'one's impression as it really is, to discriminate it, to realise it distinctly', relocating the burden of knowledge from the external world of objects to introspection of mental states themselves.⁴⁷ As Jesse Matz has argued, the 'impression' often performs a similar function to the stream of consciousness, the sense-datum and, ultimately, the quale in the period.⁴⁸

All such theories, therefore, *pace* Erich Auerbach's arguments about modernism's degenerating mimetic facility in his seminal chapter on Virginia Woolf in *Mimesis*, generally describe a mimetic relationship between the object, be it 'mind', 'consciousness' or the 'stream-of-consciousness', and the means of its representation in language.⁴⁹ 'I propose to treat the consciousness novel' writes the narratologist Monika Fludernik, 'as the culmination point in the development of narrative realism rather than its first regrettable lapse into idiosyncratic preoccupations with the non-

⁴⁶ Ann Banfield, *The Phantom Table* (Cambridge: Cambridge University Press, 2000), p. 4.

⁴⁷ Walter Pater, *The Renaissance Studies in Art and Poetry* (Oxford: Oxford University Press, 1986), p. x.

⁴⁸ Jesse Matz, *Literary Impressionism and Modernist Aesthetics* (Cambridge: Cambridge University Press, 2001), pp. 10-12.

⁴⁹ Erich Auerbach, *Mimesis: The Representation of Reality in Western Literature*, tr. Willard R. Trask (Princeton: Princeton University Press, 1953), pp. 473-488.

typical and no-longer-verisimilar of human subjectivity.’⁵⁰ David Herman too suggests that much twentieth century literary criticism has been exercised by the idea that modernist narrative fiction was motivated not by a rejection of the realist paradigm, but by a development of it:

the view that modernism marks a break from realism is consistent with both positive, negative, and neutral assessments of that break [...] But it is also possible to hold that modernist narratives move from external reality to an inner mental domain without viewing modernism as being fundamentally discontinuous with realism.⁵¹

According to Herman, modernism’s radical experimentalism did not constitute a rejection of the realist paradigm, but an attempt ‘to show not necessarily how things really are, but how things are experienced, what it feels like to be alive.’⁵² He goes on to argue that:

more than just representing minds, stories emulate through their temporal and perspectival configuration the what-it’s-like dimension of conscious awareness itself. [...] Hence, stories point beyond what might be called the closure of consciousness, that is, the impossibility of inspecting the very mechanisms by which inspection, as such, is made possible. Enacting and not just representing ways of experiencing.⁵³

In his allusion to Thomas Nagel’s definition of qualia as constituting the ‘what is it likeness’ of mental states, Herman suggests that the right kind of story can ‘enact’ rather than merely ‘represent’ consciousness. But he leaves much unanswered. Are stories the only kinds of writing that are able to ‘enact’ consciousness? And what is

⁵⁰ Fludernik, *Natural Narratology*, p. 127.

⁵¹ David Herman, ‘Re-minding Modernism’ in *The Emergence of Mind: Representations of Consciousness in Narrative Discourse in English*, ed. David Herman (Lincoln and London: University of Nebraska Press, 2011), p. 250.

⁵² Herman, *Emergence*, p. 250.

⁵³ Herman, *Emergence*, p. 251.

the difference between ‘ways of experiencing’ experiences and those experiences themselves?

The plurality of the terms employed in discussions of modernist fiction’s capacity to ‘write the mind’ in a realist manner that I have explored above is therefore an index of a profound (and longstanding) ontological confusion. Do such fictions ‘convey’ the mind, or ‘present’ it? Do they ‘capture’ it, or ‘portray’ it? Do they ‘render’ it or, perhaps, ‘create’ it? Does it even make sense to conceive of the mind as an ‘it’ – a thing separate or separable from the human subject, or even from the experiential states that that subject supposedly ‘has’? (On this point the cognitive realist must surely endorse David Hume’s objection to Descartes’ account of the cogito as proving the existence of a mind: is there really a ‘thing that thinks’ at all? Or can we only really say that ‘there are thoughts?’) Finally, does it make any sense to ask whether such works really ‘enact’ or ‘embody’ conscious states in a way that other forms of narrative do not and cannot?

In one fundamental regard describing consciousness, according to these critics, seems *not* to be like describing other objects – tables or chairs, say, or people as opposed to their minds in isolation. A description of a chair will always remain a description; we never expect the description to alter the material reality of the chair, nor do we assume that the reader somehow ‘embodies’ chairness when she reads a description of one. The case of consciousness is often considered to be rather different. When a particular consciousness is described (or described particularly well) in fiction, so these critics argue, readers are granted privileged access to that consciousness: feeling what it might have felt, seeing what it might have seen. The described consciousness is reified and passed on to the reader with no loss of clarity.

Ignoring the external world in favour of its representation, of course, leads to the central contradiction of the realist paradigm. ‘Realism purports – has always purported’, wrote Robert Scholes in *The Fabulators*, ‘to subordinate words themselves to their referents: to the things words point to.’⁵⁴ If realism aims to replace the word with the thing, then many of the aesthetic movements subsumed under the banner of modernism sought to do the opposite: to turn things, a category which now included sensations and mental experiences, into words. In an age when the notion of literary representation itself was under sustained attack, it is perhaps unsurprising that writers felt the need to carve out new worlds which they could then claim as the special province of the written. Just as the camera compelled the Impressionists to redefine the role of the artist as one concerned with individual perceptual experiences, so the new mnemonic technologies that threatened the unity of the subject and the sensorium forced novelists to justify their projects in terms of the novel’s ability to contain other, hidden or deeper varieties of knowledge. As Robert Scholes continues:

Realism exalts life and diminishes art, exalts things and diminishes words. But when it comes to representing things, one picture is worth a thousand words, and one motion picture is worth a million. In face of competition from the cinema, fiction must abandon its attempt to ‘represent reality’ and rely more on the power of words to stimulate the imagination.⁵⁵

Or, if it doesn’t abandon its attempt to ‘represent reality’, then it must work hard to redefine what precisely the ‘real’ consists of.

Defending the inward turn of twentieth century narrative fiction as a form of realism goes back to the origins of modernism itself. Writing in the *Egoist* in 1918, May Sinclair described Dorothy Richardson’s technique in *A Pilgrimage*:

⁵⁴ Robert Scholes, *The Fabulators* (Oxford: Oxford University Press, 1967), p. 11.

⁵⁵ Scholes, *Fabulators*, p. 11.

Miss Richardson produces her effect of being the first, of getting closer to reality than any of our novelists who are trying so desperately to get close [...] Reality is thick and deep, too thick and too deep, and at the same time too fluid to be cut with any convenient carving-knife. The novelist who would be close to reality must confine himself to this knowledge at first hand. He must, as Mr. Beresford says, simply 'plunge in.'⁵⁶

As I shall argue in chapter four, the scientific 'inward turn' associated with a burgeoning neuroscience meant that the novelist, concerned above all with the depth and thickness of the new reality, had to assert that such things did not dwell only in the nexus of nerve fibres which were coming under increasing scrutiny, but were emergent properties of the human person in dialogue with culture more generally. As D. H. Lawrence wrote in 'Why I am a Novelist':

I flatly deny that I am a soul, or a body, or a mind, or an intelligence, or a brain, or a nervous system, or a bunch of glands, or any of the rest of these bits of me. The whole is greater than the part. [...] For this reason I am a novelist.⁵⁷

Virginia Woolf's influential critique of the 'materialists' in her seminal essay 'Mr Bennett and Mrs Brown' argued that in their commitment to a kind of exhaustive cataloguing of objects Bennett, Wells, and Galsworthy left out the essential qualities of their characters. Something was missing, and it was this something that the modernists could provide.

Thus the critical narrative of cognitive realism had its origins in the modernist moment itself. As I have suggested, literary critics have generally followed suit, arguing that, rather than replicating the surfaces of things, the novel's power comes from its ability to represent the mind as a separate entity on its own terms. When

⁵⁶ May Sinclair, 'The Novels of Dorothy Richardson', *The Egoist*, v (1918), 57-60, p. 58.

⁵⁷ D. H. Lawrence, 'Why The Novel Matters', *Study of Thomas Hardy and Other Essays*, ed. Bruce Steele (Cambridge: Cambridge University Press, 1985), p. 195.

applied to the realm of the mental, however, the peculiar paradoxes of realism assert themselves particularly strongly. As Raymond Tallis has argued, realism should be properly thought of as a function of style or a mode of discourse rather than as a metaphysical thesis:

The remorseless accumulation of ‘realistic’ material detail is only one aspect of certain styles or phases of realism – for example of the Naturalism associated with the Medan School. But even in such cases, the physical details merely provide an essential background to action and to psychological and historical analysis. (The most determined attempt to represent *things* to the exclusion of thoughts, feelings, memories and other mental phenomena is to be found in the anti-realistic novels of Robbe-Grillet – with abominable and unrealistic results.)⁵⁸

The point is, as Tallis suggests, that ‘even realistic fiction does not attempt to *represent* reality. Words are not representational signs: they are expressive, not mimetic.’⁵⁹ It is the *sense* we make of reality that, says Tallis, is what reality really consists of:

that sense is only in part fixed by the physical characteristics reality displays at a given moment. It is certainly not exclusively determined by the visible appearances or properties of the material entities surrounding the subject. For a start, reality has tactile, olfactory, thermal and other properties that cannot be represented visually.⁶⁰

It is qualia, these tactile, olfactory, thermal and other properties *as they are experienced*, that present such a challenge to the cognitive realist thesis.

II. The Origins of Qualia

⁵⁸ Tallis, *In Defence*, p. 33.

⁵⁹ Tallis, *In Defence*, p. 33.

⁶⁰ Tallis, *In Defence*, p. 34.

As I have suggested, what underpins these divergent approaches to narrative fiction's ability to write the mind is a more or less explicit engagement with a central problem in contemporary philosophy of mind in the Anglo-American tradition: the problem of qualia. Within the analytical philosophical tradition, the problem of qualia has become largely synonymous with the mind/body problem. As Tim Crane summarises:

The [mind-body] problem is often expressed in terms of 'qualia': the 'qualitative' or 'phenomenal' features of conscious states of mind. How can a mere physical object, which we know a person to be, have states of mind with *qualitative* features or *qualia*?⁶¹

The problem of qualia draws attention to the problematic perspectivalism of the mind-body dilemma, as opposed to the causal incompatibility between mind and body which is generally the focus of arguments against substance dualism. Qualia force us to consider how inanimate matter, in the form of brain and body, can come to have a 'point of a view', a monadic position from which it can survey the world.

Like impressions, qualia have a somewhat ambiguous relationship with the senses as usually conceived. They are often discussed in terms of sense experiences, as the 'raw feels' that underpin those experiences even before they are named – the qualitative properties of perceiving the colour red, say, as opposed to its material (is light with a wavelength of about 650 nm) and functional (warns us of danger; signifies ripeness in fruit etc.) properties. But they are also said to be present *whenever* consciousness is, irrespective of the content of that consciousness. This point is often ignored by those philosophers, usually from a phenomenological perspective, who critique the reductive imperative that the notion of the quale implies. My belief that it will rain tomorrow, and all those other mental states attendant to it,

⁶¹ Tim Crane, 'The Origins of Qualia' in *The History of the Mind-Body Problem*, ed. Tim Crane and Sarah Patterson (London: Routledge, 2000), p. 170.

can be said to have a distinct qualial dimension. That belief can be translated into a series of indefinite statements of potential behaviour – I will carry an umbrella; I will take the washing in if it is out; I will moan about the weather in conversation – but even an exhaustive catalogue of such statements will inevitably leave out something essential about my belief that it will rain: what it feels like to have it. The quale has therefore become something of a catch-all term for those properties of conscious experience that are necessarily left out of any ontologically third-person account of consciousness (including that of ‘intentionality’ in Franz Brentano’s sense – the outwardly directed nature of mental states).⁶² The connection between intentionality and qualia, between semantic and syntactic meaning, and the relationship between arguments for qualia and the emergence of behaviourism, will be considered in greater detail in chapter six.

As the latest manifestation of the classical mind/body problem, the problem of qualia is an ancient one. But I will argue that the question of qualia clothes Cartesianism in the form that it does – as concerned with the particular, the specific and the irreducibly essential – in the period in which it does for historical reasons. Qualia were first defined by the American pragmatist philosopher C. I. Lewis in 1929, and emerged directly from the Cambridge neo-realist tradition: from G. E. Moore’s notion of ‘sense data’ and Bertrand Russell’s category of ‘sensibilia’. Thus as a philosophical term of art the quale is broadly contemporaneous with the artefacts of high modernism. As I have suggested, modernism’s narratives of reducibility, derived from the economies of industry and of science, manifest themselves in modernist poetics and aesthetics in quite direct ways. Likewise, within philosophy, a desire to ‘reduce’ the mental to individualised and precise instances of perceptual or sensory

⁶² The difficulties of ascertaining precisely what is meant by ‘third person’ in this context are explored below. Strictly speaking, in terms of what John Searle terms ‘ontological subjectivity’, I will argue that all writing exists in the ‘third person’.

experience displays a certain caution over the graspability of the cognitive whole or the phenomenological field. I therefore read the conceptual fragmentation of the human subject that so many literary critics have diagnosed in the period as merely a radical application of Cartesianism: gradually the thinking thing, ‘res cogitans’, and the phenomenological field were both eroded to become conceived of as monadic, temporally isolated instances of perception. In this period, the decay of res cogitans is measured out in the half-life of the glowing particles of experience, and the quale comes to stand variously for ‘soul’ or ‘spirit’; ‘mind’ or ‘consciousness’: a catch-all term for the peculiarities of the human condition.

In structuring my investigation into modernism’s minds around arguments for and against the qualia-thesis I uncover two fallacies, one logical and synthetic, but small-scale, which I call the qualial fallacy and will outline below; the other more general and speculative, which addresses the larger critical trends of the twentieth century: the fallacy of cognitive realism. The qualial fallacy is committed by literary critics invested in the cognitive realist thesis who misuse philosophical terms in support of their position. Whilst critics such as David Lodge and David Herman have begun to engage directly with the notion of the quale and its relationship to literature, their use of the term has been inconsistent and philosophically confused, leading them to commit the qualial fallacy.

The fallacy of cognitive realism I see as akin to Peter Barry’s diagnosis of the ‘enactment fallacy’ in twentieth century poetic criticism (but in fact going back to at least Dr. Johnson). Barry summarises the fallacy as:

the belief that in a good poem most elements of the sound patterning (especially alliteration and assonance, rhyme and rhythm) are directly related

to meaning, to which, ideally, they offer implicit support by ‘enacting’ or ‘miming’ or ‘embodying’ the sense.⁶³

While Barry tells an exclusively poetic story, tracing the academy’s pedagogic impulse, from I. A. Richards through the New Criticism and onwards, to consider the poem in isolation as a potentially sensorially present artefact, I would contend that a similar case can be made for the cognitive realist tendency, at least since the same period, to identify novels as ‘enacting’ subjective consciousness.

III. Modernism and the Data of Sense

In *The Phantom Table* Ann Banfield argues that ‘the debate about modernism stands in need of a new formulation which takes into account its revolutionary conception of the objects of sensation, at once physical and subjective.’⁶⁴ Much analytical philosophy of the early twentieth century was concerned with providing a new term which would describe the ontological status of sensory information as experienced, rather than as potentiality (as wave length, measurement, or mathematical symbol), and the methods used to investigate epistemological questions relating to sense data were often analogous to those deployed by those novelists associated with the inward turn in fiction.

What can we be said to be aware of when we encounter the world through the senses? This became a particularly vexed question during the early twentieth century: as matter became ever more unknowable the sensorium itself came under intense scrutiny as our only source of information about the world. Scientific advances in the period, as Gillian Beer has argued, drew attention to the fictionality of matter – to its

⁶³ Peter Barry, ‘The Enactment Fallacy’, *Essays in Criticism*, xxx (1980), 95-104, p. 95.

⁶⁴ Banfield, *Phantom Table*, p. xi.

status as a mental construct – and conceptually divided the world ever more firmly between what John Locke had termed in *An Essay on Human Understanding* its ‘primary’ and ‘secondary’ qualities. Popular science stressed that the waves which dominated the new physics were, in de Broglie’s phrase, ‘ondes fictives’.⁶⁵ As James Jeans suggested, ‘the ethers and their undulations, the waves which form in the universe are in all probability fictitious [...] they exist in our minds.’⁶⁶ Matter emerged as in some sense ‘constructed’ in the period under consideration primarily because it appeared to differ so fundamentally from our folk or perceptual intuitions about it. As Michael Whitworth summarises:

there are real things ‘out there’, feeding our five senses with information, but the mind and body work selectively on this information. As one influential philosopher wrote, language takes the ‘fluid’ world and constructs a ‘rigid’, mosaic-like picture of it, ‘at a sacrifice of exactness and fidelity but with a saving of tools and labour.’⁶⁷

The data that the new sciences were uncovering were themselves profoundly devoid of those things that are presented or given in perception. It became increasingly apparent that it was the human mind that supplied the raw data of the world – waves in motion; olfactory compounds; the kinetic energy of molecules in contact with skin – with sensory ‘meaning’.

Ernst Mach’s influential call for a science founded upon the analysis of sensations required a methodology that would allow for the basic units of conscious experience to be isolated, and named. For Mach, and many who followed him, such a process depended in practice upon attending to the actualities of vision, and

⁶⁵ Gillian Beer, ‘Wave Theory and the Rise of Literary Modernism’ in *Open Fields: Science in Cultural Encounter* (Oxford: Clarendon Press, 1996, pp. 295-318), p. 295.

⁶⁶ James Jeans, *The Mysterious Universe* (Cambridge: Cambridge University Press, 1930), p. 70.

⁶⁷ Michael H. Whitworth, *Virginia Woolf* (Oxford: Oxford University Press, 2005), p. 116.

converting those actualities into prose, prose which often took the form of a short story about the subject's perceptual experiences. As he wrote:

Thus, I lie upon my sofa. If I close my right eye, the picture represented in the accompanying cut is presented to my left eye. In a frame formed by the ridge of my eyebrow, by my nose, and by my moustache, appears a part of my body, so far as visible, with its environment. My body differs from other human bodies – beyond the fact that every intense motor idea is immediately expressed by a movement of it, and that, if it is touched, more striking changes are determined than if other bodies are touched – by the circumstance that, it is only seen piecemeal, and, especially, is seen without a head.⁶⁸

The much-reproduced illustration that accompanied this description is a telling portrayal of the ways in which Mach considered sense-experience, as data for analysis, was able to be shared with other minds (fig. 1). It is a 'scientific' illustration, a functional map of visual space much like an engineer's diagram, in which the haziness of what lies outside the central field of vision is evoked with a gradual loss of clarity on the right hand plane. The unseen shadow of the physiognomy of the face is represented with a sweeping curved line, the nose in focus and defined, the moustache forming a border at the bottom of the image. Mach was working in a mode that was a product of scientific enquiry; of demarcating and identifying qualities on a visual plane that they might be used as a rubric for analysis. Similarly, the visual field which Mach depicts is one populated by clearly defined objects. This is a world of things – of books and pens and shelves – rather than of impressions unshackled from the objects which cause them.

⁶⁸ Ernst Mach, *The Analysis of Sensations and the Relation of the Physical to the Psychological*, tr. C. M. Williams (Chicago and London: The Open Court Publishing Company, 1914), p. 18.

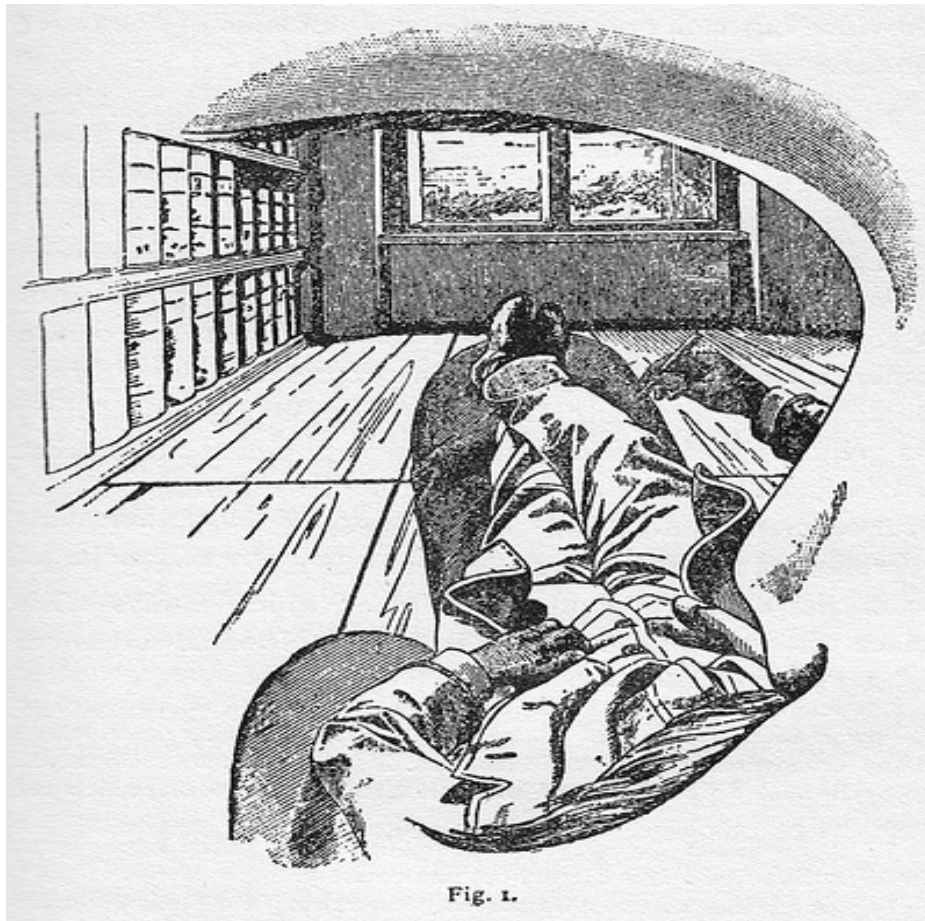


Fig. 1.

Figure 1: The perceiving subject.⁶⁹

As he continues, to engage in an analysis of the sensations is quickly to move away from sensory report towards some kind of literary narrative:

If I observe an element *A* within my field of vision, and investigate its connexion with another element *B* within the same field, I step out of the domain of physics into that of physiology or psychology, provided *B*, to use the apposite expression of a friend of mine made upon seeing this drawing, passes through my skin. Reflexions like that for the field of vision may be made with regard to the province of touch and the perceptual domains of the other senses.⁷⁰

Employing the rhetoric of logic in a description of visual perspective embodies the difficulties of conveying visual experiences through language. Mach is unable to step

⁶⁹ Mach, *Analysis*, p. 17.

⁷⁰ Mach, *Analysis*, p. 18.

outside of the literal and visual language of physics, even whilst stressing that phenomena which pass through his skin belong to a different domain. This tension is one that haunts accounts of subjective sensation in the period, and stimulated the development of literature and art which sought other techniques to address the problems of consciousness.

Karl Pearson similarly attempted to base his explanation of science on the data of the perceiving subject, reprinting Mach's picture and offering another narrative of his conscious experiences in space and time, again employing objects from his study as examples. Focussing on his blackboard as a recurring object on which to base his exploration of the mind, Pearson's description involves the demarcation of separate classes of properties, in the Lockean mould of 'primary' and 'secondary' qualities. As he writes; '[a]lthough the blackboard at first sight appears a very simple object, we see that it at once leads us up to a very complex group of properties.'⁷¹ These properties depend for their identification on inference, not on sensation. The 'sense-data' of which they consist, (or by which the mind is made aware of them - I will examine this difficult point of contention below), are instantly transformed by the active mind into categories; maintaining a continuity through time by being named. Such inferences, as Pearson argued, 'are something which I *add* to the sight-impressions.'⁷² This distinction between the 'sight-impressions' of immediate perception and the 'complexes' of thought which are created by the mind to represent objects or concepts had profound implications for the study of contemporary science, concerned as it increasingly was with the invisible, the transient, and the conceptually counter-intuitive.

⁷¹ Pearson, *The Grammar of Science* (London: Walter Scott, 1892), p. 47.

⁷² Pearson, *Grammar*, p. 48.

For Pearson, the external world could best be conceived of as a condition of potentiality. Physical objects existed only as latent states of experience, a conception that went to the heart of his interpretation of physical science. As he pointed out, '[t]he reality of a thing depends upon the possibility of its occurring as a group of immediate sense-impressions.'⁷³ Inference was the main tool of science, and as such the problems faced by theoretical physics were analogous to those of the study of the mind. As Arthur Eddington later argued:

The modern psychologist is continually devising appliances by which he can read off on a pointer the various differences in our intellectual make-up. In this way he penetrates into the nature of the human mind just as much (or as little) as the physicist penetrates into the nature of the material world.⁷⁴

Yet one difference between the two methods was that that which was inferred could, according to Pearson, always manifest itself as a sensory reality. The differences between a 'percept' and an 'eject' (W. K. Clifford's term for that which is inferred), were for Pearson removed by the ability to work upwards from such speculation to actual, experienced, sensations:

Some physicists infer the existence of atoms, although they have had no experience of any individual atom, because the hypothesis of their existence enables them to briefly resume a number of sense-impressions.⁷⁵

For this reason, as he went on to argue, science was a question of discerning universals within subjective experience. It was a conflation of the 'majority view', with a subjective 'positioning' of the perceiving subject:

⁷³ Pearson, *Grammar*, p. 50.

⁷⁴ Arthur Eddington, 'The Domain of Physical Science' in *Science, Religion, and Reality*, ed. Joseph Needham (London: Sheldon Press, 1925), p. 200.

⁷⁵ Pearson, *Grammar*, p. 61.

[i]f any normal human being be trained in the proper methods of observation and be placed in the right circumstances for investigating, he will draw from his perceptions this [scientific] conception and not its negation.⁷⁶

The degree to which such speculation could solve the problems of subjectivity which plagued the sciences at this time was taken up by many philosophers subsequently, but it seems clear that Pearson felt that Machian analysis had indeed offered a new methodology, one that answered the questions of traditional epistemology. As he concluded:

Behind sense-impressions, and as their source, the materialists place *Matter*; Berkeley placed *God*; Kant, and after him Schopenhauer, placed *Will*; and Clifford placed *Mind-Stuff*. Professor E. Mach [...] has reduced the outer world to its known surface, sense-impression, which he terms sensation – leaving no possible unknowable *plus*.⁷⁷

Thus psychological sciences of the period – Machian Introspectionism, Phenomenological reduction, analytical philosophical analysis – shared a similar methodology. As we shall see in chapter five, one way in which this conception of thought as divided between the ‘sense-impression’ and a world of simple objects influences conceptions of the mind in the period is suggested by the notion of science as a sort of sensory formula, an analytic compression of experience. It was an idea that was often applied to the arts in the period, having its origins in the Paterian injunction to concentrate not on objects but on impressions. Is art not judged successful, Pearson goes on to ask, ‘because we find concentrated into a brief statement, into a simple formula or a few symbols, a wide range of human emotions and feelings?’⁷⁸

⁷⁶ Pearson, *Grammar*, p. 65.

⁷⁷ Pearson, *Grammar*, p. 82 (footnote).

⁷⁸ Pearson, *Grammar*, p. 42.

As Michael Whitworth has identified, the Machian methodology, and many of the scientific and philosophical projects attendant to it, was founded upon what he terms ‘descriptionism’, the idea that science should be considered as an economisation of thought.⁷⁹ Its value lay in its ability to provide ever more succinct formulas by which the world could be interpreted. ‘The Machian school of science’, argues Whitworth, ‘rejected the idea that science *explained* the universe, preferring instead the more modest claim that it provided economic descriptions’.⁸⁰ According to Arthur Eddington, these economic descriptions were not mere thought-saving devices, but were essential tools in communicating the nature of the physical world to other minds. As he commented:

Science is not describing a world invented to save trouble; it is following up a problem which took definite shape the first time two human beings compared notes of their experiences; and it follows it up according to the original rules – namely, to obtain the element common to all human experience, separated from the merely individual elements in that experience.⁸¹

Ernst Mach’s *Analysis of Sensations and the relation of the physical to the psychical* and Karl Pearson’s *Grammar of Science*, were therefore both attempts to find an objective basis for science by outlining a schematic of sense experience founded on introspection. They took the subjective experiences of an individual mind in contact with world as the ‘data’ which any complete science of consciousness must explain. In the preface to his *The Analysis of the Sensations*, Mach wrote:

The frequent excursions which I have made into this province have all sprung from a profound conviction that the foundations of science as a whole, and of

⁷⁹ See Michael H. Whitworth, *Einstein’s Wake* (Oxford: Oxford University Press, 2001), pp. 83-110.

⁸⁰ Whitworth, *Einstein’s Wake*, p. 86.

⁸¹ Eddington, *Science*, p. 196.

physics in particular, await their next greatest elucidations from the side of biology, and especially from the analysis of the sensations.⁸²

‘[P]hysical ways of thinking and physical modes of procedure enjoy on all hands unwonted prominence’ Mach continued:

In keeping with this drift of modern inquiry, the physiology of the senses, gradually abandoning the method of investigating sensations themselves followed by men like Goethe, Schopenhauer, and others, but with greatest success by Johannes Müller, has also assumed an almost exclusively physical character.⁸³

The data which the new sciences were uncovering were themselves profoundly devoid of those things that are ‘presented’ or ‘given’ in perception, however. It was the human mind, as more and more people recognised, that supplied the ‘raw data’ of the world – waves in motion, primarily – with sensory ‘meaning’. As Alfred North Whitehead pointed out:

The poets are entirely mistaken. They should address their lyrics to themselves, and should turn them into odes of self-congratulation on the excellency of the human mind. Nature is a dull affair, soundless, scentless, colourless; merely the hurrying of material, endlessly, meaninglessly.⁸⁴

The impossibility of handling qualities which seem to exist only in the abstracted realm of mathematics placed science at one remove from sensory experience. The other side of this conceptual divide, of course, was the rise of psychology, both of the Jamesian pragmatist school, and, later, of the Freudian psychoanalytical school.

William James’s questioning of the transcendental ego was hugely influential for British analytical philosophy, and debates over the status of the disappearing soul

⁸² Mach, *Analysis*, p. viii.

⁸³ Mach, *Analysis*, p. 1.

⁸⁴ Alfred North Whitehead, *Science and the Modern World: Lowell Lectures, 1925* (New York: Macmillan, 1964), p. 69.

continued throughout the early twentieth century. The idea of the Cartesian theatre was attacked by Bertrand Russell and G. E. Moore, largely as a reaction against the work of Franz Brentano and Alexius Meinong, who felt that despite the obvious contradictions of such a model, *res cogitans* must find some home in thought. In his *Analysis of Mind*, Russell took issue with Meinong's model of the tripartite structure of the act of thinking, a model based on the assumption that thoughts could be divided into three main parts; act, content and object. The 'act' Meinong argued was a feature of all thought, identical in its properties. The 'content' of a thought was that which differentiated it from other thoughts – what the thought may be 'about' – and the 'object' as the external 'thing' (material object or abstract concept) to which the thought referred. The first assumption of Meinong's model to be questioned by Russell was that of the 'act'. Russell criticised this notion in forthright terms:

The occurrence of the content of a thought constitutes the occurrence of the thought. Empirically, I cannot discover anything corresponding to the supposed act; and theoretically I cannot see that it is indispensable. We say: 'I think of so-and-so,' and this word 'I' suggests that thinking is the act of a person. Meinong's 'act' is the ghost of the subject, or what once was the full blooded soul.⁸⁵

Russell's dismissal of Meinong's thesis is typical of the difficulty faced by philosophers of mind since Descartes, that which Gilbert Ryle attempted to dispel with his treatment of the 'Ghost in the Machine'.⁸⁶ The recurring descriptions of the thinking agent as a 'ghost' or 'echo' of the subject is symptomatic of its persistent immaterialism, an immaterialism which perhaps owed something to what Freud called (in conversation with Jung), 'the black tide of mud of occultism'.⁸⁷ Yet Russell's

⁸⁵ Bertrand Russell, *The Analysis of Mind* (London: Allen & Unwin, 1921), p. 18.

⁸⁶ See Gilbert Ryle, 'Descartes' Myth,' in *The Concept of Mind* (Hutchinson, London, 1949).

⁸⁷ Qtd in C. G. Jung, 'On the Psychology and Pathology of So-called Occult Phenomena' in *Collected Works*, 16 vols., tr. R. F. C. Hull (Princeton: Princeton University Press, 1978), vol. i, p. 79.

dismissal of the personal pronoun is also telling. Trying to get outside of ourselves – describing the ‘world’ without recourse to the conduit of the mind through which it seems necessary for that world to ‘pass’ before it is rendered sharable – was a driving motivation for much novelistic narrative of the period. The destruction of the subject as a stable grammatical entity can be seen in embryo in much philosophizing of the time.

In *The Analysis of Mind*, the Cartesian debate is re-enacted almost move for move. Russell plays the part of David Hume, who first voiced concern over the need for *res cogitans*, in conceiving of the act of thinking. As Russell states, ‘It is supposed that thoughts cannot just come and go, but need a person to think them.’⁸⁸ He argued that thoughts should be better conceived of as ‘bundles’, and the grammatical constructions ‘I think’, ‘you think’ and ‘Mr. Jones thinks,’

are misleading if regarded as indicating an analysis of a single thought. It would be better to say ‘it thinks in me,’ like ‘it rains here’.⁸⁹

Yet despite his attempts to be rid of the thinking subject, its persistence is demonstrated even in Russell’s novel grammatical formulations. It is unclear what precisely constitutes the ‘me’ of ‘it thinks in me’, (or, indeed, the ‘it’) which Russell sneaks back into his descriptions of thought. It was a tension that became ever more evident in the debates over what constituted ‘sensation’ once isolated from a thinking thing.

As Tim Crane has argued, many of the concerns of the qualia-thesis were prefigured by debates over the status of ‘sense-data’ in the Cambridge analytical tradition, particularly in the work of G. E. Moore and Bertrand Russell. ‘[L]anguage

⁸⁸ Russell, *Analysis*, p. 17.

⁸⁹ Russell, *Analysis*, p. 18.

offers us no means of referring to such objects as ‘blue’ and ‘green; and ‘sweet’” wrote G. E. Moore in 1922, ‘except by calling them sensations; it is an obvious violation of language to call them ‘things’ or ‘objects’.’⁹⁰ As I shall argue in the next chapter, Moore’s epistemological project, developed by Bertrand Russell, was an attempt to isolate and name these things of experience more rigorously. Moore’s neo-realism was founded on an attempt to deconstruct the world of objects into their component parts, a narrative positioning which, I will suggest, is mirrored and extrapolated on in the fiction of Virginia Woolf. When we observe the world we do not, strictly speaking, see pens and desks and other objects, argued Moore, but something else entirely – the sense-data conjured by the union between mind, eye and object; shades and shapes of light and outline.

From its inception therefore the sense-data thesis was reductive and impressionistic, emphasising the constructed nature of the world of objects. Clearly, those phenomena described were not physical objects, but neither were they considered to be fully psychological. They embodied something of the paradoxes of wave/particle duality also: both present in the mind and born of interaction with the material world. As H. H. Price summarised, sense-data was:

meant to be a *neutral* term. The use of it does not imply the acceptance of any particular theory. The term is meant to stand for something whose existence is indubitable (however fleeting), something from which all theories of perception ought to start, however much they may diverge later. And I think that all past theories have in fact started with sense-data. The Ancients and the Schoolmen called them *sensible species*. Locke and Berkeley called them *ideas of sensation*, Hume *impressions*, Kant *Vorstellungen*. In the nineteenth century they were usually known as *sensations*, and people spoke of visual and auditory sensations when they meant colour-patches and noises; while many contemporary writers, following Dr. C. D. Broad, have preferred to call them *sensa*.⁹¹

⁹⁰ G. E. Moore, *Philosophical Studies* (London: Kegan Paul, Trench, Trubner, 1922), p. 19.

⁹¹ H. H. Price, *Perception* (London: Methuen, 1932), p. 19.

What Moore's neo-realism emphasised was the distinction between what is 'given to the senses' and what can be said to constitute an external object – a construction made up of component parts, assembled in the mind. Such analysis suggests the existence of an ephemeral property of mental experience which, whatever its precise status, seems impossible to deny outright. As Tim Crane summarises:

All philosophers have agreed on *something*. [When looking at one's hand] [t]hey have disagreed about whether one sees the surface of one's hand: some say that what is seen is the surface of one's hand, others deny that it is the surface of one's hand. But what is the 'it' I am talking about when I say that others 'deny that *it* is the surface of one's hand'? The 'it' is what Moore means by sense-data: the object of experience, whatever it is.⁹²

Though we know it intimately, this 'it' is doomed forever to exist outside of language.

Thus both the Machian descriptionists and the sense-data theorists were engaged in attempts to identify and name an object of experience and to place it in relation to the material objects of the world: to chairs and tables, but also to the more elemental particles uncovered by the new science, protons and electrons. Yet it was not until 1929 that a term appeared which could suitably replace the relatively ambiguous 'sense-data' to describe the peculiar ontology of the new phenomena. In *Mind and the World Order*, the American philosopher C. I. Lewis wrote:

There are, in our cognitive experience, two elements: the immediate data such as those of sense, which are presented or given to the mind, and a form, a construction, or interpretation, which represents the activity of thought.⁹³

⁹² Crane, *Mind-Body Problem*, p. 25.

⁹³ C. I. Lewis, *Mind and the World Order* (New York: Dover, 1929), p. 38.

The difficulty of naming precisely what constitutes the ‘second element’ of cognitive experience manifests itself: it is a ‘construction’, or an ‘interpretation’, different to that which is taken as the data of sense. Lewis went on to clarify the point by invoking a new term, which he hoped would remove the ambiguities that accompanied sense-data, which in turn made explicit the curious properties of sensation that had dogged analytical philosophy. As he states:

In any presentation, this content is either a specific quale (such as the immediacy of redness or loudness) or something analyzable into a complex of such. The presentation as an event is, of course, unique, but the qualia which make it up are not. They are recognizable from one to another experience. Such specific qualia and repeatable complexes of them are nowadays sometimes designated as ‘essences’.⁹⁴

Whereas sense-data was a concept which could apparently be discussed or analysed on its own terms, the status of which remained perilously ambiguous, qualia stood more as a philosophical cipher for that which, *a priori*, resisted any such classification. As Lewis continued, ‘such qualia, though repeatable in experience and intrinsically recognizable, have no names.’⁹⁵ Thus qualia were passive, unconstructed and, ultimately, unshareable: a phenomenon of the gaps.

It is tempting to read the emergence of qualia within the philosophical tradition as mirroring the aesthetic redefinitions associated with modernism in the arts. Just as the computational, mnemonic and cognitive functions of mind became threatened by technological advances (faculties constrained by the verisimilitudinous perfection of photography and, later, by the processing abilities of the new computer science), so the spark of the human was sought in ever more specific contexts. In policing the dividing line between the machine and the human the quale embodies the

⁹⁴ Lewis, *Mind*, p. 60.

⁹⁵ Lewis, *Mind*, p. 60.

political and ethical tensions implicit to the modernist project also. Here was an entity that promised to draw clear lines between affect and its absence; between the individual artist and the mob; between recognising the epiphanies of significant form, style and colour and being forever ignorant of them.

Like the impression, the sensation and the sense-datum, the quale was therefore often associated with childhood, a state of consciousness unburdened by knowledge of sin, or of the analytical framework within which the adult mind is forced to operate. The modernist novelists' attempts to 'recapture' childhood, to describe it or evoke it, were therefore as doomed to fail as was their attempts to render in prose the 'abstract' qualities of contemporary visual art. The seam of literature which sought to explore this disjunction between knowledge of fact and knowledge of one's own sensations can be read in embryo in Virginia Woolf's (often ambivalent) engagement with Cambridge epistemology. But its roots can be traced to the dawn of the modern novel itself. In Henry James's *What Maisie Knew*, for instance, a naïve and knowledgeless child is asked to make sense of a world of perceptions in much the same way that we as readers are asked to encounter fictional worlds.

The naïve eye which, as we shall see, was enshrined in much modernist fiction was essentially a scientific eye; one focussed on experience, hypothesis and experimentation. The art historian E. H. Gombrich argued that the process by which a scientist, however 'objective' they hope to be, always approaches observation with a tentative hypothesis in mind is mirrored in the development of visual art from the period, especially that associated with Impressionism. The question asked of the world by the scientist is dependant upon a scientific tradition which had already ascertained certain things about that world. In much the same way, argues Gombrich, such a model is:

[E]minently applicable to the story of visual discoveries in art. Our formula of schema and correction, in fact, illustrates this very procedure. You must have a starting point, a standard of comparison, in order to begin that process of making and matching and remaking which finally becomes embodied in the finished image. The artist cannot start from scratch but he can criticize his forerunners.⁹⁶

As he goes on to argue, Impressionism's developments had little to do with a genuine incarnation of visual innocence in a reductive sense, and more to do with artists embodying a theoretical position, and exploring the implications of their visual 'hypotheses' through art:

These considerations [the careful and experimental manner in which artistic progress occurs] must surely increase our respect for the achievement of the successful innovator. More is needed than a rejection of tradition, more also than an 'innocent eye'. Art itself becomes the innovator's instrument for probing reality.⁹⁷

Just as art became conceived of as a way of 'probing reality' – engaged in an experimental process not because it represented an 'experiment' in form that might succeed or fail, but because it actively experimented *on* the viewer: the canvas as photographic plate; the novel as laboratory – so the sciences, as I have suggested, internalised techniques associated with the arts as diagnostic tools. In a thought experiment in his scientific primer *Relativity for All* which was typical of philosophical and popular scientific writing from the period, Herbert Dingle told a short story about a naïve subject, asking readers to imagine a knowledgeable being conjured on Hampstead Heath:

⁹⁶ E. H. Gombrich, *The Story of Art*, rev. ed. (London: Phaidon, 1972), p. 272.

⁹⁷ Gombrich, *The Story of Art*, p. 274.

Suppose a being, endowed with full human intelligence, but without any experience or knowledge of the world, were suddenly created and placed, say, on Hampstead Heath: what would he perceive? The answer we should naturally give to this question is contained in the first chapter – he would perceive material things in space and time. The answer of the relativist, however, is different.⁹⁸

Here Dingle was taking issue with the ‘relativist’ Henri Bergson, whose philosophy in large part was an attempt to undermine the methodical, abstracted attempts to model consciousness outlined in Mach’s and Pearson’s descriptionisms. In a book which further elucidated Bergson’s ideas to a British reading public, published in 1922, Karin Stephen presented his method as an inversion of the rational hierarchy, when it came to studying the mind, that had become dominant. After asking us to imagine a darkened room in which we experience certain sensations that lead us to conclude that we had stumbled on a dog, Stephen argued that:

Analysis and sensation are the two methods which we are accustomed to rely upon for improving our knowledge in unfamiliar situations. [...] [A]nyone who said that after you were able to say what you had stumbled upon you would know less of the whole situation than you knew before would find it difficult to get you to agree.⁹⁹

In contrast to the Machian school of descriptionism, naming and classifying were considered by Bergson to ‘seriously handicap us when we want not merely to explain [...] the situation but know it.’¹⁰⁰ Stephen (who was exposed to modern art through her sister-in-law Vanessa Bell) then used the example of contemporary art to elucidate the practice of discrimination and categorisation she saw as antithetical to Bergson’s thought:

⁹⁸ Herbert Dingle, *Relativity For All* (London: Methuen and Co., 1922), p. 10.

⁹⁹ Karin Stephen, *The Misuse of Mind* (London: Kegan Paul, 1922), p. 16.

¹⁰⁰ Stephen, *Misuse*, p. 17.

If, for instance, you look at a very modern painting, at first what you are directly aware of may be little more than a confused sight: by and by, as you go on looking you will be able to distinguish colours and shapes, one by one objects may be recognised until finally you may be able to see the whole picture at a glance as composed of four or five different colours arranged in definite shapes and positions. You may even be able to make out that it represents a human figure, or a landscape.¹⁰¹

This process of ‘reading’ a picture, so she argued, limits understanding of the painting in that it diminishes a certain type of experience by focussing the mind on those elements of the painting that pertain to ‘action’; on the kinds of judgements made by the rational mind on behalf of the body. ‘Actual knowledge’ emerges from this examination of the senses, the communicable kernel of meaning that guides human action. As Stephen continued: ‘[f]rom the infinitely vast field of our virtual knowledge we have selected, to turn into actual knowledge, whatever concerns our action upon things; the rest we have left neglected.’¹⁰² Thus the kind of knowledge associated with adulthood, behaviour, analysis and what Russell termed ‘description’ dominated the affective immediacy of other forms of knowledge. It was in the virtual knowledge left over, so Bergson argued, that sensation dwelt.

Stephen’s interpretation of Bergson cast perception as an active process – selecting what is to be seen according to its utility for action. This practical interpretation of the role of perception had something in common with William James’s functionalist pragmatism also, in which all mental processes were considered to be the result of the human organism’s desire for survival. But rather than concentrate on that process, Stephen invited readers to follow Bergson in attending to those moments of unclassified sensation rather than on explaining them. In this conception, the task of philosophy was to:

¹⁰¹ Stephen, *Misuse*, p. 25.

¹⁰² Stephen, *Misuse*, p. 26.

turn our attention *away* from the practically interesting aspect of the universe in order to turn it *back* to what, from a practical point of view, is useless. And this conversion of attention would be philosophy itself.¹⁰³

Yet this insistence on turning away from classification was, as I have suggested, fraught with difficulty. One problem Stephen's Bergsonianism faced was that of communicability. In what way could the 'conversion of attention' be shared as a philosophical ideology if language itself functioned solely as a description, or rationalisation, of sensation?

Nevertheless this brand of Bergsonianism had a large impact on modernist literary aesthetics, especially on Imagist poetics. T. E. Hulme was its most insistent spokesman in Britain, and his writing is a good case study of the ways in which philosophical speculation on the mind melded with aesthetic theories of the age. Like Stephen, Hulme stressed the Bergsonian idea that 'action' motivated the selective presentation of the senses. The tyranny of this classification created the separate class of perceiver that Hulme identified with the artist. As he suggested:

What I see and hear is simply a selection made by my senses to serve as a light for my conduct. My senses and my consciousness give me no more than a practical simplification of reality.¹⁰⁴

And, as he went on to say:

we never ever perceive the real shape and individuality of objects. We only see stock types. We tend to see not *the* table but only *a* table.¹⁰⁵

¹⁰³ Stephen, *Misuse*, p. 23.

¹⁰⁴ T. E. Hulme, 'Bergson's Theory of Art', *Speculations* (London: Routledge & Kegan Paul, 1924), p. 158.

¹⁰⁵ Hulme, *Speculations*, p. 159.

Applying Bergson's ideas to poetic practice, Hulme discussed Keats's 'Isabella; or, The Pot of Basil', specifically focussing on the line 'And she forgot the blue above the trees', and asking:

Why [...] did he put 'blue above the trees' and not 'sky'? 'Sky' is just as attractive an expression. Simply for this reason, that he instinctively felt that the word 'sky' would not convey over the actual vividness and the actuality of the feeling he wanted to express. The choice of the right detail, the blue above the trees, forces that vividness on you and is the cause of the kind of thrill it gives you.¹⁰⁶

Here literary originality is conceived of as figurative – meaning, and thus new knowledge, resides in the creation of novel metaphorical connections. The deconstruction and alienation of the visual field that is central to the Imagist project is, as we shall see in chapter five, of a piece with the general reductive impulses of modernity, stripping away extraneous markers of knowledge to concentrate on essential meaning.

The strategy of defamiliarisation which as we have seen was of such interest to philosophers is here incorporated as a poetic principle. The atomisation of sensation into constituent visual synecdoche was for Hulme a characteristic of poetry that could never be achieved in prose, as poetry was associated with the creation of fresh metaphors that derived their power from an ability to convey felt sensation:

It is only where you get these fresh metaphors and epithets employed that you get this vivid conviction which constitutes the purely aesthetic emotion that can be got from imagery.¹⁰⁷

There is some confusion over what precisely is conveyed as 'aesthetic emotion'.

Though he states that it is only a very particular kind of feeling that is conveyed by

¹⁰⁶ Hulme, *Speculations*, pp. 163-4.

¹⁰⁷ Hulme, *Speculations*, p. 152.

the ‘living’ metaphor, elsewhere he seemed to suggest that language could indeed embody felt experience of any kind:

Every word in the language originates as a *live* metaphor, but gradually of course all visual meaning goes out of them and they become a kind of counters[sic]. Prose is in fact the museum where the dead metaphors of the poets are preserved.¹⁰⁸

Nevertheless, once poetic language has lost its power to convey this sensation it becomes subsumed within the residuum of algebraic designation, entombed in the museum of dead metaphors that is prose. By trading in universals, language lets the specific subjective character of experience ‘slip through’.¹⁰⁹ Prose does not even attempt to convey felt sensation in the way that poetry does:

As in algebra certain concrete things are embodied in signs or counters which are moved about according to rule without being visualised at all in the process. [...] In fact, any necessity to visualise the words you are using would be an impediment, it would delay the process of reasoning. [...] Now any tendency towards counter language of this kind has to be carefully avoided by poetry. It always endeavours, on the contrary, to arrest you and to make you continuously see a physical thing.¹¹⁰

According to this reading, any attempt by philosophies of consciousness, written in prose, to get to grips with that which they attempted to analyse was doomed to failure.

The language with which such positions were outlined, both within philosophy and within aesthetics, was politically loaded. ‘Childish’, ‘naïve’ or ‘unsophisticated’ accounts of perception were conducted from the relatively paradoxical position of philosophical or literary sophistication. Authors and philosophers attempted, with varying degrees of success, to strip away or ignore their learned knowledge of the

¹⁰⁸ Hulme, *Speculations*, p. 152.

¹⁰⁹ Hulme, *Speculations*, p. 157.

¹¹⁰ Hulme, *Speculations*, p. 166.

world in order to concentrate on what was apparently ‘essential’ knowledge. In his definition of qualia in *Mind and the World Order*, C. I. Lewis laboriously deconstructed the perceptual world in much the same way as G. E. Moore and Bertrand Russell had done previously:

At the moment, I have a fountain pen in my hand. When I so describe this item of my present experience, I make use of terms whose meaning I have learned. [...] I bring to the present moment something which I did not then bring; a relation of this to other actual and possible experiences, and a classification of what is here presented with things which I did not then include in the same group. [...] A savage in New Guinea, lacking certain interests and habits of action which are mine, would not so classify it. [...] Yet what I refer to as ‘the given’ in this experience is, in broad terms, qualitatively no different than it would be if I were an infant or an ignorant savage.¹¹¹

Even by identifying the bundle of sense-data perceived as an object, a pen, Lewis imposes on the external world an interpretation. Underpinning his interpretations, however, is ‘the given’, an essential property of perception akin to the sense-datum or the impression. Lewis’s invocation of the ‘infant’ and ‘ignorant savage’ created a further dichotomy between that which is experienced and its communicable form. As he continued:

The infant may see it much as I do, but still it will mean to him none of these things I have described it as being, but merely ‘play thing’ or ‘smooth biteable’.¹¹²

Lewis’s point is, like that of Bergson, James and others before him, that we inevitably bring to the world our preconceptions of it, and make the data we experience fit our established conceptual schema. Rational beings, so Lewis contended ‘do not see patches of colour, but trees and houses; we hear, not undescrivable[sic] sound, but

¹¹¹ Lewis, *Mind*, p. 50.

¹¹² Lewis, *Mind*, p. 51.

voices and violins.’¹¹³ As rational beings, we are better off working within the confines of shared concepts and linguistically sophisticated demarcations of experience than attempting to transcend them. The radical subjectivity endorsed by Bergsonianism and phenomenology were, argued Lewis, impossible projects and, worse, regressive:

Only the mystic or those that believe man would be better off without an upper-brain, have ground for objection to analysis and abstractions.¹¹⁴

There is a hint of Max Nordau’s conception of ‘degeneration’ in this account, with the aims of the ‘mystics’ associated with continental philosophy being lampooned as an evolutionary backward step. Indeed, debates over the status of ‘the given’ in the period were often politically charged in this way. As A. J. Austin later remarked, in invoking the spectre of the ‘man in the street’ and his ‘mistaken belief that he saw objects directly’, naïve realism was an elitist epistemology, founded on the idea that the common perceiver is simply unaware of the subtle metaphysical delineations which must be made in order to perceive matter directly. ‘Is it not delicately hinted’, wrote Austin, ‘that the plain man is really a bit naïve?’¹¹⁵ Others objected to the new philosophical realism of Moore and Russell and the pragmatism of William James and C. I. Lewis, because to privilege the sense-datum or the quale above the gestalt of the phenomenological field was to privilege the primitive, barbaric or idiotic. ‘[T]here is no Given at all’, H. H. Price summarised, ‘or if there is any, it is found only in the experience of new-born children, idiots, and people falling into or just coming out of fainting fits’.¹¹⁶ Elsewhere the degenerate radicalism of the

¹¹³ Lewis, *Mind*, p. 54.

¹¹⁴ Lewis, *Mind*, p. 55.

¹¹⁵ A. J. Austin, *Sense & Sensibilia* (Oxford: Clarendon Press, 1962), p. 9.

¹¹⁶ Price, *Perception*, p. 6.

notion of the ‘given’ was objected to in terms very similar to those used to condemn such modernist excesses as jazz, impressionist art, and experimental literature. ‘Our modern interest in the sense-datum’, wrote H. J. Patin, ‘is just one more manifestation (among so many others) of the degeneracy of the age which prefers the childish, the easy, and the barbarous’.¹¹⁷ The philosophical system which the sense-datum gave rise to, argued Patin, was:

a revival of primitive barbarism in philosophy, similar to the development of jazz in music, of post-impressionism in painting, or fascism in politics, and – to compare great things with small – of the Charleston in modern dancing. All such movements have, of course, their value. They are the expression of a disgruntled but not unenterprising age, seeking to free itself from the dead tradition and past errors, to explore new paths, to acquire a new technique, to see things for itself. It is well that we should sometimes deliberately reassert the childlike attitude, that we should try to experience once more the process of growing up.¹¹⁸

As we shall see, contemporary philosophers who subscribe to the notion of qualia often employ the term as a convenient lightning rod for all the properties of mind associated with what David Chalmers terms the ‘hard problem’ of consciousness. Yet one question regarding consciousness that emerges from conceiving of it in terms of a special property is that it remains unclear what such a property might be *for*. It is a conceptual possibility, so some philosophers argue, that there exist physical beings who behave outwardly as though they think and feel, but who lack internal mental states completely: who lack qualia. These ‘philosophical zombies’ embody the fears of modernity; of the mob, of the death of affect and the culmination of what, in *Cinema and Modernism*, David Trotter identifies as

¹¹⁷ H. J. Patin, ‘The Idea of the Self’ in *The Nature of Ideas: Lectures delivered before the Philosophical Union, University of California, 1925-26* (Berkeley, Calif: University of California press, 1926), pp 76-7.

¹¹⁸ Patin, ‘The Idea of Self’, p. 77.

modernism's 'will-to-automatism' in the philosophical realm.¹¹⁹ Thus arguments for qualia must engage with some ethical questions also. If *humanitas* consists merely of the presence of affect, channelled into the esoteric category of the *quale*, than it is very easy to justify the extermination of any group or type of person by ignoring their outward behaviours and claiming that they simply lack any interiority whatsoever. On this reading, qualia are implicated in the fascistic tendencies and exteriorising aesthetics of what Jessica Burstein has labelled 'cold modernism'.¹²⁰

My own methodology is not philosophical but historicist, and it must be acknowledged that qualia remain a hugely disputed concept within contemporary philosophy of mind.¹²¹ Phenomenologists such as Maurice Merleau-Ponty, and Wittgensteinians such as Peter Hacker, as well as some philosophers within the analytical tradition (most famously Daniel Dennett), deny their very existence, suggesting that qualia are an incoherent notion born of what Hacker calls 'degenerate monism'.¹²² In *Consciousness Explained*, Dennett writes:

Philosophers have adopted various names for the things in the beholder (or properties of the beholder) that have been supposed to provide a safe home for the colors and the rest of the properties that have been banished from the 'external' world by the triumphs of physics: 'raw feels', *sensa* 'phenomenal qualities', 'intrinsic properties of conscious experiences', the 'qualitative content of mental states' and of course 'qualia' [...] There are subtle

¹¹⁹ The philosophical 'zombie' is a speculative being which (whether or not the zombie amounts to a 'who' is the point in question) resembles a person in all physical and behavioural ways, but which lacks inner mental states – lacks qualia. That such beings are conceivable is taken by some philosophers, including David Chalmers, as evidence of the existence of qualia. The relationship between philosophical zombies and Trotter's notion of the 'will-to-automatism' will be discussed more fully in chapter six. See especially Chalmers, *The Character of Consciousness* (Oxford: Oxford University Press, 2010), pp. 305–6 and David Trotter, *Cinema and Modernism* (Oxford: Blackwell, 2007).

¹²⁰ See Jessica Burstein, *Cold Modernism: Literature, Fashion, Art* (Pennsylvania: Pennsylvania University Press, 2012).

¹²¹ For a good introduction to the debates for and against the existence of qualia, see John Searle *The Mystery of Consciousness* (London: Granta, 1997) and *The Case for Qualia*, ed. Edmund Wright (Cambridge, Mass, London: MIT Press, 2008).

¹²² Peter Hacker, *Human Nature: The Categorical Framework* (John Wiley & Sons, 2007), p. 28.

differences in how these terms have been defined, but [...] I am denying there are any such properties.¹²³

Similarly, Peter Hacker objects to the formulation of mind-body dualism in terms of qualia because he does not believe that there is any such thing as an object of sensation at all, be it defined as sense-datum, sensibilia or quale. 'Red', he suggests, is simply not a quality of an experience – it makes no sense to say my experience was 'red', in the same way that it makes sense to speak of a 'good' or 'bad' sensory experience: such an experience just is, and whatever interpretative schema we bring to it is post-facto. Objects of experience, argues Hacker, are not the same as experiences themselves. On the question of qualia, therefore, he follows Wittgenstein:

One would like to say 'I see red *thus*', 'I hear the note that you strike *thus*', 'I feel sorrow *thus*', or even '*This* is what one feels like when one is sad, *this* when one is glad', etc. One would like to people a world, analogous to the physical one, with these *thuses* and *thises*. But this makes sense only where there is a picture of *what is experienced*, to which one can point as one makes these statements.¹²⁴

Yet whether or not they exist, qualia continue to cause huge conceptual headaches both for critical narratives of modernism's 'inward turn' and for neuroaesthetic accounts of literature. They keep alive the spectre of the Cartesian theatre in an age of materialist reductionism, chasing *res cogitans* into individual instances of sense-perception, and haunting materialist accounts of consciousness as a new ghost in the old machine.

In the remainder of this chapter I wish to examine the concept's role within contemporary literary criticism in order to demonstrate how it has been misunderstood by some critics so as to be subsumed into a general theory of literature

¹²³ Daniel Dennett, *Consciousness Explained* (London: Allen Lane 1991), p. 372.

¹²⁴ Ludwig Wittgenstein, *Remarks on the Philosophy of Psychology*, 2 vols. (Oxford: Blackwell, 1980), vol. i, p. 25.

which seeks to ignore the manifold difficulties implicated by materialist theories of mind and their relationship to language. Rejecting materialism would seem to necessitate an endorsement of qualia, yet at the same time a dualist conception of mind undermines the possibility of faithfully recreating sensation within language. Within much contemporary literary criticism the notion of qualia has generally been misunderstood so as to be subsumed into a general theory of the novel which seeks to ignore the manifold difficulties implicated by materialist theories of mind and their relationship to language. To endorse qualia is implicitly to reject materialism, yet a dualist conception of mind undermines any possibility of faithfully recreating primary sensation within language. Many contemporary critics seem to deny any simple, scientific reductionism in theory, yet at the same time view the novel as successfully encoding qualia within language (denying the possibility of conveying sensation directly through straightforward ‘third-person’ reporting of sensory experiences, for instance, whilst maintaining that certain formal literary strategies are able to circumvent these limitations), and would therefore seem to rely on some form of materialism to justify their arguments.

IV. The Qualial Fallacy

‘Consciousness is simply the medium in which one lives’, wrote David Lodge in his novel *Thinks...*, [t]he problem is how to *represent* it, especially in different selves from one’s own. In that sense novels could be called thought experiments.’¹²⁵

In *Consciousness and the Novel*, a collection of essays that elucidated many of the theoretical assumptions underpinning *Thinks...*, Lodge argued that:

¹²⁵ David Lodge, *Thinks...* (London: Secker & Warburg, 2001), p. 61.

[L]iterature is a record of human consciousness, the richest and most comprehensive we have. Lyric poetry is arguable man's most successful effort to describe qualia. The novel is arguably man's most successful effort to describe the experience of individual human beings moving through space and time.¹²⁶

According to Lodge the literary 'I', the first-person subject, is identical with the presented consciousness: the novel-form is a 'thought experiment' and represents mankind's 'most successful effort to describe the experience' of consciousness. These claims are typical of the cognitive realist thesis. Let us evaluate them.

Lodge understands the first-person pronoun as representative of especially 'literary' or 'lyrical' discourse, and suggests that such narrative positioning is equivalent to the successful portrayal of qualia. 'The first-person pronoun is not used in scientific papers', he goes on to observe, '[i]f there were any hint of qualia in a scientific paper [...] it would be edited out.'¹²⁷ When his heroine is describing the effects of Henry James's *The Wings of the Dove* Lodge again suggests that qualia are properties of language:

'at once slippery and sticky' – how's that for qualia? And yet it's narrated in the third person, in precise, elegant, well-formed sentences. It's subjective and objective.¹²⁸

On this reading qualia are treated as properties of *language* rather than as ontologically distinct entities. Here Lodge seems to follow V. S. Ramachandran and Sandra Blakeslee, who argue that solving the problem of qualia would involve

¹²⁶ David Lodge, *Consciousness and the Novel* (London: Secker & Warburg 2002), p. 10.

¹²⁷ Lodge, *Consciousness and the Novel*, p. 11.

¹²⁸ Lodge, *Consciousness and the Novel*, p. 30.

reconciling ‘the first-person and third-person accounts of the universe.’¹²⁹ But to interpret Ramachandran and Blakeslee’s definition of ‘first-person and third-person accounts’ as referring to narrative strategies is to miss the more radical difficulty presented by the qualia-thesis. As John Searle has argued, the quale’s first-person ontology is not the same as a first-person narrative positioning, and it is a category mistake to conflate the two. Searle distinguishes between ‘epistemic’ and ‘ontological’ subjectivity, a distinction that will become central to my discussion over the relationship between qualia and literary narrative. As he argues:

In one sense the objective/subjective distinction is about claims to knowledge. I call this the epistemic sense. A claim is said to be objective if its truth or falsity can be settled as a matter of fact independently of anybody’s attitudes, feelings, or evaluations; it is subjective if it cannot [...]. In another sense, the objective/subjective distinction is about modes of existence. I call this the ontological sense. An entity has an objective ontology if its existence does not depend on being experienced by a human or animal subject; otherwise it is subjective. For example, mountains, molecules, and tectonic plates are ontologically objective. Their existence does not depend on being experienced by anybody. But pains, tickles, and itches only exist when experienced by a human or animal subject. They are ontologically subjective.¹³⁰

The kind of subjectivity invoked by the third-person/first-person narrative distinction is epistemic – it is about claims to knowledge, even if those claims pertain to the fictional world. A series of epistemic statements, such as those that make up the opening section of Virginia Woolf’s *The Waves*: ‘I see a ring,’ ‘I see a slab of yellow’, ‘I hear a sound’, would not be altered ontologically by being written in the third-person.¹³¹ Inadmissible to a scientific paper though such sensory declarations may be, they do not suddenly become *less* ontologically subjective by being rewritten in the

¹²⁹ V. S. Ramachandran and S. Blakeslee, *Phantoms in the Brain: Probing the Mysteries of the Human Mind* (New York: Morrow & Co, 1998), p. 229.

¹³⁰ John Searle, ‘The Mystery of Consciousness Continues’, *The New York Review of Books*, lviii (2011), 50-54, p. 50. See also Searle, *The Mystery of Consciousness*, pp. 112-122.

¹³¹ Virginia Woolf, *The Waves* (London: The Hogarth Press, 1931), p. 7.

third person. To read 'I see a ring' rather than 'he sees a ring' is still to be at one remove from the ring seen.

If qualia exist (and, by his use of the term, we must assume that Lodge allows that they do) then it is meaningless – literally senseless – to argue that the 'hint of qualia' he identifies above as being 'edited out' of scientific discourse can be 'present' in *any* form of discourse. For according to the qualia-thesis all narrative, whether scientific or literary, is inherently 'third-person' in ontological terms, even if it presents itself as the intimate articulation of the subjective experiences of a particular individual. Lodge takes qualia here to mean something like 'subjective description', so that his statement could be re-written 'any hint of first-person subjective description' would be 'edited out' of a scientific paper. But this is not the same thing at all. 'Qualia' could not be edited out of a scientific paper, for they could never be there in the first place.

In Lodge's hierarchy of the literatures of consciousness, therefore, more self-consciously 'literary' language is considered to have special cognitive realist powers. He defines literary language as language that draws attention to itself, flaunting its materiality and thus becoming able to simulate the senses directly. In Lodge's hierarchy of language, poetry is placed ahead of the straightforward referentiality of prose, and well ahead of scientific discourse. The method of the lyric poem, as he goes on to say is: 'to use language in such a way that the description of qualia does not seem partial, imprecise, and only comprehensible when put in the context of the poet's personal life.'¹³² Lodge's attempt to integrate a 'lyrical' understanding of felt sensation into a larger literary project is typical of the cognitive realist thesis in that it identifies figurative language as possessed of a descriptive capacity denied other

¹³² Lodge, *Consciousness and the Novel*, pp. 11-12.

forms of discourse. He goes on to suggest that metaphor and simile are the most successful techniques by which the poet can 'render' qualia:

[I]n literature, by describing each quale in terms of something else that is both similar and different [...] the object and the experience of it are vividly stimulated. One sensation is invoked to give specificity to another. The nonverbal is verbalised.¹³³

Characterising figurative language as a means of overcoming the challenge to materialism posed by the qualia-thesis is a popular (even if largely unconscious) critical strategy. In *Imagining Minds*, Kay Young too suggests that the figurative nature of literary discourse allows the novelist to address the senses directly, sidestepping the representative limitations qualia maintain. The philosopher, she argues, 'writes ideas as arguments about the nature of being' whereas the novelist 'embodies ideas as representations of being'.¹³⁴ Philosophers 'write [...] arguments' whereas artists 'represent [...] in metaphor'.¹³⁵ Similarly, by resisting particular contextual information, by obscuring the individual who may be doing the speaking, so Lodge argues, lyric poetry achieves an affective phenomenological fidelity: a faithful and specific replication of a specific sensory experience. Quoting from a discussion of Marvell's 'The Garden' from *Thinks...* he continues:

Let me point out a paradox about Marvell's verse, which applies to lyric poetry in general. Although he speaks in the first person, Marvell does not speak for himself alone. In reading this stanza we enhance our own experience of the qualia of fruit and fruitfulness. We see the fruit, we taste it and smell it and savour it with what has been called 'the thrill of recognition' and yet it is not there, it is the virtual reality of fruit, conjured up by the qualia of the poem.¹³⁶

¹³³ Lodge, *Consciousness and the Novel*, p. 13.

¹³⁴ Young, *Imagining*, p. 95.

¹³⁵ Young, *Imagining*, p. 95.

¹³⁶ Lodge, *Consciousness and the Novel*, p. 12.

Philosophers and scientists too have attempted to answer the challenge of qualia by proposing a dualism between forms of discourse rather than between world and language. As V. S. Ramachandran and William Hirstein argue:

It also makes it clear that the problem of qualia is not necessarily a scientific problem, because your *scientific* description is complete. It's just that the description is incomplete epistemologically because the experience of electric current is something you never will know. This is what philosophers have assumed for centuries, that there is a barrier which you simply cannot get across. But is this really true? We think not; it's not as though there is this great vertical divide in nature between mind and matter, substance and spirit. We will argue that this barrier is only apparent, and that it arises due to *language*. In fact, this barrier is the same barrier that emerges when there is any *translation*. The language of nerve impulses (which neurons use to communicate among themselves) is one language; a spoken natural language such as English is a different language.¹³⁷

But as I shall argue in chapter three, Thomas Nagel's formulation of qualia as the 'what is it likeness' of consciousness is explicitly *not* a comparative statement. Metaphor is no way out of the qualial impasse. Although in 'The Garden' we are told *something* about the 'fruit of the vine', and of some of its properties, to say that 'we see the fruit, taste it and smell it' through reading is patently nonsense. 'Ecrire la merde', noted Roland Barthes, 'ne sent pas'.¹³⁸

In their analyses of the role of metaphor, Lodge and Young both subscribe to a definition of figurative language which itself took hold during the modernist moment, manifested particularly in the Symbolist inheritance of Imagist poetics, where the poet was figured as the source of new language able to meet the demands of fractious modernity. In his *Speculations*, for instance, T. E. Hulme wrote:

¹³⁷ V. S. Ramachandran and William Hirstein, 'Three Laws of Qualia What Neurology Tells Us about the Biological Functions of Consciousness, Qualia and the Self', *Journal of Consciousness Studies*, iv (1997), 429-457, p. 431.

¹³⁸ Qtd in Danuta Fjellestad, 'Towards an Aesthetics of Smell, or, the Foul and the Fragrant in Contemporary Literature', *CAUCE, Revista de Filología y su Didáctica*, xxiv (2001), 637-651, p. 637.

Metaphors soon run their course and die. But it is necessary to remember that when they were first used by the poets who created them they were used for the purpose of conveying over a vividly felt actual sensation. Nothing could be more dead now than the conventional expressions of love poetry, the arrow which pierces the heart and the rest of it, but originally they were used as conveying over the reality of the sensation experienced.¹³⁹

But, as Ned Block has pointed out, to focus on the comparative or figurative capabilities of literary language, and to anoint them with some special status which manages to overcome the problem of qualia, is to misrepresent precisely what is at issue. As he suggests in an article on ‘Wittgenstein and Qualia’:

The content of an experiential state can often be described in public language partly in terms of qualities of objects that bear some salient relation to the state, for example, ‘looks red’ or ‘feels like sandpaper’ or ‘smells rotten’, but [...] public language terms including terms for such properties of objects do not fully capture the contents. Qualia in my terminology are *ways* things look red or feel like sandpaper or smell rotten.¹⁴⁰

There is a clear tendency for critics engaged, even tangentially, with the question of qualia to identify ‘literature’ in general, and figurative language in particular, as somehow more suited or more successful at conveying certain types of knowledge than scientific language. Such accounts, as I have suggested, frequently depend upon the primacy and privileging of metaphor as a literary strategy. As Frederic Jameson summarises:

No doubt the primacy of metaphor is the projection of a literary hierarchy for which poetry and poetic inspiration are felt to be loftier and more noble than the humdrum referential activity of prose.¹⁴¹

¹³⁹ Hulme, *Speculations*, p. 151.

¹⁴⁰ Ned Block, ‘Wittgenstein and Qualia’, *Philosophical Perspectives*, xxi (2007), 73–115, p. 73.

¹⁴¹ Fredric Jameson, *Fables of Aggression* (Berkeley: University of California Press, 1979), p. 23.

Such a hierarchy is not confined to individual utterances, but extends to produce a sensorially focussed hierarchy of types of language use, of genres or modes of discourse, in general. Such self-reflexive manipulation of the sources of art, translated into an artefact to be beheld by the senses, is seen by Jameson as archetypally modernist, leading to the creation of fragmentary maps of the mind which permeate culture:

reification may be seen as a fragmentation of the psyche and of its world that opens up the semi-autonomous and henceforth compartmentalized spaces of lived time over against clock time, bodily or perceptual experience over against rational and instrumental consciousness, a realm of 'ordinary' or creative language over against the reality – and performance – principles of 'le sérieux' and of adult life, and of the growing independence of the various senses from one another – in particular the separation of the eye from the ear.¹⁴²

The narratologist David Herman too has written widely on the significance of qualia to literary modernism and narrative. Like Lodge, Herman identifies narrative as an essential feature of consciousness. He argues that the qualial dimensions of consciousness are dependent on what we tell ourselves about those experiences, and thus that 'we cannot even have a notion of the felt quality of experience without narrative'.¹⁴³ 'Storytelling', he continues, 'constitutes not just a repository of qualia, but furthermore a resource for exploring their nature and functions.' Invoking neuroscience he argues that: 'the research suggests not only that narrative is centrally concerned with *qualia* [...] but also that narrative bears importantly on debates concerning the nature of consciousness itself.'¹⁴⁴ But like Lodge, Herman seems to conflate the question of qualia with one over levels of discourse, identifying the novel's ability to contain both first- and third- person narratives with a sort of

¹⁴² Jameson, *Fables*, p. 14.

¹⁴³ Herman, *Basic Elements of Narrative* (Chichester: Wiley-Blackwell, 2009), p. 145.

¹⁴⁴ Herman, *Basic*, p. 144.

metaphilosophical flexibility regarding the qualia question. ‘Hemingway’s chosen strategy is to prompt readers to draw inferences about what it’s like for the characters to experience events unfolding in the storyworld rather than providing direct characterizations of the qualia,’ he writes, as if readers would *not* have to ‘draw inferences about what it’s like for characters’ to experience the fictional world if they were provided with ‘direct characterizations’ of qualia.¹⁴⁵ What is a ‘direct characterization of qualia’ anyway, we may well ask, and how is it distinguished from an indirect one? Like Lodge, Herman treats qualia as a property to be ‘evoked’ within narrative fiction, concluding that:¹⁴⁶

narrative, unlike other modes of representation such as deductive arguments, stress equations, or the periodic table of the elements, is uniquely suited to capturing what the world is like from the situated perspective of an experiencing mind.¹⁴⁷

To speak of degrees of subjectivity in this way seems completely nonsensical if a philosophically rigorous conception of qualia is employed. I either feel a pain or I do not. No matter how well I articulate my feeling of pain, I cannot share it with you directly – make you feel it for yourself. When we discuss notions of pain (or any other mental state) we can ascribe a series of properties to it. It has, of course, a functional component – pains make us aware that our bodies are being damaged, or potentially damaged, in some way. Pain also has a neurological correlate, generally described in terms of a particular variety of nerve fibres – called ‘C fibres’ – firing. Yet it also has a qualial element: that which it feels like to experience pain. I will return to this point in the following chapter.

¹⁴⁵ Herman, *Basic*, p. 148.

¹⁴⁶ Herman, *Basic*, p. 150.

¹⁴⁷ Herman, *Basic*, p. 157.

Many critics have therefore interpreted the specific problems of representing the mind in fiction as emerging directly from attempts to interpret consciousness in positivist, scientific terms. In this account modernist aesthetics self-consciously grapples with the Cartesian legacy and our increasingly sophisticated knowledge of the biological workings of the brain. Often, debates over the status of qualia within literature are channelled into discussion of the presence (or absence) of ‘the body’ more generally within fiction. Partly, as Terry Eagleton has argued repeatedly, this desire to re-insert an abstracted ‘body’ into literary discourse is the product of a nostalgia for the origins of aesthetics. As he summarises:

Aesthetics is born as a discourse of the body. In its original formulation, by the German philosopher Alexander Baumgarten, the term refers not in the first place to art, but, as the Greek *aisthesis* would suggest, to the whole region of human perception and sensation, in contrast to the more rarefied domain of conceptual thought [...] It is thus the first stirrings of a primitive materialism – of the body’s long inarticulate rebellion against the tyranny of the theoretical.¹⁴⁸

And yet in one important sense, as we shall see in the following chapter, bodily ‘ways of knowing’ simply cannot be accommodated within literature, however much we’d like that to be the case. The void between bodily and analytical knowledge is, as Patricia Waugh argues in her essay ‘Writing the Body: Modernism and Postmodernism’, largely the product of the conditions of modernity:

The incertitude of the void is the abyss which opens between the Cartesian subject and the Newtonian universe, and the specifically modern aesthetic is formulated as a heroic struggle toward the plenitudinous form of a concrete universal where, somehow, the wound of self-consciousness might be healed, where embodied experience might be reunited with the reflective idea of itself,

¹⁴⁸ Terry Eagleton, *The Ideology of the Aesthetic* (Oxford: Blackwell, 1990), p. 13.

mind with body, and consciousness with cosmos. Literature exists in this heroic vision to give presence to what is made unavailable by science.¹⁴⁹

Waugh herself presents a view of literature which seeks to transcend the ‘two-cultures’ debate, concerned as it is with articulating the difference between various competing conceptions of ‘knowledge’. She frames the argument in terms of C. P. Snow’s well-known analysis, with the knowledge of positivist science placed against F. R. Leavis’s arguments for a ‘third realm’ of shared cultural construction.¹⁵⁰ The cleaving of the ‘two cultures’ is seen on this reading as a symptom of an increased technological threat to the unity of the human sensorium. Such arguments stress the role of the body in mediating experience of the external world, a tendency exemplified, as Waugh argues elsewhere, in the quest for a positivist account of felt experience as undertaken by phenomenologists such as Maurice Merleau-Ponty, and in the increasing concern with certain types of experiential ‘knowledge’ embodied in individual experience and encoded within the modernist novel.¹⁵¹ As she suggests:

Perhaps literary language, striving to capture a different kind of truth from that of analytical philosophy, is more an extension of ordinary language, written not so much out of the heart, as out of ‘the cerebral cortex, the nervous system, and the digestive tracts’ as in Eliot’s famous recapitulation of the creative process.¹⁵²

Yet in her attempts to identify the modernist period as one in which artists and writers anticipated the central claims of contemporary neurophilosophy, Waugh also commits the qualial fallacy. In her otherwise admirable account of the connections

¹⁴⁹ Patricia Waugh ‘Revising the Two Cultures Debate’, *The Arts and Sciences of Criticism*, ed. Patricia Waugh and David Fuller (Oxford: Oxford University Press 1999), p. 36.

¹⁵⁰ See Waugh, *Arts and Sciences*, p. 38.

¹⁵¹ See Waugh, *The Body and the Arts*, pp. 131-147.

¹⁵² Waugh, *The Body and the Arts*, p. 132.

between technological change, the rise of the modernist novel, and the senses Waugh too suggests that the novel is able to contain qualia:

The novel has always mediated the world through textual representations that effectively reproduce in the reader actual *qualia*, James's sense of the experiential body as 'me'.¹⁵³

The claim that novels 'effectively reproduce' begs the question: what is the ontological status of the reproduction?

Whilst offering a compelling justification for the analysis of literature as our most inclusive and persuasive record of individual human consciousness, therefore, such claims offer little methodical exegesis. It is not enough to simply claim that literary language is more 'embodied' than other forms of language use. By invoking the term, many critics give credence to the concept of 'qualia' whilst at the same time maintaining that the dualist void the existence of such properties would create can be crossed by certain types of writing, and thus commit the qualial fallacy.

It is of course understandable that literary critics often feel compelled to make special representational claims for the novel-form in this way. But often these claims directly contradict other assumptions they hold about the status of representation. As I have suggested, it is simply inconsistent to deny materialism – deny that the mind can be reduced to a symbolic representation of a set of physical processes without loss – whilst at the same time maintaining that literature is able to overcome those limitations and present us with 'actual qualia', and thus simulate living minds. The qualial fallacy, as committed by these critics, is similar in form to mimetic fallacy. The mistake committed by all these critics is to understand qualia as a discrete property of some experiences and modes of writing – figurative, intersubjective,

¹⁵³ Waugh, *The Body and the Arts*, p. 139.

positioned in various ways as more intimately ‘first-person’ – rather than as the mantle of consciousness that descends upon *all* conscious experiences whatever. This may seem to be nitpicking, but the qualial fallacy goes to the heart of what work the cognitive realists consider narrative fiction capable of doing.

The central claim of this thesis is that qualia, whether understood as equivalent with sensations, the ‘mind’ or with consciousness itself, are not objects that can be ‘captured’ at all. I do not deny that modernism’s narratives positioned or advertised themselves as engaging with subjectivity, experientiality, time and all the other properties of the phenomenon which has come to be called consciousness, but I *do* deny that this phenomenon is a stable, if elusive, object, unchanging through time, that was finally pinned down by the dagger-definitions which were unsheathed by modernist novelists. Instead, I would suggest, they are rhetorical constructions, the last in a long line of post-Aristotelian attempts to reify consciousness: turning the mind into an object which can be placed alongside the tables and chairs which inhabit the world of things.

The anxiety articulated in debates over qualia is one conditioned, I have suggested, by the vast technological and material changes that threatened the unity of the sensorium in the late-nineteenth and early-twentieth centuries. This argument is, I hope, uncontroversial. I broadly share Sara Danius’s view that:

classical modernism represents a shift from idealist theories of aesthetic experience to materialist ones, or, which ultimately amounts to the same thing, that the emergence of modernist aesthetics signifies the increasing internalization of technological matrices of perception.¹⁵⁴

¹⁵⁴ Sara Danius, *The Senses of Modernism*, p. 2.

But the particular form this argument takes within contemporary philosophy of mind is paradigmatic of modernist anxieties about the limits of positivism, and about the relationship between knowledge and sensation more generally. This is an anxiety that we have inherited, and is one that still dominates discussions over the nature of consciousness, and the relationship between textual representations of the mind and what it might be that those representations are supposed to represent. The second strand to my thesis – the diagnosis of a fallacy of cognitive realism – is perhaps more controversial. What we think we know about the essential characteristics of consciousness are, I would suggest, largely derived from the representations of mind that modernist fiction is celebrated for. In this thesis I therefore seek to use the notion of qualia to suggest that, far from developing more successful strategies for the representation of the essential qualities of consciousness, modernist fiction ‘wrote the mind’ in a more straightforward sense: by providing the models or metaphors of cognition which still dominate the way in which the mind-body distinction is framed.

Of course I do not deny that the development of the novel is intimately associated with the origins of consciousness. Kate Hamburger argues that the perennial attempts to read the novel as a manifestation of the cognitive realist thesis demonstrates the correctness of the thesis:

This same call, sounding from such different times and places (and many more voices could be cited), suggests the importance of the mimesis of consciousness for the history of the novel.¹⁵⁵

But it would be equally valid to suggest that modernist novels strike us as particularly representative of how our minds work because they have *caused* our minds to work in the way that they do. On this reading the novel-form doesn’t describe consciousness

¹⁵⁵ Kate Hamburger, qtd. in Cohn, *Transparent Minds*, p. 9.

at all: it causes it to exist, defines its qualities and properties, reifying the mind and thus bringing it into being as a conceptual entity that is then read back in to the history of the novel itself. Ian Watt outlined this notion of a kind of back-formation in his seminal work *The Rise of the Novel*, arguing that the novel-form should perhaps be interpreted not as a record of human consciousness but as a parallel development to it. According to Watt what we think of as ‘consciousness’ and what we read as ‘the novel’ were both responses to the same paradigmatic shift, which began in the Renaissance, and which reflected a general and historically contingent preoccupation with a certain kind of subjectivity. These ‘philosophical and literary innovations’ Watt writes:

must be seen as parallel manifestations of larger change – that vast transformation of Western civilization since the Renaissance which has replaced the unified world picture of the Middle Ages with another very different one – one which presents us, essentially, with a developing but unplanned aggregate of particular individuals having particular experiences at particular times in particular places.¹⁵⁶

Thus the novel did not record consciousness, but developed out of a new way of thinking about the mind. Similarly, in *The Inward Turn in Narrative* Eric Kahler argued that ‘[i]f we wish to understand what has happened to the novel, we must grasp both the transformation of our reality and the transformation within man’s consciousness’, urging that literary history should therefore be ‘considered as an aspect of the history of consciousness.’¹⁵⁷

To read modernist fiction in search of what I have termed ‘cognitive realism’ strikes me as singularly impoverished; a critical approach that endorses a small-minded and conservative theory of literature and which threatens us with the spectre

¹⁵⁶ Ian Watt, *The Rise of the Novel Studies in Richardson, Defoe, Fielding* (London: Chatto and Windus, 1957), p. 31.

¹⁵⁷ Kahler, *Inward Turn*, p. 3.

of the mimetic fallacy. If modernist fiction's crowning achievement was to 'write minds' in a realist mode, to engage in an act of cognitive mimesis, then why should we read novels at all, equipped, as we all presumably are, with consciousnesses of our own? Why bother describing what we all know more intimately than any other thing? Surely it is not the job of the novel to bring us ever closer to knowledge of ourselves, to mimic the workings of consciousness in such a way that we can finally, after two thousand years of literary development, 'read minds' in some eidetic, 'natural' or supersensory way? 'If the world be promiscuously described', wrote Dr Johnson in *The Rambler*, 'I cannot see of what use it can be to read the account; or why it may not be as safe to turn the eye immediately on mankind, as upon a mirror which shows all that presents itself without discrimination.'¹⁵⁸ This thesis will argue that to pursue a cognitive realist interpretation of modernist fiction is to domesticate, tame, and misrepresent the work of novelists who often explicitly rejected the idea that their work aimed to 'represent' anything at all.

¹⁵⁸ Samuel Johnson, *The Rambler*, iv (1750), 27-36, p. 33. Rpt. in Samuel Johnson, *Political Writings* (New Haven; London: Yale University Press, 1977, p. 157.

Chapter 2

What Virginia Didn't Know: Knowledge, Impressionism and the Eye

Words are no longer conceived illusively as simple instruments; they are cast as projections, explosions, vibrations, devices, flavors. Writing makes knowledge festive.

Roland Barthes, 'Inaugural Lecture, Collège de France'

while as for knowing, if I find my finger in the fire, I know that fire burns, with a knowledge so emphatic and vital, it leaves Nirvana merely a conjecture. Oh, yes, my body, me alive, *knows*, and knows intensely. And as for the sum of all knowledge, it can't be anything more than an accumulation of all the things I know in the body, and you, dear reader, know in the body.

D. H. Lawrence, 'Why the Novel Matters'

I. Knowledge and the Novel

As I suggested in the previous chapter, literature in general, and the novel-form in particular, has often been considered capable of conveying kinds of knowledge that seem resistant to other forms of representation. As Michael Wood argues in *Literature and the Taste of Knowledge*:

The idea that literature might harbour its own mode of knowledge is ancient, at least as old as the so-called quarrel between poetry and philosophy and Plato's notorious expulsion of the poets from the city in the *Republic*. It is fair to say that since Plato's famous decision there has been an implicit but consistent association of the poetic act with a peculiar, mysterious, and even dangerous sort of knowledge.¹

¹ Michael Wood, *Literature and the Taste of Knowledge* (Cambridge: Cambridge University Press, 2005), p. 5.

But the nature of this knowledge is various, as Wood points out, and has altered over time. As we shall see in the following chapters, technological advances in the early-twentieth century prompted enormous changes over what can be said to *be* known, and of what we imagine such knowledge to consist. ‘[W]hat one can know of a human being today’, wrote Friedrich Kittler in *Discourse Networks*, ‘has nothing to do with the 4,000 pages that Sartre, posing the same question, devoted to the psychology of Flaubert. One can record people’s voices, their fingerprints, their carapaces.’² Under the scrutiny of the reductive sciences, bolstered by mnemonic technologies able to capture sense-data seemingly without loss, knowledge of personhood and of what constitutes literary character began to be sought elsewhere. In the ‘Hades’ episode of James Joyce’s *Ulysses* Leopold Bloom contemplates the ways in which technology was making the person recordable as never before:

Besides how could you remember everybody? Eyes, walk, voice. Well, the voice yes. Gramophone. Have a gramophone in ever grave or keep it in the house. [...] remind you of the voice like a photograph reminds you of the face.³

Technology allows a simulacrum of personhood to be captured, but in doing so it renders the human subject dead or, at any rate, dying.

Echoing William Empson, Michael Wood offers a reading of Henry James’s *What Maisie Knew* (as we shall see, James’s novel is central to both literary and philosophical characterisations of knowledge in the period), identifying seven distinct

² Friedrich Kittler, *Discourse Networks 1800-1900*, tr. Michael Metteer and Chris Cullens (Stanford, Calif.: Stanford University Press, 1990), p. 237.

³ Joyce, *Ulysses*, ed. Hans Walter Gabler (London: Bodley Head, 1986), 6.933.

forms of ‘knowing’ that are referred to in that novel,⁴ and goes on to quote part of Elizabeth Bishop’s poem ‘At the Fishhouses’:

If you tasted it, it would first taste bitter,
then briny, then surely burn your tongue.
It is like what we imagine knowledge to be:
dark, salt, clear, moving, utterly free,
drawn from the cold hard mouth
of the world, derived from the rocky breasts
forever, flowing and drawn, and since
our knowledge is historical, flowing, and flown.⁵

Bishop’s poem presents us with a well-rehearsed and seemingly perennial tension. Sensations exist in language only as metaphorical realities, as ghostly and insubstantial gesturings towards a certain type of experiential knowledge. Like many literary treatments of sensory phenomena, ‘At the Fishhouses’ is really a poem about doubt. Taste is glossed as ‘*like* what we *imagine* knowledge to be’ [my italics]; a doubled equivocation that registers a multiplied anxiety over figuration’s capabilities as a barer of sensation. Such knowledge is doomed to exist in the past tense – has always and inevitably ‘flown’ before we sit down to describe it. What is true of taste and the proximate senses, I will suggest in the following chapter, ‘What is it Like to Be Leopold Bloom?’, is true of all the senses, and, indeed, is true of all conscious experience whatsoever. Literary representations of consciousness will always leave something out and can only *ever* be comparative – ‘like’ what we imagine first-hand knowledge of such phenomena to be.

⁴ These are knowing ‘that something is the case’, knowing ‘what you yourself feel or believe’, knowing ‘people, in the sense of having been introduced to them’, knowing ‘people, and things, in the sense of recognising them’, knowing ‘people or fail[ing] to know them, in the sense of deep intimacy’, knowing in ‘an interesting, semi-intransitive sense [...] where the word seems almost synonymous with life’, and knowing ‘simply meaning guessing right’. Of all of these, only the second approaches the kind of knowing I’m concerned with here. (Wood, *Taste of Knowledge*, pp. 16, 17, 18, 19, 19, 20).

⁵ Elizabeth Bishop, ‘At the Fishhouses’ in *Complete Poems* (London: Chatto & Windus, 1991), pp. 65-66.

Thus the idea that literature might provide a way of conveying to its readers the kind of knowledge that D. H. Lawrence calls, in ‘Why the Novel Matters’, ‘emphatic and vital’ – bodily knowledge; a way of knowing that is often associated with the phenomenological tradition in philosophy – is clearly problematic. Although, as Lawrence continues, the ‘body, me alive, *knows*, and knows intensely,’ this knowledge seems doomed forever to exist outside of discourse, whether that discourse is scientific, literary, or analytical.⁶ And yet, as I argued in the previous chapter, modernist narrative fiction often tends to be interpreted very much in terms of its ability to make us think that the overtly ‘literary’ body is, in Patricia Waugh’s words ‘in some sense’ more alive than other textual manifestations of it. That was why, so D. H. Lawrence claimed, he was a novelist. As Waugh argues:

although fiction cannot ‘write the body’, literary language is in some sense more embodied, closer to and arising out of the rhythms and pulsations of the body, and more able to produce bodily effects in its readers, than the so-called transparent language of science.⁷

One question that emerges from such discussion is: when does a ‘mental effect’ become a bodily one? As we saw in the last chapter, to subscribe to a materialist theory of consciousness means that one must subscribe also to the belief that mental events simply *are* bodily events. And if one subscribes to a dualist interpretation of consciousness then to suggest that the void between sensory and analytical knowledge can be crossed by certain forms of writing is to commit the qualial fallacy. Invoking the notion of qualia complicates this picture of the written body therefore, forcing us

⁶ D. H. Lawrence, ‘Why The Novel Matters’, *Study of Thomas Hardy and Other Essays*, ed. Bruce Steele (Cambridge: Cambridge University Press, 1985), p. 194.

⁷ Patricia Waugh, ‘Writing the Body: Modernism and Postmodernism’ in *The Body and the Arts*, ed. Corinne J. Saunders and Ulrika Maude (Basingstoke: Palgrave Macmillan, 2009), pp. 140-141.

to be more rigorous in our associations of certain forms of writing with ‘bodily’ knowledge.

An explicit anxiety over the status of knowledge, over its limits and properties in relation to the body, manifests itself explicitly within modernist narrative fiction.

As Alan Palmer suggests:

Modernist narrative is oriented toward the investigation of such issues as perception and cognition, perspective, the subjective experience of time, and the circulation and reliability of knowledge. It is preoccupied with such questions as, What is there to know about the world? Who knows it, and how reliably? How is knowledge transmitted, to whom, and how reliably?⁸

Advocates of this interpretation of the modernist novel have therefore tended to emphasise its catholic nature – its heteroglossic capacity to contain competing yet often complementary types of knowledge, and also to comment on or interpret these ways of knowing from within its formal confines. ‘The flexibility of [the novel’s] narrative modes and uses of voice’, Waugh continues, ‘allows for complex metalevel reflection on the relations between language, feeling and cognition in the representation of *qualia*.’⁹ As we have seen, the question of whether it makes any sense to speak of the representability of qualia is a vexed one, and in this chapter I will explore the question by focussing on what has come to be termed the ‘knowledge argument’ for the existence of qualia, an argument that intersects in provocative ways with the origins of the term itself and with many of the literary preoccupations associated with modernism.

In this chapter I will suggest that much of Virginia Woolf’s fiction engages explicitly with the idea of representing consciousness in terms of forms of knowledge,

⁸ Alan Palmer ‘1945 - Ontologies of Consciousness’ in *The Emergence of Mind: Representations of Consciousness in Narrative Discourse*, ed. David Herman (Lincoln and London: University of Nebraska Press, 2011), p. 276.

⁹ Waugh, ‘Writing the Body’, p. 139.

especially in terms of the eye's knowledge of the world. The problem is one that has important implications for the status of the novel, for the epistemological limits of fiction, and for the possibilities of reductive critical approaches to literature more generally. Attempts to reconcile the surfeit of consciousness with the apparent poverty of language seem to me to be doomed to a particularly interesting kind of failure, and it is this failure, considered as a failure of conveying a certain type of knowledge, that I would like to explore here. In the first part of this chapter I want to define more clearly the kind of knowledge that literature – despite the protestations of Lawrence and others – and language in general, seems incapable of containing. As I shall argue, the philosophical conditions of the so-called 'knowledge argument' are prefigured in debates over the status of sense-data in the Cambridge analytical tradition and are writ large in the work of Virginia Woolf.

II. Woolf's Knowledge

Despite Bloomsbury's declared educative project, Virginia Woolf never felt entirely at ease with the state of her knowledge. She claimed to have been denied a formal education, and pursued her learning largely autonomously, culling it from the books in her father's library.¹⁰ Consequently, Woolf was always insecure about her knowledge of certain academic subjects, of languages, economics, philosophy and especially of the problems of epistemology: of knowledge that engaged explicitly and often tortuously with what we can know, and how we can come to know it. Difficult

¹⁰ Recent work by Anna Snaith and Christine Kenyon-Jones suggests that Woolf may have overstated the degree to which she was self-taught. They provide evidence that 'Woolf had much more first hand experience of women's higher education than either she or her biographers have acknowledged'. See 'Tilting at Universities: Virginia Woolf at King's College London', *Woolf Studies Annual*, xvi (2010), 1-44, p. 1.

knowledge assaulted her, and she often described the learning process as a visceral, bodily one. She wrote of reading G. E. Moore:

I split my head over Moore every night, feeling ideas travelling to the remotest parts of my brain, and setting up a feeble disturbance hardly to be called thought. It is almost a physical feeling, as though some little coil of brain unvisited by any blood so far, and pale as wax, had got a little life into it at last; but had not strength to keep it.¹¹

The terms with which she discusses the difficulty of Moore's writing here is typical; her language suggesting that of a proto or imagined neuroscience, but she also stresses the affective mechanisms by which difficulty makes itself known to the body. The 'little coil of brain' stands as a physical marker, registering mental work as a bio-mechanical phenomenon.¹² Thus according to Woolf knowledge that might never truly be known can be felt even as it can't be mastered. There are undoubtedly shades of autobiography in Bernard's lamentations in *The Waves*, when he declares '[c]ertain things lie beyond my scope. I shall never understand the harder problems of philosophy', knowing, with certainty, what he will never know.¹³

Elsewhere Woolf suggested that resistance to a doctrinal philosophical position, a methodical and overly definitive system of knowledge, was liberating, declaring 'I don't want a "philosophy" in the least,'¹⁴ and arguing, in an essay on George Meredith:

¹¹ Qtd. in S. P. Rosenbaum, 'The Philosophical Realism of Virginia Woolf' in *Aspects of Bloomsbury*, (Basingstoke: Macmillan, 1998), p. 319.

¹² Woolf's frequent off-hand references to the 'nerves', (which are often presented as 'fiddle strings' to be 'vibrated' by sensory input), suggest a similar model of affect and cognition. See, for instance, *To The Lighthouse*, in which Mrs. Ramsay declares: 'My nerves are taught as fiddle strings. Another touch and they will snap.' Woolf, *To The Lighthouse* (London: The Hogarth Press, 1927), p. 143. I will explore the implications of this form of 'neuromodernism' in chapter four.

¹³ Virginia Woolf, *The Waves* (London: The Hogarth Press, 1931), p. 202.

¹⁴ Virginia Woolf, *The Diary of Virginia Woolf*, 6 vols., ed. Anne Olivier Bell and Andrew McNeillie (Harmondsworth: Penguin, 1979-1985), vol. iv, p. 126.

when philosophy is not consumed in a novel, when we can underline this phrase with a pencil, and cut out that exhortation with a pair of scissors and paste the whole into a system, it is safe to say that there is something wrong with the philosophy or with the novel or with both.¹⁵

As S. P. Rosenbaum has noted, '[t]hese remarks were not written by someone hostile or even indifferent to philosophy and its importance for fiction', though they do suggest that for Woolf the novel's forms of knowledge were different to those espoused by philosophy.¹⁶ The aesthetic curtailing brought about by the tyranny of a mindlessly pursued philosophical doctrine, often misunderstood and invariably misapplied, was a very real threat. Similarly, the flights of mystical fancy engaged in by more esoteric philosophies were anathema to her, and are nicely punctured in *Jacob's Room* by the figure of Miss Marchmont, whose synaesthetic research in the British museum reading room is made to seem absurdly vague:

What was she seeking through millions of pages, in her old plush dress, and her wig of claret-coloured hair, with her gems and her chilblains? Sometimes one thing, sometimes another, to confirm her philosophy that colour is sound – or, perhaps, it has something to do with music. She could never quite say, though it was not for lack of trying.¹⁷

Despite her suspicion of systematised forms of knowledge, however, it seems clear that Woolf, more than many writers, repeatedly 'consumed' certain philosophical arguments within her fiction. As S. P. Rosenbaum and Ann Banfield have both shown, many of Woolf's works, particularly her shorter fictions and late novels, demonstrate a sustained familiarity with the central epistemological problems

¹⁵ Virginia Woolf, 'The Novels of George Meredith' in *The Essays of Virginia Woolf*, 6 vols., ed. Stuart N. Clark (London: The Hogarth Press, 2009), vol v, p. 550. See also Woolf, 'Philosophy in Fiction' in *The Essays*, vol. ii, p. 211., in which she notes 'At first sight it seems that there must be something amiss with a story which is aimed at the reason [...].'

¹⁶ S. P. Rosenbaum, 'The Philosophical Realism of Virginia Woolf' in *English Literature and British Philosophy*, ed. S. P. Rosenbaum (Chicago and London: University of Chicago Press, 1971), p. 317.

¹⁷ Woolf, *Jacob's Room* (London: Hogarth Press, 1922), p. 171-172.

posed by philosophers in the British empirical tradition, especially as channelled through the work of G. E. Moore and Bertrand Russell.¹⁸ And as Banfield has argued, it was the question of knowledge itself – in all its social, artistic and political manifestations – that most exercised these philosophers, and by which Cambridge philosophy was shared abroad. ‘The problem of knowledge’ writes Banfield, ‘was the philosophical problem through which philosophy was brought to a wider public’.¹⁹ G. E. Moore’s ethical system, as outlined in his 1903 *Principia Ethica*, had stressed the role of pedagogy as a public good, an impulse manifested in Woolf’s adult teaching at the Morley institute and in the role of the Bloomsbury group in the formation of the British Broadcasting Corporation. Lord Reith’s founding maxim was essentially Aristotelian, holding that the aim of the BBC should be to ‘inform, entertain, educate’. As Todd Avery summarises:

Bloomsbury’s belief in the irreducible ethical value of conversation, and the group members’ faith in the ‘capacity of the human spirit to overflow boundaries’ [...] dovetailed with radio’s novel ability to perforate social borders, mix social classes, and effect a general democratization of moral valuation.²⁰

But underpinning all these ideological manifestations of public knowledge and the role of institutions in disseminating it was a more technical philosophical problem. The problem of knowledge Banfield refers to in *The Phantom Table* is the problem of public knowledge, formulated as two related questions: what constitutes an ‘object’ of knowledge? And how can these objects be shared with other minds?

¹⁸ See Ann Banfield, *The Phantom Table* (Cambridge, Cambridge University Press, 2000); and S. P. Rosenbaum, *Aspects of Bloomsbury*.

¹⁹ Banfield, *The Phantom Table*, p. 17.

²⁰ Todd Avery, *Radio Modernism: Literature, Ethics, and the BBC, 1922-1938* (Aldershot: Ashgate, 2006), p. 37.

The title of this chapter alludes to a thought experiment conceived by Frank Jackson entitled ‘What Mary Didn’t Know’, and with it I do not wish to cast further aspersions on the state of Woolf’s learning, but to suggest that distinctions between various types of ‘knowledge’, which lay at the centre of Moore’s and Russell’s neo-realist epistemological project, manifest themselves throughout Woolf’s work in ways that anticipate quite directly contemporary debates over the mind-body problem and the status of qualia.

Frank Jackson’s thought experiment concerns a savant-like neuroscientist, ‘Mary’, (itself an auspicious name: in ‘A Room of One’s Own’ Woolf introduced us to her own Mary saying ‘call me Mary Beton, Mary Seton, Mary Carmichael or by any name you please – it is not a matter of any importance’) who has been permanently confined since birth in a monochrome room of *her* own.²¹ Whilst there she is:

educated through black-and-white books and through lectures relayed on black-and-white television. In this way she learns everything there is to know about the physical nature of the world. She knows all the physical facts about us and our environment, in a wide sense of ‘physical’ which includes everything in completed physics, chemistry, and neurophysiology, and all there is to know about the causal and relational facts consequent upon all this, including of course functional roles. If physicalism is true, she knows all there is to know. For to suppose otherwise is to suppose that there is more to know than every physical fact, and that is just what physicalism denies. [...] It seems, however, that Mary does not know all there is to know. For when she is let out of the black-and-white room or given a color television, she will learn what it is like to see something red, say. This is rightly described as learning – she will not say ‘ho, hum.’ Hence, physicalism is false.²²

Jackson’s thought experiment, as he says, poses a challenge to functionalist, physicalist, and other reductively materialist accounts of consciousness. For it seems

²¹ Virginia Woolf, *A Room of One’s Own* (London: Hogarth Press, 1929), p. 5.

²² Frank Jackson, ‘What Mary Didn’t Know’, *Journal of Philosophy*, lxxxiii (1986), 291-295, p. 293.

that no matter how comprehensive the state of Mary's learning (and it is significant that the experiment depends upon the notion of what Jackson calls a 'completed' science of perception: Mary does not just know all that *we* know about such things, she knows everything it will ever be *possible* to know)²³, she will inevitably be unacquainted with the particular qualities of perceptual knowledge as it is experienced in a mind connected with the world – with the qualia of seeing red. The implication is that the knowledge Mary gains when experiencing colour for the first time, knowledge of certain sensory experiences *as they are experienced*, exists independently of any system of representation we could invent to communicate them. According to Jackson the notion of qualia refers to a certain way of knowing the world: qualia are claims to knowledge of certain properties of the external world as it is experienced. It is this kind of knowledge that asserts its peculiarities throughout much of Woolf's work. The problem of qualia outlined here therefore is that which the concept poses to *descriptions* of consciousness – no language, no matter how exhaustive, and whether it be scientific or literary, seems capable of conveying these raw sensations of experience to any reader, no matter how sensitive she may be. As Jackson concludes, '[i]magination is a faculty that those who *lack* knowledge have to fall back on[italics in original].'²⁴

According to Banfield, the eye was the sensory organ through which Bloomsbury's epistemological debates were most frequently framed. She suggests that:

The visual in Bloomsbury is synecdochic for the sensible, for 'those senses which are stimulated so briskly by the moderns; the senses of sight, of sound, of touch.'²⁵

²³ Jackson, 'What Mary Didn't Know', p. 293.

²⁴ Jackson, 'What Mary Didn't Know', p. 294.

²⁵ Banfield, *The Phantom Table*, p. 12.

Banfield argues that it was the combination of Roger Fry's notion of 'significant form' with Bertrand Russell's and G. E. Moore's theories of knowledge that underpinned Woolf's anti-materialist literary project. She reads Woolf's fictional internalisation of the problems of epistemology as a product of the confluence between abstract science and new theories of aesthetics engendered by her lack of a formal education. As she summarises:

For Woolf, untrained in logic, mathematics and philosophy, it is Roger Fry's theory of Post-Impressionism that provides the crucial link between the logical underpinnings of Cambridge theory of knowledge and her theory of 'modern fiction'.²⁶

As we shall see, it is undoubtedly the case that the notion of 'significant form' invoked by Fry and Clive Bell to explain the experimentalism of the new art associated with Post-Impressionism had a profound influence on Woolf's aesthetic sensibility. Yet in many ways her theories of fiction represent a delicate negotiation *between* Impressionist aesthetics and those that followed.

Bloomsbury's oculo-centrism was caused in part by the peculiar paradoxes thrown up by contemporary science, which exposed the tension between the observed properties of the external world at a macro level and science's explanation of its workings at the micro. It is undoubtedly the case that the 'sensory crisis' identified by many critics as occurring in the early 20th century had its genesis in scientific developments which made it ever more difficult to reduce what we know to what we feel. As I have suggested previously, scientific developments led a whole host of philosophers to increasingly conceive of the sensorium not as a cohesive, synaesthetic

²⁶ Banfield, *The Phantom Table*, p. x.

whole but as a fragmented and specialised set of almost reflexive sensory responses. How to represent those isolated instances of perception within the unified linearity of the sentence became one of Woolf's most pressing concerns.

Seeing has, of course, since Aristotle been intimately associated with 'knowing'; with interpretation of the real world in dispassionate and rational terms. It is a bias enshrined in phrases such as 'Do you see?' as a synonym for understanding, and in our implicit faith in the eye as a neutral arbiter of external reality. An anxiety over the disembodiment inherent in seeing, however, has been appropriated by contemporary discourses which stress the lack of bodily connection we have with the external world in a society which is more and more dominated by spectacle. The dominance of the eye and its close association with enlightenment principles has led many critics to identify it as an organ which has had a disproportionate influence on western sensory discourse. For hundreds of years, so it is argued by critics such as Martin Jay, Jonathan Crary and Karen Jacobs, the eye was enshrined as the organ of good sense and rationality, and 'Cartesian perspectivalism' dominated the western sensorium. According to Karen Jacobs, it was precisely this conception of seeing that came under attack in the late nineteenth and early twentieth century:

Cartesian perspectivalism is characterized by a monocular, disembodied, objective, and ahistorical vision. From the nineteenth century onward, Cartesian perspectivalism comes under increasing assault, its assumption of a detached, neutral observer discredited by a competing scopic regime traceable to the Baroque.²⁷

In *The Eye's Mind* Jacobs concentrates on theoretical and philosophical challenges to this oculo-centrism. Yet Jacobs's interest in the 'crisis in ocularism' is defiantly

²⁷ Karen Jacobs, *The Eye's Mind: Literary Modernism and Visual Culture* (Ithaca: Cornell University Press, 2001), p. 7.

theoretical – for her the process was caused by the ‘newly sceptical philosophical discourses of vision’, discourses like Marxism, psychoanalysis and existential philosophy, rather than the new optical technologies which, I would suggest, make such conceptions thinkable.²⁸ In contrast, I believe such a crisis might fruitfully be considered in terms of material and scientific developments which anticipated such conceptual and methodological realignments both within philosophy and in the arts. Thus in general my enquiry broadly conforms to Jacobs’s question:

As the modernist observer’s posture of neutral detachment is continually denaturalized and subjectivized from the beginnings of the twentieth century, and the realist novel is gradually overtaken by the rise of modernism, [we must ask] how does ‘the eye in the text’ renegotiate its relation to forms of knowledge and power?²⁹

Yet I would query Jacobs’s diagnosis of the reasons for this ‘posture of neutral detachment.’ These reasons are, I would suggest, stubbornly material, and prefigure the conceptual revolutions that Jacobs rightly identifies as conceptually significant.

According to Jacobs, the ‘God’s eye view’ of Cartesian perspectivalism, a vision of the world in which, according to Paul Ricoeur, ‘the whole of objectivity is spread out like a spectacle on which the *cogito* spreads its sovereign gaze’, came under attack especially in the modernist moment.³⁰ Yet I would suggest that if Cartesian oculo-centrism invokes a model of seeing that is too insistent on detachment, difference, and otherness, then all sense modalities must suffer in the same way. It is surely our prejudices toward the senses, derived from their technological mediation – our assumption that sight externalises objects in a way that smelling, touching and tasting, during which we must come into close contact with external objects, do not –

²⁸ Jacobs, *The Eye’s Mind*, p. 14.

²⁹ Jacobs, *The Eye’s Mind*, p. 3.

³⁰ Qtd. in Jacobs, *The Eye’s Mind*, p. 20.

that define the very terms of the debate; that allow the very concept of a ‘visual culture’ to take hold in the first place. Indeed, much of the time Jacobs is not talking of ‘seeing’ at all, but of sensing in general, of ‘being aware of’, or of ‘feeling’ in its primary sense. In attempting to rethink the sovereignty of the eye as a means of knowing, she recreates the prejudices she hopes to break down. This is a feature of much criticism concerning the senses and literature.

Although, as I will argue, seeing does certainly have some essential differences in its mode of operation, these differences are biological and mechanical rather than ontological in nature. Once written, the material and methodological differences within the sensorium that Jacobs takes to be essentialist are trumped by a larger, ontological question. As Karen Jacobs maintains:

In literary texts, of course, a gaze is a linguistically constructed, representational one, and comes into being through the reader’s identification with or visualization of the narrator’s view. In this sense, we might think of the realist narrator and the reader as coextensive, the realist narrator functioning as a kind of proxy for the reader.³¹

It is this ontological difference in forms of knowledge that Frank Jackson’s thought-experiment draws attention to.

Distinguishing between sensory experience and its analysis in terms of competing types of knowledge is in itself not particularly novel, of course. In his *Essay Concerning Human Understanding* John Locke recalled ‘[a] studious blind Man who had mightily beat his Head about visible Objects’, attempting to ‘understand those names of light and colours which often came in his way’ and:

³¹ Jacobs, *The Eye’s Mind*, p. 50.

Bragg'd one day, That he now understood what *Scarlet* signified. Upon which, his friend demanding, what Scarlet was? the blind Man answered, It was like the sound of a trumpet. Just such an Understanding of the name of any other simple *Idea* will he have, who hopes to get it only from a Definition, or other Words made use of to explain it.³²

Locke's studious blind man, like the neuroscientist Mary, attempts to transcend his sensory limitations by approaching knowledge of vision obliquely, via the imagination. It is striking that the distinction between types of knowledge is discussed by Locke primarily in terms of discourse, and, as in Jackson's thought experiment, the connection between sight and knowledge is stressed. Often the knowledge argument sets up a dichotomy between education, scholarship and 'studiousness' more generally, and bodily knowledge in this way. Such thought-experiments thus display some anxiety over a life of the mind, or a life lived through books, as inherently impoverished. Attempts to transcend the gulf of feeling using the traditionally humanistic tools of literature – comparison and imagination – seem on these readings to be inevitably doomed.

Many nineteenth-century philosophers too built their systems on a perceived difference between experiential knowledge, knowledge associated with sensory experience, and indirect or descriptive knowledge. In 1865 John Grote identified the distinction as an implicit feature of many languages, noting that in most cases natural language 'distinguishes between these two applications of the notion of knowledge, the one being *γινῶναι*, noscere, kennen, connaître, the other being *εἰδέναι*, scire, wissen, savoir.'³³ Later, Hermann von Helmholtz was struck by the difficulties of

³² John Locke, *An Essay Concerning Human Understanding*, ed. Peter H. Nidditch (Oxford: The Clarendon Press, 1975), p. 425.

³³ Qtd *A Companion to Epistemology*, ed. Jonathan Dancy, Ernest Sosa and Matthias Steup (Oxford: Blackwells, 1992), p. 479. The closeness of the French 'savoir' to 'savour' is remarked upon by Michael Wood, who quotes Roland Barthes as saying 'Literature doesn't say it knows something, but that it knows of something; or better, that it knows *about* something, - that it knows about men.' See Wood, *Taste of Knowledge*, p. 38.

reconciling ‘das Kennen’ (knowledge constitutive of ‘mere familiarity with phenomena), and ‘das Wissen’ (‘the knowledge of [phenomena] which can be communicated by speech’).³⁴ Following Helmholtz and Grote, in 1890 William James argued that:

I am acquainted with many people and things, which I know very little about, except their presence in the places where I have met them. I know the color blue when I see it, and the flavor of a pear when I taste it; I know an inch when I move my finger through it; a second of time, when I feel it pass; an effort of attention when I make it; a difference between two things when I notice it; but about the inner nature of these facts or what makes them what they are, I can say nothing at all. I cannot impart acquaintance with them to any one who has not already made it himself. I cannot describe them, make a blind man guess what blue is like, define to a child a syllogism, or tell a philosopher in just what respect distance is just what it is, and differs from other forms of relation. At most, I can say to my friends, Go to certain places and act in certain ways, and these objects will probably come.³⁵

According to such arguments, to seek knowledge of other minds within fiction seems doomed to failure, for what hope does literature have of acquainting us with such things as blueness?

As I have suggested, this dichotomy, between the kind of knowing that is intimate and conveyed by the senses directly, and that knowledge which exists only in relation to representational systems of language, came to the fore within philosophy alongside material and technological developments in the natural sciences that increasingly attempted to decipher the workings of the sensorium itself, and to represent its workings in empirically objective terms. As technological changes began to threaten the notion of a unified and coherent sensorium, with inventions such as the telephone and camera (as well as phonography and even perfumery – as we shall see, the entire sensorium was targeted during the period), separating out the data streams

³⁴ H. L. F. von Helmholtz, ‘The Recent Progress of the Theory of Vision’, *Popular Scientific Lectures*, tr. P. H. Pye-Smith (New York: Dover Publications, 1962), pp. 93-185.

³⁵ William James, *Principles of Psychology*, 2. vols. (London: Macmillan, 1891), vol. i, p.221.

which supplied the mind with its representations of the world, the contrast between the senses and their representation in language became ever more fraught.

It was within the Cambridge analytical philosophical tradition that the dualist implications of contemporary epistemology were most severely tested. Bertrand Russell famously argued that the new epistemologies espoused by himself and G. E. Moore were prompted by ‘the gulf between the world of physics and the world of sense’, a gulf that could be refigured as one between experiences of the world and scientific accounts of it.³⁶ As we saw in the last chapter, the relation of sense-data to physics, the title of an influential talk by G. E. Moore, was a central concern for those attempting to establish a new science of consciousness. As Bertrand Russell proclaimed, sensations were intimate, infallible, and independent both of the cultural knowledge which underpinned other forms of perception and of the matter described by physics which was their ultimate source. ‘[A]ll we ever know immediately’, he wrote, ‘is not matter, but our own sensations.’³⁷ In *Problems of Philosophy* he developed this thought, outlining an influential distinction between ‘knowledge by acquaintance’ and ‘knowledge by description’.³⁸ ‘We shall say we have *acquaintance*’ wrote Russell:

with anything of which we are directly aware, without the intermediary of any process of inference or any knowledge of truths. Thus in the presence of my table I am acquainted with the sense-data that make up the appearance of my table – its colour, shape, hardness, smoothness, etc. ; all these are things of which I am immediately conscious when I am seeing and touching my table. The particular shade of colour that I am seeing may have many things said about it – I may say that it is brown, that it is rather dark, and so on. But such statements, though they make me know truths *about* the colour, do not make me know the colour itself any better than I did before: so far as concerns knowledge of the colour itself, as opposed to knowledge of truths about it, I

³⁶ Bertrand Russell, *Our Knowledge of the External World* (London: George Allen & Unwin, 1922), p. 101.

³⁷ Qtd. in Banfield, *The Phantom Table*, p. 11.

³⁸ Russell, *Problems of Philosophy* (London: Thornton Butterworth Ltd., 1912), p. 72.

know the colour perfectly and completely when I see it, and no further knowledge of it itself is even theoretically possible.³⁹

Knowledge by description, in contrast, depended on language: on mental categories and concepts, on appealing to what Russell termed ‘universals’ in order to define meanings:

My knowledge of the table as a physical object, on the contrary, is not direct knowledge. Such as it is it is obtained through acquaintance with the sense-data that make up the appearance of the table. [...] There is no state of mind in which we are directly aware of the table; all our knowledge of the table is really knowledge of *truths*, and the actual thing which is the table is not, strictly speaking, known to us at all. We know a description, and we know that there is just one object to which this description applies, though the object itself is not known to us.⁴⁰

According to Russell, knowledge by acquaintance is immediate, irrefutable, and unmediated. Knowledge by description is indirect, analytical and, ultimately, what might be termed *literary*; dependant on our descriptive skill and the stories we tell ourselves about the world.

As we saw in the previous chapter, the sense-data thesis was founded on the notion that our ‘common-sense’ perceptions of the world were fundamentally misleading. In his 1910-1911 lectures, G. E. Moore defined sense-data by using the example of looking at a white envelope, claiming that what we see (and what escapes scientific description) when we attend closely to our sensations is not the object ‘envelope’ itself, but ill-defined patches of colour and shapes:

These things: this patch of a whitish colour, and its size and shape I did actually see. And I propose to call these things, the colour and size and shape, *sense-data*, things given or presented to the senses.⁴¹

³⁹ Russell, *Problems*, p. 73.

⁴⁰ Russell, *Problems*, p. 73.

⁴¹ G. E. Moore, *Some Main Problems in Philosophy* (London: George Allen & Unwin, 1953), p. 30.

As Tim Crane notes, ‘Moore commented in 1952 that he should have called the *patch* the sense-datum, and not the properties of the patch’ and equivocations regarding the status of sense-data, over whether they are independent of mind or not, continue (indeed this question lies at the heart of contemporary discussions over the status of qualia).⁴² Moore’s neo-realism, like Jackson’s qualia-thesis, was therefore founded on the notion that sensations constitute objects of knowledge. ‘A sensation’, wrote G. E. Moore, ‘is, in reality, a case of ‘knowing’ or ‘being aware of’ or ‘experiencing’ something. When we know that the sensation of blue exists, the fact that we know is that there exists an awareness of blue.’⁴³

In a definition of sensation which undoubtedly, as S. P. Rosenbaum has argued, influenced Woolf’s short piece ‘Blue and Green’, in which a perceiving consciousness considers the images thrown on a wall by a lustre on a mantel piece, Moore went on to define colours in terms of their inherently subjective nature, identifying ‘consciousness’ itself as a property of colour sensations as they are experienced:

The term ‘Blue’ is easy enough to distinguish, but the other element which I have called ‘consciousness’ – that which the sensation of blue has in common with the sensation of green – is extremely difficult to fix. That many people fail to distinguish it at all is sufficiently shown by the fact that there are materialists. And, in general, that which makes the sensation of blue a mental fact seems to escape us: it seems, if I may use a metaphor, to be transparent – we look through it and see nothing but the blue; we may be convinced that there *is something* but *what* it is no philosopher, I think, has yet clearly recognised.⁴⁴

Here the very notion of an executive consciousness is abandoned in favour of the somewhat Humean thesis that there is no thinking agent, only thoughts occurring.

⁴² Tim Crane, ‘The Origins of Qualia’ in *The History of the Mind-Body Problem*, ed. Tim Crane and Sarah Patterson (London: Routledge, 2000), p. 173.

⁴³ Moore, *Philosophical Studies*, p. 24.

⁴⁴ Moore, *Philosophical Studies*, p. 20.

Consciousness is something to be seen *through*, not to be made present or objectified on its own terms. Throughout Woolf's fiction too consciousness is represented as something which mediates between the world of physical reality and the mental states that are themselves representations of that reality. The mind is the 'luminous halo, semi-transparent envelope' described in Woolf's essay 'Modern Fiction'; or it is like 'lying in a grape and seeing through a film of semi-transparent yellow', as she wrote in *A Sketch of the Past*.⁴⁵ Woolf's definitions of the mind often suggest the Impressionist practice of looking through half-closed eyes in order to get a truer sense of the forms and colours which were being perceived, encouraged by Sir Joshua Reynolds who in his *Discourses* (edited by Roger Fry in 1905), advised the painter to perceive through dilated pupils, so that one may more faithfully represent what one is actually made conscious of.⁴⁶ The act, like Woolf's description of her own consciousness, forces us to attend not to the clear and specific portrayal of physical objects, but to a more general image composed of forms, shapes and colours made alien and therefore seen anew. Woolf's advice to the painter Mark Gertler, recorded in her diary, again suggests her belief in the importance of a necessary distance between artist and material, subject and creator: 'I advised him, for arts sake, to keep sane; to grasp & not exaggerate, & put sheets of glass between him & his matter.'⁴⁷

Like Woolf, who often invoked consciousness as a luminous envelope or a pane of glass to be seen through, Moore understood consciousness to be simply an element or property of perceptual experiences themselves. The 'something' that allows us to identify continuity between experiences is all that consciousness itself can be said to consist of. As we have seen, Moore enshrined that 'something' at the

⁴⁵ Virginia Woolf, 'Modern Fiction', *The Essays of Virginia Woolf*, 6 vols., ed. Andrew McNeillie and Stuart Clarke (London: The Hogarth Press, 1994), vol. iv, p. 160; Virginia Woolf, *A Sketch of the Past*, ed. Jeanne Schulkind (London: Hogarth Press, 1985), p. 65.

⁴⁶ Joshua Reynolds, *Discourses*, ed. Roger Fry (London, 1905), p. 189.

⁴⁷ Virginia Woolf, *The Diary of Virginia Woolf*, vol. i, pp. 175-6.

heart of his philosophical system, defining it as a property independent of both mind and matter.

That Moore's notion of sense-data was similar to C. I. Lewis's definition of the quale as ineffable and ontologically subjective is indicated more explicitly in his statement that 'you cannot, by any other manner of means, [than experience] explain to anyone who does not already know it, what yellow is.'⁴⁸ Just as in Frank Jackson's knowledge argument, Moore here suggests that no amount of purely physical, analytical description will ever provide a sufficient account of all the elements of consciousness; sensations themselves resist translation into language because they can only be experienced by a mind in contact with an external sensory stimulus. When Moore published in 1905 his paper 'The Nature and Reality of Objects of Perception' he argued that, because of the curious properties of the sense-datum: 'there is a sense in which no man can observe the perceptions, feelings, or thoughts of any other man' and it is this sense that the knowledge argument draws attention to.⁴⁹ That there are 'sensations' rather than mere words depends on a property of those sensations themselves, rather than the fact that they are 'had' by any thinking agent; any consciousness. It was this property which Moore identified as consciousness, and that C. I. Lewis would later define as qualia:

We all know that the sensation of blue differs from that of green. But it is plain that if both are *sensations* they also have some point in common. What is it that they have in common? [...] I will call the common element 'consciousness'.⁵⁰

Yet consciousness, thus conceived, was just as slippery a concept as the thinking agent had been exposed as. As Moore wrote elsewhere:

⁴⁸ G. E. Moore, *Principia Ethica* (Cambridge: Cambridge University Press, 1903), p. 7.

⁴⁹ Moore, *Philosophical Studies*, p. 53.

⁵⁰ Moore, *Philosophical Studies*, p. 17.

The moment we try to fix our attention upon consciousness and to see *what*, distinctly, it is, it seems to vanish. It seems as if we had before us a mere emptiness. When we try to introspect the sensation of blue, all we can see is the blue; the other element is as if it were diaphanous. Yet it *can* be distinguished, if we look attentively enough, and know that there is something to look for.⁵¹

In many manifestations of the knowledge argument therefore the thinking ego is eroded in favour of theories of sensations as immanent phenomena. ‘I think therefore I am’ is replaced as a philosophical certainty with ‘there are sensations’. Like Russell’s distinction between knowledge by acquaintance and by description and Moore’s identification of the ‘sense-datum’ as neutral bearer of material information, ‘What Mary Didn’t Know’ draws attention to the irreducibility of qualia and consequently of perceptual experiences in general. In this it is an emergentist theory, supposing that the vast complexities of perceptual experience cannot be put back in the box from whence they spring. The signified ‘truth’ of the table transcends its sensory signifiers. According to the qualia-thesis and Jackson’s thought experiment, public objects, and states of consciousness, are epiphenomenal. They are dependant on but not reducible to brainstates and photon streams.

As I suggested in chapter one, conceiving of the argument over the reality of sensory experience in relation to categories of knowledge in this way has a precedent in the ‘descriptionist’ science of the early twentieth century also. Ernst Mach’s *The Analysis of Sensations* and Karl Pearson’s *The Grammar of Science* both posited what Otto Neurath would later term a ‘physicalist’ (as opposed to a straightforwardly materialist) model of consciousness – a reductive view of the mind that argued for the possibility of explaining how consciousness functioned in terms of descriptions of

⁵¹ G. E. Moore, ‘The Refutation of Idealism’, *Mind*, xii (1903), 433-453, p. 450.

physical processes. This was a development of materialist doctrine which itself depended on new conceptions of the role of science for its justification. In 1925 the Cambridge philosopher C. D. Broad outlined the limitations of such approaches using his own version of the knowledge argument, invoking the figure of the ‘mathematical archangel’ in his book *The Mind and its Place in Nature*. Such a being, argued Broad, though endowed with unlimited analytical skills and ‘gifted with the further power of perceiving the microscopic structure of atoms’ could not predict the full nature of, say, ammonia, for he would always lack knowledge of one essential quality of that substance until he experienced it.⁵² As Broad argued:

He [the archangel] would know exactly what the microscopic structure of ammonia must be; but he would be totally unable to predict that a substance with this structure must smell as ammonia does when it gets into the human nose. The utmost that he could predict on this subject would be that certain changes would take place in the mucous membrane, the olfactory nerves and so on. But he could not possibly know that these changes would be accompanied by the appearance of a smell in general or of the peculiar smell of ammonia in particular, unless someone told him so or he had smelled it for himself.⁵³

Distinguishing between sensations and the representation of the physiological and neurological mechanisms which governed them was a direct result, I will argue in chapter four, of modernity’s medical advances which exposed the neural system as never before. Here Broad’s ‘mathematical archangel’ is figured as something of a scientist, able to predict ‘certain changes in the mucous membrane, the olfactory nerves and so on’, but utterly unable to connect these observations with affect. Like Locke’s studious blind man and Jackson’s Mary, here is a subject isolated from the

⁵² C. D. Broad, *The Mind and its Place in Nature* (London: Kegan Paul, 1925), p. 70.

⁵³ Broad, *Mind*, p. 71.

economies of knowledge. He represents the life of the pure mind, isolated from the shocks of the world in the monadic room of the laboratory.

III. Knowledge's Genders

'What Mary Didn't Know' and its predecessors engage with perceptual and epistemological economies, as well as with issues of gender and knowledge, echoing the ways in which Woolf 'consumed' such questions within her fiction. The knowledge argument is a profoundly *literary* thought-experiment, and not just in terms of its form: a short story about a woman trapped in a room. Mary's monadic, monochrome world is composed almost entirely of symbols – it is a world of books and print contrasted with the world of experiential knowledge provided by life as it is generally lived. As I have suggested Mary's gender is significant also, itself symptomatic of the changes within the academy that Woolf herself looked forward too in 'A Room of One's Own' and elsewhere. As Friedrich Kittler notes, speaking of another female modernist-scientist Gertrude Stein:

In the methodic isolation of her laboratory, cut off from all the classical determinations of woman and integrated into the new desexualized university, an ideal student speaks and writes as if the rejected truth of Western thought had returned. Psychophysics thus took the place of occult media (read: women). Alone and dazed, a Pythia sits on the tripod again, and men or priests whisper to her the secret ideas of the people.⁵⁴

The idea of gendered economies of knowledge runs through much of Woolf's work. In her short story 'A Society' she identified men as the progenitors of infinite and often unreadable books, producers of the streams of information which constantly

⁵⁴ Kittler, *Discourse Networks*, p. 228.

threatened to overload the modern consciousness. In the story a group of women form a reading group around one of their number, Poll, whose father has bequeathed her inheritance only on the condition that she reads all the books in the London Library. ‘While we have borne the children’, says Poll, ‘they, we supposed, have borne the books and the pictures. We have populated the world. They have civilised it. But now that we can read, what prevents us from judging the results?’⁵⁵ Poll’s somewhat Borgesian task leads to a discussion about the ‘truth’ (either aesthetic, cultural or scientific), and of what constitutes knowledge itself. Whilst she masters much of the knowledge of her time – contained in those bastions of masculine discourse, contemporary novels, scientific articles, and the *Times* – Poll becomes increasingly aware of the inherent emptiness of such ways of knowing. Learning, or at any rate the learning prized by patriarchal society, is presented as a poisoned chalice and represents a fall from innocence to experience. ‘If we hadn’t learned to read’ Poll says, bitterly, ‘we might still have been bearing children in ignorance and that I believe was the happiest life after all.’⁵⁶

Elsewhere Woolf pursued this gendered dichotomy of knowledge by contrasting the classificatory and taxonomic principles of genealogy with the writing of evocative sketches – a dichotomy she described in an essay on biography as divided between the ‘granite’ of fact and the ‘rainbow’ of fictional evocation.⁵⁷ In her short story ‘The Journal of Mistress Joan Martyn’, for instance, she described a female historian far more interested in showing ‘vividly as in a picture, some scene from the life of the time’ than in listing the dry, statistical if, perhaps more ‘objective’

⁵⁵ Virginia Woolf, *A Haunted House: the Complete Shorter Fiction*, ed. Susan Dick (London: Vintage, 2003), p. 19.

⁵⁶ Woolf, *Haunted House*, p. 19.

⁵⁷ Woolf, ‘The New Biography’ in *The Essays*, vol. iv, p. 473.

information gleaned from her studies – names and dates.⁵⁸ She is criticised by her fellow historians who say that such digressions ‘have nothing to do with the system [of] mediaeval land tenure’ and that she has ‘no materials at [her] side to stiffen these words into any semblance of the truth.’⁵⁹ Knowledge of ancestry, that ongoing concern of Woolf’s, is here conceived of as something that can be read in two ways – as a heraldic progression of dates, rents and quantities, true but not ‘vivid’, or as the rich record of unique and idiosyncratic individual lives.

As I have suggested, this tension over lived experience, over how it should be represented in literature and whether it can be reconciled with semantic or descriptive knowledge, recurs throughout Woolf’s fiction, and is often contained in narratives that mirror the formal structures of the philosophical thought experiments which touch on similar questions. In ‘The Mark on the Wall’, for instance, the phenomenological investigations of an individual consciousness are triggered by a visual experience so slight as to almost defy description:

In order to fix a date it is necessary to remember what one saw. So now I think of the fire; the steady film of light upon the page of my book; the three chrysanthemums in the round glass bowl on the mantelpiece. Yes, it must have been the winter time, and we had just finished our tea, for I remember that I was smoking a cigarette when I looked up and saw the mark on the wall for the first time.⁶⁰

Here the visual impression is presented as the starting point for analytical speculation. An anonymous narrator, stripped of the usual trappings associated with literary ‘character’, sits in a monadic room and explores the implications of her own epistemological assumptions. The narrating consciousness uses the visual impression – the sense-datum of the mark on the wall – as an anchor to structure thought, a way

⁵⁸ Woolf, *Haunted House*, p. 74.

⁵⁹ Woolf, *Haunted House*, p. 74.

⁶⁰ Woolf, *Haunted House*, p. 77.

of obtaining temporal placement (the cold hard date must be fixed with reference to an ephemeral visual experience), and locating the mind in a past which it is no longer possible to possess directly. This meditation on the visual is then presented as something essentially limiting, intrinsically difficult to share with others and eternally hampered by the material and cultural constraints which attend it:

How readily our thoughts swarm upon a new object, lifting it a little way, as ants carry a blade of straw so feverishly and then leave it [...] If that mark was made by a nail, it can't have been for a picture [...].⁶¹

In navigating through a host of semiotic 'readings' of the mark, the narrator of 'The Mark on the Wall' engages in a kind of epistemological enquiry which again creates a distinction between sensations and other forms of knowledge. 'No, no' she eventually declares:

nothing is proved, nothing is known. And if I were to get up at this very moment and ascertain that the mark on the wall is really – what shall I say? – the head of a gigantic nail, driven in two hundred years ago, which has now, owing to the patient attrition of many generations of housemaids, revealed its head above the coat of paint, and is taking its first view of modern life in the sight of a white-walled fire-lit room, what should I gain? Knowledge? Matter for further speculation? I can think sitting still as well as standing up. And what is knowledge?⁶²

Again the type of objective knowledge the narrator would gain were she to get up and investigate the mark is in the story associated again with 'masculine' values; knowledge which seeks to pin down and categorise, knowledge associated with 'Whittaker's table of precedency', recalling 'leading articles, cabinet ministers – a whole class of things indeed which as a child one thought the thing itself, the standard

⁶¹ Woolf, *Haunted House*, p. 77.

⁶² Woolf, *Haunted House*, p. 43.

thing, the real thing.’ It is ‘generalisation’, a type of knowledge sought by ‘learned men’, descendants of ‘witches and hermits’.⁶³

In another short story, ‘Monday and Tuesday’, this quest for masculine knowledge and ‘truth’ is internally reconciled with sensation by creating a sharp delineation between the two types of information. The faithful replication of a train of thought is relayed in words stripped of their categorical specificity, and the distillation of language is associated with the narrator’s constant quest for truth:

desiring truth, awaiting it, laboriously distilling a few words, for ever desiring – (a cry starts to the left, another to the right. Wheels strike divergently. Omnibuses conglomerate in conflict) – for ever desiring – (the clock asseverates with twelve distinct strokes that it is midday; light sheds gold scales; children swarm) – for ever desiring truth.⁶⁴

The technique of bracketing off sensory experiences from the main thrust of the narrative of conscious life, suggesting a literary simultaneousness that Woolf wielded so effectively in *To The Lighthouse* and *Mrs. Dalloway*, can be discerned in embryo. Here it creates a hierarchy of cognition. Specificities of sensory description are confined to parenthesis; external action punctuates – typographically – the distillation process which is described. But the lament is one which never really reaches a conclusion. The external world constantly and forcefully intrudes on thought, never allowing us to settle on any particular definition of the ‘truth’.

I shall examine another thought experiment about an individual trapped in a closed epistemic system – John Searle’s ‘Chinese Room’ argument – in chapter six, but for now I want to draw attention to the formal similarities of the thought experiment as a means of gaining knowledge about the world and the short story or

⁶³ Woolf, *Haunted House*, p. 45.

⁶⁴ Woolf, *Haunted House*, p. 90.

novel *as* a form of thought-experiment. '[S]ignificantly', observes David Herman, it is true that 'many of the arguments about qualia in the philosophy of mind are couched in the form of stories or story-like thought experiments'.⁶⁵ Woolf herself was well aware that the form of the thought experiment was analytical philosophy's most forceful argumentative tool. Many of Woolf's novels fictionalise some central paradoxes of subjectivity in terms of the conflicted status of the observing agent and explicitly connect this figure with contemporary philosophical incarnations of it. The 'Time Passes' section of *To The Lighthouse*, for instance, which attempts to present quite directly a narrative of unobserved passivity, in many ways forms a structural correlative to Andrew's definition of his father's work in *To The Lighthouse*: "think of a kitchen table then" he told her, "when you're not there".⁶⁶ In 'Time Passes', passivity is the defining feature of the unobserved world: 'Not only was furniture confounded; there was scarcely anything left of body or mind by which one could say "this is he" or "this is she."' ⁶⁷

But what happens when the individual consciousness is removed from participating in the visual economy whilst retaining, outwardly, the potential for vision, for seeing? Mr. Ramsay is described in *To The Lighthouse* in precisely these terms:

Indeed he seemed to her sometimes made differently from other people, born blind, deaf and dumb, to the ordinary things, but to the extraordinary things, with an eye like an eagle's. His understanding often astonished her. But did he notice the flower? No. Did he notice the view? No. Did he even notice his own daughter's beauty or whether there was pudding on his plate or roast beef?⁶⁸

⁶⁵ Herman, *Basic Elements of Narrative* (Chichester: Wiley-Blackwell, 2009), p. 154.

⁶⁶ Woolf, *Lighthouse*, p. 40.

⁶⁷ Woolf, *Lighthouse*, p. 196.

⁶⁸ Woolf, *Lighthouse*, 111.

Later on, Mrs. Ramsay muses further on her husband's inability to appreciate the subtleties of vision; to gain pleasure from the experience of beauty:

And looking up, she saw above the thin trees the first pulse of the full-throbbing star, and wanted to make her husband look at it; for the sight gave her such keen pleasure. But she stopped herself. He never looked at things. If he did, all he would say would be, Poor little world, with one of his sighs.⁶⁹

In Woolf's work sensory pathology is frequently associated with masculinity. Here there is a doubled distancing of 'sense' from knowledge. Astronomy was a central concern for many of Woolf's contemporaries, and Bertrand Russell had argued that astronomy was a relatively unique science, suggesting that it 'differs from terrestrial physics because of its exclusive dependence upon sight.'⁷⁰ As such, astronomy (hinted at above in the 'pulse of the full-throbbing star') in some respects represented an older, discredited model of knowledge, one that depended upon the making of stories, and upon trusting our increasingly untrustworthy sensorium. As Russell continued: 'As physics has advanced it has appeared more and more that sight is less misleading than touch as a source of fundamental notions about matter.'⁷¹

Woolf often invoked tactility as a more definite and objective sense than vision, a sense opposed to the abstractions of the eye. Certain recurring motifs in her work continue the tradition, identifiable in Descartes' 'Argument from Illusion' but perhaps Biblical in origin, of privileging touch over sight as a source of definite knowledge. Thus in *The Waves* Bernard taps his knuckles 'smartly upon the edges of apparently solid objects' and asks 'Are you hard?' and later states 'I strike the table with a spoon. If I could measure things with compasses I would, but since my only

⁶⁹ Woolf, *Lighthouse*, p. 112.

⁷⁰ Qtd in Banfield, *Phantom Table*, p. 12.

⁷¹ Qtd in Banfield, *Phantom Table*, p. 13.

measure is a phrase, I make phrases.’⁷² (in the ‘Proteus’ episode of *Ulysses* Stephen applies his Aristotelian epistemology in a similar manner – ‘he was aware of them bodies before of them coloured. How? By knocking his sponce against them’). Like doubting Thomases, many of Woolf’s protagonists require the confirmation of solidity to be conducted by hand or foot, rather than by eye. In *The Waves*, for instance, the boot becomes the measure of the real, the banisher of figments and phantoms:

These are fantastic pictures – these are figments, these visions of friends in absence, grotesque, dropsical, vanishing at the fist launch of the toe of a real boot.⁷³

In her essay ‘Phases of Fiction’ Woolf wrote of the ‘truth tellers’ – Defoe, Swift and Trollope – who mimic reality by focussing on solidity itself. ‘[W]hat they describe happens actually before our eyes. We get from their novels the same sort of refreshment and delight that we get from seeing something actually happen in the street below.’⁷⁴ In Defoe, especially, she continues, we ‘seem wedged among solid objects in a solid universe’.⁷⁵ And yet this conjuring up of a solid, literal, world cannot hold our attention for long. Denied variation of ‘realities’, and presented at all times with the material facts of characters interacting, concentration is lost. ‘We begin to crave for something to vary it that will yet be in harmony with it.’⁷⁶ Matter, that paradoxically un-solid substance, is tested by the boot. There are frequent references to the kicking of stones and to the solidity of boots in Woolf’s work, (as when Mr. Ramsay describes the boots of his own design to Lily Briscoe in *To The Lighthouse*,

⁷² Woolf, *The Waves*, pp. 303-304.

⁷³ Woolf, *The Waves*, pp. 126-127.

⁷⁴ Woolf, ‘Phases of Fiction’ in *The Essays*, vol. v, p. 42.

⁷⁵ Woolf, ‘Phases of Fiction’, p. 43.

⁷⁶ Woolf, ‘Phases of Fiction’, p. 44.

and she goes on to note: ‘the very stone one kicks with one’s boot will outlast Shakespeare,’) ⁷⁷ a lineage of kicking which is surely an echo of Boswell’s report of Dr. Johnson’s refutation of Bishop Berkeley, in which he recounts:

After we came out of the church, we stood talking for some time together of Bishop Berkeley’s ingenious sophistry to prove the nonexistence of matter, and that every thing in the universe is merely ideal. I observed, that though we are satisfied his doctrine is not true, it is impossible to refute it. I never shall forget the alacrity with which Johnson answered, striking his foot with mighty force against a large stone, till he rebounded from it – ‘I refute it *thus*.’ ⁷⁸

The visual, therefore, standing in for sensory experience throughout Woolf’s work, is frequently challenged by the paradoxes of solidity, and by the knowledge we can gain of the world through our other sensory organs. The degree to which objective ‘knowledge’ differs from perceptual knowledge is central to Ann Banfield’s conception of Woolf’s literary project, and to her reading of Bloomsbury’s concerns more generally. The problem of what objectivity can ever remain once Berkeleyian idealism, guaranteed by an observing God, has been rejected (one thinks of the Hymn recalled by Jacob in *Jacob’s Room*, with its Christian idealist mantra which amounts to a plea or a request for epistemological certainty: ‘Great God, what do I see and hear?’, invoking God as a means of justifying perceptual experiences themselves) is, however, not solved by the implicit placement of an observing god-narrator. ⁷⁹

Idealism and neo-realism do battle on the pages of Woolf’s novels, manifesting their influence in the exploratory essays on the limits of knowledge ‘consumed’ within much of her work, leading to a profound engagement with the status of sensation within fiction more generally.

⁷⁷ Woolf, *Lighthouse*, p. 59.

⁷⁸ James Boswell, *The Life of Samuel Johnson* (London: Carter, Hendee and Co., 1832), p. 209.

⁷⁹ Woolf, *Jacob’s Room*, p. 81.

As I argued in the previous chapter, both ‘sense-data’ and ‘sensibilia’ are categories which relocate Cartesian arguments about mind and matter to individual instances of sense perception, and as such maintain or indeed reinstate a dualism of some kind. Banfield contends that: ‘The replacement of the dualism of the subject and object, mind and matter, by the public and private does not eliminate dualism, but depsychologizes one side.’⁸⁰ Bertrand Russell himself argued: ‘[t]his dualism has nothing to do with any ‘mind’ that I may be supposed to possess; it exists in exactly the same sense if I am replaced by a photographic plate.’⁸¹ Such a dualism poses difficulties for the status of literature, as it problematizes the types of knowledge that can be conveyed through language. Woolf’s dismissal of certain types of analytical, masculine, quantitative knowledge in favour of a subjective knowledge of sense and emotion is unsuited to such a conception of mind and world.

As such, and as Banfield contends, the central question asked by Woolf throughout her fiction is one that can never finally be answered, and is one that conflicts with what we might be able to say about the formal innovations of the visual arts. It was a question that she articulated in straightforward terms in *To The Lighthouse*: ‘But how describe the world seen without a self?’⁸² The problem of describing a world seen without a self is for her not one of ontology but of language: ‘[t]here are no words. Blue, red – even they distract, even they hide with thickness instead of letting light through.’⁸³ Woolf’s frequent calls for a model of utterance which would allow one to ‘record [...] impressions in words of one syllable’ in the impressionist mode, for what she calls in *The Waves* a ‘little language such as lovers use’ a language composed of ‘howls and cries’, locates the central problem of

⁸⁰ Banfield, *Phantom Table*, p. 73.

⁸¹ Banfield, *Phantom Table*, p. 78.

⁸² Woolf, *The Waves*, p. 314.

⁸³ Woolf, *The Waves*, p. 314.

Woolf's philosophy not outside consciousness – as a study in the possibility of abstract objectivity – but inside the individual mind, as a problem of conveying sensations to others: a problem of sharing certain types of often competing knowledge.⁸⁴

The impossibility of conveying qualia to other minds through language is something that Woolf addresses most directly in her essays, however. In 'On Being Ill', for instance, she suggests that on the whole 'literature does its best to maintain that its concern is with the mind; that the body is a sheet of plain glass through which the soul looks straight and clear,' and, further, that illness presents a special sensory case which makes its translation into language impossible.⁸⁵ As she suggests:

The merest schoolgirl, when she falls in love, has Shakespeare or Keats to speak her mind for her; but let a sufferer try to describe the pain in his head to a doctor and language at once runs dry. [...] There is nothing ready made for him. He is forced to coin words himself, and, taking his pain in one hand, and a lump of pure sound in the other (as perhaps the people of Babel did in the beginning), so to crush them together that a brand new word in the end drops out.⁸⁶

Woolf does go on to propose a solution to the problems of writing the shiver and the headache, suggesting that:

It is not only a new language that we need, more primitive, more sensual, more obscene, but a new hierarchy of the passions; love must be deposed in favour of a temperature of 104; jealousy give place to the pangs of sciatica; sleeplessness play the part of villain, and the hero become a white liquid with a sweet taste – that mighty Prince with the moths' eyes and the feathered feet, one of whose names is Chloral.⁸⁷

⁸⁴ Woolf, *The Waves*, p. 323.

⁸⁵ Virginia Woolf, 'On Being Ill' in *The Essays*, vol. iv, p. 318.

⁸⁶ Woolf, 'On Being Ill', pp. 318-319.

⁸⁷ Woolf, 'On Being Ill', p. 319.

Here Woolf seems to be proposing a view of consciousness that attempts to overcome the problem of qualia, a conception of mind that, as we shall see in chapter four, Paul and Patricia Churchland call ‘Eliminative Materialism.’ This is the belief that our common sense or ‘folk’ psychological intuitions about the mind are wrong and, if we want to understand consciousness objectively, must be replaced with scientific terms for mental states. In this account, ‘pain’ itself is a redundant and imprecise term, merely offering an imprecise description of a brain state; that of ‘C-Fibres firing’. All other mental states have their brain-state equivalents, and it is the language of neuroscience that we must become fluent in if we want to accurately describe consciousness.

As a peculiarly distinct and decentred sensory state, the problem of pain has an established history as a challenge to neuro-scientific descriptions of consciousness, and has itself been the focus of some critical speculation. As Woolf wrote in *The Waves* ‘for pain words are lacking.’⁸⁸ It has seemed by many thinkers to be a state that is particularly inexpressible. The apparent incommunicability of pain-states led C. S. Lewis to argue in *The Problem of Pain* that:

There is no such thing as a sum of suffering, for no one suffers it. When we have reached the maximum that a single person can suffer, we have, no doubt, reached something very horrible, but we have reached all the suffering there ever can be in the universe. The addition of a million fellow-sufferers adds no more pain.⁸⁹

When we discuss notions of pain (or any other mental state) we can ascribe a series of properties to it. It has, of course, a functional component – pains make us aware that our bodies are being damaged, or potentially damaged, in some way. Pain also has a

⁸⁸ Woolf, *The Waves*, p. 288.

⁸⁹ C. S. Lewis, *The Problem of Pain* (London: Centenary Press, 1940), p.116.

neurological correlate, generally described in terms of a particular variety of nerve fibres – called ‘C fibres’ – firing. Yet it also has a qualitative element: that which it feels like to experience pain.

A similar conception of pain as an especially subjective sensory modality has been advanced by Elaine Scarry in *The Body in Pain*, her account of the relationship between pain and language. Though she avoids using the term itself, Scarry’s project is clearly concerned with the paradoxes thrown up by conceiving of consciousness in terms of qualia. Scarry argues that pain represents some special case of sensory experience which is somehow less accessible to public language than other, more neutral, mental states are:

When one hears about another person’s physical pain, the events happening within the interior of that person’s body may seem to have the remote character of some deep subterranean fact, belonging to an invisible geography that, however portentous, has no reality because it has not yet manifested itself on the visible surface of the earth. [...] Vaguely alarming yet unreal, laden with consequence yet evaporating before the mind because not available to sensory conformation, unseeable classes of objects such as subterranean plates, Seyfert galaxies, and the pains occurring in other people’s bodies flicker before the mind, then disappear.⁹⁰

Yet Scarry’s identification of ‘pain’ with ‘subterranean plates’ and ‘Seyfert galaxies’ suggests that she misapprehends the full implications of materialist philosophies of consciousness for written consciousness. I would suggest that the latter two entities, though undoubtedly difficult to observe, can be objectively described in ways which ‘pain’ cannot. As she summarises, ‘Whatever pain achieves, it achieves in part through its unshareability, and it ensures this unshareability through its resistance to language.’⁹¹

⁹⁰ Elaine Scarry, *The Body in Pain: the Making and Unmaking of the World* (Oxford: Oxford University Press 1984), p. 4.

⁹¹ Scarry, *Pain*, p. 4.

Pain is ‘unshareable’ because, as she goes on to argue, it has no ‘external referent’:

[w]hy pain should so centrally entail, require, this shattering of language will only gradually become apparent over the course of many pages; but an approximation of the explanation may be partially apprehended by noticing the exceptional character of pain when compared to all our other interior states. Contemporary philosophers have habituated us to the recognition that our interior states of consciousness are regularly accompanied by objects in the external world, that we do not simply ‘have feelings’ but have feelings *for* somebody or something, that love is of *x*, fear is fear of *y*, ambivalence is ambivalence about *z*. [...] Physical pain – unlike any other state of consciousness – has no referential content. It is not *of* or *for* anything. It is precisely because it takes no object that it, more than any other phenomenon, resists objectification in language.⁹²

Again the limitations of this claim are quickly apparent. Of course ‘pain’ has its referential equivalents to the states listed by Scarry above. I can speak sensibly of the pain of stubbing my toe, or of losing a loved one: pains are no more disconnected from the world of external objects than any other perceptual state.

Elsewhere Scarry seems to treat the problem of qualia, in relation to pain, merely as one of nomenclature. As evidence she refers to Woolf’s essay ‘On being Ill’, in which it is claimed that English, ‘which can express the thoughts of Hamlet and the tragedy of Lear has no words for the shiver or the headache’.⁹³ Her appropriation of Woolf’s comment is metaphysically naïve. The obvious answer to this statement, one that Scarry doesn’t acknowledge, is to point out that in fact we do have words for the shiver and the headache, namely, ‘shiver’ and ‘headache’. Whether such words adequately convey the sensations they describe is a question not limited to the realm of pain.

⁹² Scarry, *Pain*, p. 5.

⁹³ Woolf, ‘On Being Ill’, p. 319.

The apparent ‘shareability’ of sensory states other than pain through language is similarly chimerical. It may indeed be possible to express *some* of Hamlet’s thoughts in language, but, if they exist, by their very definition it would be impossible to convey his qualia. Indeed Woolf’s point was more subtle than that which Scarry credits her with. As Woolf goes on to argue, it may be strange that we have fewer pain-related descriptors than we do for other sense modalities, but we are certainly free to create more. Scarry employs a dubious grammatical distinction to argue for a metaphysical dualism which is simply not sustained by any introspective ‘testing’ of her hypothesis. It is a strategy that is typical of attempts to marry arguments about the status of consciousness to those of literary production. In the end it seems clear that she has succumbed to what Woolf warns us is a direct result of the ‘miracle’ of embodied sensation:

this monster, the body, this miracle, its pain, will soon make us taper into mysticism, or rise, with rapid beats of the wings, into the raptures of transcendentalism.⁹⁴

What’s really interesting about Woolf’s account of pain in ‘On Being Ill’ is how, once she’s proposed a reductive account of pain, she then re-inscribes a literary model for these scientific processes into her ‘story’ of illness. Love may have to be ‘deposed in favour of a temperature of 104’, but sleeplessness becomes personified: it is a villain, to be vanquished in heroic fashion by ‘that mighty Prince with the moths’ eyes and the feathered feet, one of whose names is Chloral’.

In attempting to grapple with the inherently subjective nature of sense-data as experienced, with qualia, Woolf employs language in a way that suggests a Post-Impressionist focus not upon the visual as perceived through the eye, therefore, but on

⁹⁴ Woolf, ‘On Being Ill’, p. 319.

the world as reconstructed in the mind through the interplay between idea and sense. Hotness, coldness, redness, roughness, pain – Woolf’s fiction is constantly returning to the primacy of felt experience which is presented as the source of all our mental being. And yet at the same time her language immediately moves in to fossilise felt experience, to entomb it in words which ultimately deaden, and frequently question their own ability to make us feel. Indeed, much of Woolf’s fiction and non-fiction suggests that it is only within language that we can think at all:

‘We haven’t the words – we haven’t the words,’ Mrs. Swithin protested.
 ‘They’re behind the eyes; not on the lips; that’s all.’
 ‘Thoughts without words,’ her brother mused. ‘Can that be?’
 ‘Quite beyond me!’ cried Mrs. Manresa, shaking her head.⁹⁵

IV. Knowledge and the Naïve Eye

As Michael Whitworth has argued, the trope of the ‘naïve subject’ recurred regularly within the scientific and philosophical writing in the period. In his account of modernism’s relationship with popular science, *Einstein’s Wake*, Whitworth identifies a ‘propositional naïveté’, ‘such that Ernst Mach postulates [in *The Analysis of Sensations*] with his child in a field who says: “[...]The world is a blue ball”’, as a recurring trope of philosophical literature of the time.⁹⁶ The naïve subject was a being devoid of certain forms of knowledge, portrayed as inhabiting a world of primary sensory phenomena simply expressed. It was a trope which the phenomenologists turned into a philosophical system, and was a founding assumption of Impressionist

⁹⁵ Virginia Woolf, *Between the Acts* (London: The Hogarth Press, 1947), p. 68.

⁹⁶ Michael H. Whitworth, *Einstein’s Wake: Relativity, Metaphor, and Modernist Literature* (Oxford: Oxford University Press, 2001), p. 97.

practice in the visual arts also.⁹⁷ Often this naïveté was addressed explicitly in terms of childhood, as a form of perceptual innocence coupled with a lack of descriptive sophistication. For many scientists and philosophers the naïve eye was a conceptual tool embodying an unsophisticated narrative positioning, allowing for the adoption of an ideologically neutral position from which to perceive the world. It involved embracing a ‘common sense’ perspective regarding phenomenological issues. Such positioning, they believed, would lead to the discovery of greater truth.

The general vogue for the primitive, as well as the fears of ‘degeneration’ this vogue engendered during the modernist moment, can be read as an attempt to strip the world back to some original, pre-Edenic state of sensory reification. G. E. Moore’s epistemological project was conceived explicitly along these lines. As he wrote: ‘I want to raise some childishly simple questions as to what we are doing when we make judgements of a certain kind.’⁹⁸ Similarly, in his essay on ‘Some elementary reflexions of sense-perception’ C. D. Broad wrote of his desire to consider:

the three main forms of sense-perception from what I will call a ‘purely phenomenological point of view.’ By this I mean that I shall try to describe them as they appear to any unsophisticated percipient, and as they inevitably *go on appearing* even to sophisticated percipients whose knowledge of the physical and physiological process involved assures them that the appearances are highly misleading.⁹⁹

The confluence between phenomenology and Impressionism, though often conflicted, was apparent to many philosophers of the period also. It’s not surprising that Maurice

⁹⁷ See, for instance, Herbert Muller, ‘Impressionism in Fiction: Prism vs. Mirror’, *The American Scholar*, vii (1938), 355-367, p. 356.

⁹⁸ G. E. Moore, *Philosophical Studies*, p. 220.

⁹⁹ C. D. Broad, ‘Elementary Reflections of Sense-Perception’ in *Perceiving, Sensing, Knowing: A Book of Readings from Twentieth-century Sources in the Philosophy of Perception*, ed. R. J. Schwartz (Garden City, N.Y: Anchor Books, 1965), p. 30.

Merleau-Ponty, consolidating Husserl's phenomenological project, was a keen advocate of Cézanne. As he wrote in 'Cézanne's Doubt':

We live in the midst of man-made objects [...] and most of the time we see them only through the human actions which put them to use. [...] Cézanne's painting suspends these habits of thought and reveals the base of human nature upon which man has installed himself. This is why Cézanne's people are strange, if viewed by a creature of another species. Nature itself is stripped of the attributes which make it ready for animistic communions [...] It is an unfamiliar world in which one is uncomfortable and which forbids all human effusiveness.¹⁰⁰

The process which Merle Williams identifies as 'phenomenological reduction' is, as we shall see in chapter five, in some ways akin to the 'descriptionism' of philosophies of science, but was focussed not on material relations but on utterances about them. Cézanne's and the Impressionists' proclamations called for the annihilation of socially constructed 'ways of seeing', of representing a catalogued world where objects were depicted as separate entities, almost as secular, scientific, icons. Yet clearly even such attempts, which generally involved the reduction of the visible into its basic visual forms, break from the descriptionist rubric in a variety of ways. They represent not 'efficient' – and therefore clearer – ways of summarising visual information, but alienating strategies which attempt to make us view the world afresh, even if we disagree with their interpretations. As Jesse Matz suggests: 'Impressionism does aspire to something like the phenomenological synthesis, but without phenomenology's inclination to define it clearly.'¹⁰¹

Though notoriously difficult to define, Impressionism in the visual arts can thus be characterised by its interest in the representation of subjective visual sensation

¹⁰⁰ Maurice Merleau-Ponty, 'Cézanne's Doubt' in *Sense and Non-Sense*, tr. Hubert L. Dreyfus and Patricia Allen Dreyfus (Illinois: Northwestern University Press, 1964), p. 16.

¹⁰¹ Jesse Matz, *Literary Impressionism and Modernist Aesthetics* (Cambridge: Cambridge University Press, 2001), p. 18.

in ways analogous to what I have termed cognitive realism, and in ways which intersect with Woolf's work in a number of interesting ways. The faithful representation of such experiences, unshackled from the compromising effects of cultural legacy, over-literalisation, or the narrative manipulation of a scene, was at the heart of Impressionist aesthetics. Many of these artists defined their practice as producing something realer than naturalism; ignoring externalities to provide veridical portraits of the subjective sensory experiences of an individual, idealised, observer. In Cézanne's words; 'painting from nature is not copying the object, it is realising one's sensations.'¹⁰² Virginia Woolf's literary project, outlined in her influential essay 'Modern Fiction', was based on a similar desire. She famously urged the novelist to:

record the atoms as they fall upon the mind in the order in which they fall, [to] trace the pattern, however disconnected and incoherent in appearance, which each sight or incident scores upon our consciousness.¹⁰³

In stressing that the novelist should remain faithful to the actualities of sensory experience, 'however disconnected and incoherent in appearance' the finished work might appear, in 'Modern Fiction' Woolf was proposing a literature of sensation with aims analogous to those of Impressionist painting. Similarities of style and subject between Woolf's writing and the aesthetic assumptions of Impressionism are certainly apparent, but it is inevitable that, as she commented in her essay on Walter Sickert, painting and writing 'must part in the end.'¹⁰⁴ As Jesse Matz has argued, the principles of Impressionism appear to be meaningless when applied to language, which by its very nature distorts experience, channelling it into universals rather than specifics:

¹⁰² Qtd. in Hughes, Roberts, *The Shock of the New* (London: Thames & Hudson), p. 125.

¹⁰³ Virginia Woolf, 'Modern Fiction' in *The Essays*, vol. iv, p. 161.

¹⁰⁴ Woolf, 'Walter Sickert: A Conversation' in *The Essays*, vol. vi, p.43.

Literature, it seems, means ideas, reflection, and judgement, and so it has no place for the merely perceptual impression. [...] Impressionism has lost a place in literary history to the belief that literature and Impressionism rule each other out and that to admit their juncture would reduce literature's intelligence to mere sense.¹⁰⁵

Matz goes on to describe the process by which Impressionism has, contrary to the above, become enshrined as a foundational feature of twentieth century aesthetics and as the defining feature of much modernist literature. Rather than reading the literary Impressionists as engaged in a cognitive realist project, however, Matz argues that the impression should be interpreted playing 'a *mediatory* role, standing somewhere between sensations and ideas, and likewise undoing other basic oppositions.'¹⁰⁶

Seeking knowledge of how the world is 'represented', phenomenology largely inverted the notion of propositional naïveté as it had been understood by the Impressionists. As Merle Williams contends, Husserl used the term 'naïve attitude' to refer not to the 'innocent eye' of childhood, but to mature individuals who do not recognise the strangeness of their relationship to the world of sense, people who 'accept, quite unthinkingly, the basic conditions of their existence', those basic conditions being culturally derived.¹⁰⁷ In this formulation, it is the mind equipped with language and constrained by shared concepts that is considered 'naïve'; trapped in a net both of linguistic and of cultural assumptions. In an inversion of impressionist rhetoric, phenomenologists conceived of the 'innocent eye' as *less* naïve, than that equipped with experience. The strategy of 'epoché', or bracketing, aimed to dissolve these naïve attitudes (which included ideological, religious, or moral standpoints, as

¹⁰⁵ Matz, *Impressionism*, p. 12.

¹⁰⁶ Matz, *Impressionism*, p. 12.

¹⁰⁷ Merle A. Williams, *Henry James and the Philosophical Novel: Being and Seeing* (Cambridge: Cambridge University Press, 1993), p. 28.

well as the classificatory impulses of adult vision) in the process of which the world could be seen as it ‘really is’.¹⁰⁸ As Williams continues:

Husserl’s remedy is the phenomenological *epoché*, or the process of ‘bracketing’ which puts the *natural attitude* out of action. The familiar world of people and objects, with all its accompanying values and judgements, is set on one side. The bracket has a similar effect to the one used in mathematics; it alters the status of what it contains.¹⁰⁹

Such ‘bracketing’ was an attempt to isolate the specific workings of the brain by incarnating a sort of spiritual epiphany in regard to the external world. As Maurice Merleau-Ponty developed the notion:

The best formulation of the reduction is probably that given by Eugen Fink, Husserl’s assistant, when he spoke of ‘wonder’ in the face of the world. Reflection does not withdraw from the world towards the unity of consciousness as the world’s basis; it steps back to watch the forms of transcendence fly up like sparks from a fire; it slackens the intentional threads which attach us to the world and thus brings them to our notice; it alone is consciousness of the world because it reveals that world as strange and paradoxical.¹¹⁰

In Merleau-Ponty’s terms, phenomenology was an attempt to imbue the world of sense with ‘wonder’ through deconstructing assumptions, which were subsequently categorised as naïve.

Phenomenological reduction therefore involved not a simplification of the sensory environment into felt segments, to be chased ever more obliquely into the crevasse of unknowing, but a concentration on the relationships between statements as mediated by their status within language. As such it seemed to offer a solution to the

¹⁰⁸ See Richard Schmitt: ‘Husserl’s Transcendental-Phenomenological Reduction’ in *Phenomenology: The Philosophy of Edmund Husserl and its Interpretation*, ed. Joseph J. Kockelmans (New York: Doubleday, 1967), p. 58.

¹⁰⁹ Williams, *Henry James*, p. 29.

¹¹⁰ Maurice Merleau-Ponty, *Phenomenology of Perception*, tr. Colin Smith (London: Routledge & Kegan Paul, 1962), p. xiii.

epistemological paradoxes of the kind of propositional naïveté I have examined above, one that was not subject to the problems of reducing sense-data. Many modernist novels can be thought of as embodying these arguments, and Woolf's work in particular demonstrates a sustained focus on childhood and the 'innocent eye' as a narrative strategy.

The problem of knowledge outlined above was, as we have seen, primarily a literary problem. Frank Jackson borrowed the title of his thought experiment from Henry James's *What Maisie Knew*, a work which was itself concerned with the degree to which knowledge could be shared, and which marked a revolutionary shift in the epistemic claims made on behalf of, and indeed *by*, the novel-form. In his preface James described Maisie as a 'light vessel of consciousness', a half-formed cipher unable to contain a fully fledged mind.¹¹¹ Maisie was a focaliser of naïveté, an innocent stand-in for the reader's eye perceiving the scene, unable to translate her experience into rich literary language. As James continued, '[s]mall children have many more perceptions than they have terms to translate them.'¹¹² Maisie, like Jackson's Mary, was supposed to know significantly *less* than those around her, and in decoding what she *did* know the reader was supposed to be drawn closer to the way in which she experienced the world:

The infant mind would at the best leave great gaps and voids; so that with a systematic surface possibly beyond reproach we should nevertheless fail of clearness of sense. I should have to stretch the matter to what my wondering witness materially and inevitably *saw*; a great deal of which quantity she either wouldn't understand at all or would quite misunderstand.¹¹³

¹¹¹ Henry James, *What Maisie Knew*, ed. Douglas Jefferson and Douglas Grant (Oxford: Oxford University Press, 1966), p. 4.

¹¹² James, *What Maisie Knew*, p. 6.

¹¹³ James, *What Maisie Knew*, p. 5.

With *What Maisie Knew* James attempted to draw attention to the ways in which meanings are constructed through social interaction and cultural sophistication. As Merle Williams points out:

Maisie stands on the threshold of experience; she has not been drawn into the acceptance of conventional values, she lacks even the rudiments of a normal nursery education.¹¹⁴

James does not narrate ‘through’ Maisie as such, nor does he offer a first person narrative, but ‘is between the two, narrating her story but doing so from within the confines of her limited conceptual and linguistic understanding of the world.’¹¹⁵ This allows for a complex narrative distance to be established within the novel. When her father’s friends pinch Maisie’s calves and call them toothpicks, for instance, she knows only that she is ‘deficient in something that would meet the general desire’.¹¹⁶ What that something might be is not made explicit, but it is hinted at:

She found out what it was, it was a congenital tendency to the production of a substance to which Moddle, her nurse, gave a short ugly name, a name painfully associated at dinner with the part of the joint that she didn’t like.¹¹⁷

Fat, then, is the big unmentionable in this faux-naïf description of Maisie’s confused sexual awakening. The scientific language James uses here, the description of ‘a congenital tendency to the production of a substance’ again makes clear the different orders of ‘explanation’ that the naïve mind must navigate. And, as Millicent Bell points out, the real ‘unnameable’ at the heart of this exchange is something more sinister even than fat: ‘What the calf pinchers really find wanting in Maisie’s young

¹¹⁴ Williams, *Henry James*, p. 27.

¹¹⁵ Williams, *Henry James*, p. 32.

¹¹⁶ James, *What Maisie Knew*, p. 16.

¹¹⁷ James, *What Maisie Knew*, p. 16.

legs is [...] sexuality, a special sense of ‘desire’ that Maisie does not yet know.’¹¹⁸

This tension between what is explicitly stated and what is hinted at is familiar in works that had to navigate the consequences of censorship in the early twentieth century also (it is reminiscent of the ‘pig’s pizzle’ in Hardy’s *Jude the Obscure*) but James’s use of it in his narrative was a product not of legal constraints but of a wish to explore a form of epistemological naïveté from within the confines of the novel itself. Innuendo is used to suggest the thickness of the world.

The fragile subjectivity of perspective and focalisation proposed by *What Maisie Knew*, in which the emotional experiences of a small child are narrated in a language which reflects her limited understanding of the world, fictionalised many of the philosophical assumptions held by William James, and posited the subjective impression as the focus of much contemporary fiction. The effect of this formal psychological intimacy, however, was itself paradoxically alienating, drawing attention to the fact that the novel was itself fundamentally artificial. Though Woolf herself was impressed with the technique, she stressed the alienating qualities of attempts to suggest the conscious mind, especially that of a child, indirectly within the novel. Maisie, Woolf wrote:

can only affect us very indirectly, each feeling of hers being deflected and reaching us after glancing off the mind of some other person. Therefore she rouses in us no simple and direct emotion. We always have time to watch it coming and to calculate its pathway, now to the right, now to the left [...] we hang suspended over this aloof little world and watch with intellectual curiosity for the event.¹¹⁹

The definition of James’s novel as an ‘aloof little world’ is typical of Woolf’s ongoing interest in closed epistemic systems – with rooms as prototypal minds or monads,

¹¹⁸ Millicent Bell, *Meaning in Henry James* (Cambridge, Mass; London: Harvard University Press, 1991), p. 251.

¹¹⁹ Woolf, ‘Phases of Fiction’ in *The Essays*, vol. v, p. 64.

with the *res cogitans* as isolated agent, passively taking in external stimuli, or with the hermetically sealed systems represented by children playing with the miniature worlds, such as the rock pools Nancy plays with in *To the Lighthouse*:

She crouched low down and touched the smooth rubber-like sea anemones, who were stuck like lumps of jelly to the side of the rock. Brooding, she changed the pool into the sea, and made the minnows into sharks and whales, and cast vast clouds over this tiny world by holding her hand against the sun, and so brought darkness and desolation, like God himself, to millions of ignorant and innocent creatures, and then took her hand away suddenly and let the sun stream down.¹²⁰

The novel, of course, is itself a little world: a selective and particular utterance exploring certain pre-ordained limits of the mind. But it is the innocence of childhood figured as a lack of *knowledge* that is so striking a feature of James's novel, and of Woolf's and Jackson's later applications of it.

Thus naïveté and the innocent eye, both in the arts and in philosophy, represented a range of often contradictory positions regarding the status of the perceiving agent and the representability of its perceptions. Point of view is always and inevitably connected with the knowledge the perceiving agent has of the scene perceived, but the value of that knowledge or its absence was fiercely contested in the period. For Woolf the relationship between childhood and naïve objectivity was self-evident. 'It seems to me that a child must have a curious focus' she wrote 'it sees an air-ball or a shell with extreme distinctness.'¹²¹ Lacking the ability to name and therefore classify, and subsequently dull, a world composed primarily of perceptual experiences, for Woolf childhood could only be characterized after the event as the experience of:

¹²⁰ Woolf, *To The Lighthouse*, pp. 118-9.

¹²¹ Woolf, *A Sketch of the Past*, p. 78.

many bright colours; many distinct sounds; some human beings, caricatures; comic; several violent moments of being, always including a circle of the scene which they cut out: and all surrounded by a vast space – that is a rough visual description of childhood.¹²²

In ‘Kew Gardens’ Woolf described the experience of childhood in terms of a subject coming into cognizance of a world that was once filled with vague and general shapes:

The slow pulling down of thick green stalks so that the cup of the flower, as it turns over, deluges one with purple and red light. Why, after all, should one not be born there as one is born here, helpless, speechless, unable to focus one’s eyesight, groping at the roots of the grass, at the toes of the Giants?¹²³

For Woolf childhood was a primitive state associated with synaesthetic experience and the uncontrollable assaults of sense-data on the sensorium. But her attempts to capture the experience of childhood in prose were always tinged with elegy. Unlike James Joyce, whose attempts to render the fractured and fragmented (if associative) nature of childish discourse on the first page of *A Portrait of the Artist as a Young Man* embodied the limited literary abilities of youthful consciousness, Woolf’s children speak in a sophisticated ‘little language’ which speaks of absence and an inability to say precisely what is meant. It is a little language deeply imbued with the anxieties of knowledge and its relationship to epistemological enquiry.

As I have suggested, much has been written about the way in which Woolf’s focus on colours and shapes in her descriptive passages (such as that above) is suggestive of the *plein air* paintings of the high Impressionists.¹²⁴ E. M. Forster’s

¹²² Woolf, *A Sketch of the Past*, p. 79.

¹²³ Woolf, *Haunted House*, p. 42.

¹²⁴ See, for instance, Diane F. Gillespie, *The Sister’s Arts: The writing and painting of Virginia Woolf and Vanessa Bell* (Syracuse, N.Y: Syracuse University Press, 1988).

gentle dismissal of stories such as ‘Kew Gardens’ and ‘The Mark on the Wall’ as ‘lovely little things’ which ‘seem to lead nowhere,’ composed as they are of ‘tiny dots and coloured blobs’, is symptomatic of a critical approach to her shorter fictions which treats them as interesting, yet limited, experiments in consolidating and consummating the techniques of visual impressionism in language.¹²⁵ Woolf herself described these stories in a letter to Ethel Smyth as ‘mere tangles of words; balls of string that the kitten [...] has played with [...] inarticulate, ridiculous, unprintable mere outcries.’¹²⁶

Nevertheless there are certainly illuminating comparisons to be made between Woolf’s work and the visual arts. Monet’s famous advice to Lilla Cabot Perry could be read as a manifesto for many of Woolf’s descriptive passages:

When you go out to paint, try to forget what objects you have before you – a tree, a house, a field, or whatever. Merely think, here is a little square of blue, here an oblong of pink, here a streak of yellow, and paint it just as it looks to you, the exact colour and shape, until it gives your own naïve impression of the scene before you.¹²⁷

A similar conception of a new method of description is a central tenet of Woolf’s stylistic principles. As she states in her essay on Walter Sickert:

The novelist [...] must often think that to describe a scene is the worst way to show it. It must be done with one word, or with one word in skilful contrast with another.¹²⁸

¹²⁵ E. M. Forster, *Virginia Woolf* (Cambridge: Cambridge University Press, 1942), p. 7.

¹²⁶ Virginia Woolf, *The Letters of Virginia Woolf*, 6 vols., ed. Nigel Nicolson and Joanne Trautmann Banks (London: Hogarth Press, 1979), vol. iv, p. 231.

¹²⁷ Quoted in Linda Nochlin, *Impressionism and Post-impressionism, 1874-1904* (Englewood Cliffs: Prentice Hall, 1966), p. 35.

¹²⁸ Woolf, ‘Walter Sickert : A Conversation’, p.43.

The use of ‘one word, or one word in skilful contrast with another’ in place of realist ‘description’, places a semantic burden on individual words which means that they must be carefully chosen in order to achieve their effects through suggestion, rather than assertion. As she wrote elsewhere, words have ‘short wings for their heavy body of meaning’, and are often ‘inadequate to carry them far [...] thus alighting awkwardly upon the very common objects that surrounded them.’¹²⁹ By employing language stripped of much of its specificity, Woolf’s impressionist descriptions seem to undermine form. Like the paintings which they are analogous to, the passages force us to imagine for ourselves the relations between the objects depicted, component parts of the visual field must be built up again internally. The description of the flowerbed in ‘Kew Gardens’ operates in precisely this way:

there rose perhaps a hundred stalks spreading into heart-shaped or tongue-shaped leaves half-way up and unfurling at the tip red or blue or yellow petals marked with spots of colour raised from the surface; and from the red, blue, or yellow gloom of the throat emerged a straight bar, rough with gold dust and slightly clubbed at the end.¹³⁰

Here we are offered a defiantly partial account of the flower bed, which strikes us as flat, lacking perspective. We are forced to reconstruct the ‘scene’ in a more attentive fashion than is usually required. In ‘Kew Gardens’ the movement between the various stages of visual description are strikingly cinematic also. The close-up intensity of domestic vision we are offered here quickly gives way to the vagaries of impressionistic description. The family move away from the implied observer (camera or eye); ‘diminishing in size among the trees and looked half transparent as the sunlight and shade swam over their backs in large trembling irregular patches.’

¹²⁹ Woolf, *Haunted House*, p. 37.

¹³⁰ Virginia Woolf, *Haunted House*, p. 32.

Our attention returns to the progress of the snail, a recurring point of specific perceptual concentration for Woolf, and again the sweep and movement of changing perspectives is suggested. The progress of the snail, occurring in a temporal frame which is so alien to that which governs the progress of the characters around it, serves to focus our attention, to contrast with the more biographical narrative facts we are presented with elsewhere in the story, and provide a fundamentally alien relief to the events which surround it.

In the visual arts, the interplay between the experience of the senses and their representation often forces us to attend anew to our own visual consciousness, and aesthetic satisfaction is derived from the realization that the world ‘out there’ is itself represented through the senses in ways which resist formal classification. The lack of visual demarcation so characteristic of Impressionism, resulting in paintings which look as though the scene were being viewed through half closed eyes, works in precisely this way. As Christopher Butler has pointed out, much of the power of impressionist art relies on this interplay between the representation and the experience of visual sensation:

In the work of Monet [...] and in many other such cases, there is a pleasure in understanding the relationship between what we take to be a *representation* (of trees in the morning mist or lilies on the pond) and our visual sensations of colour.¹³¹

In Woolf’s fiction the defamiliarisation of the subject, achieved in painting through remaining faithful to the ‘exact colour and shape’ of the subject, is replicated in language which focuses on basic perceptions, rather than on categories or objects, to describe the world.

¹³¹ Christopher Butler, *Pleasure and the Arts* (Oxford: Oxford University Press, 2004), p. 135.

Bernard in *The Waves*, with his notebook of world-making phrases, provides another image of a kind of utopian and direct sensory inscription, one that stands as a corrective to the epistemological models outlined above. The fluid ‘hive mind’ suggested by *The Waves*, if we can call it that, is itself concerned primarily with the data of sense – with colours, smells, and other sensory realities. Thus the novel opens, as we saw in the previous chapter, with an exhaustive catalogue of sensory description, a litany of feelings and perceptions recounted in straightforward, referential prose:

‘I see a ring,’ said Bernard, ‘hanging above me. It quivers and hangs in a loop of light.’

‘I see a slab of pale yellow,’ said Susan, ‘spreading away until it meets a purple stripe.’

‘I hear a sound,’ said Rhoda, ‘cheep, chirp; cheep, chirp; going up and down.’¹³²

Here all the senses of the classical sensorium are targeted individually, in language which, though poetic and crafted, isn’t particularly elaborate. As Susan contends, later on in the novel, her language is tokenistic in the Hulmean sense: ‘It is black, I see; it is green, I see; I am tied down with single words.’¹³³ Compared to Susan’s elemental phrase-making, her fitting of words to world in the most straightforward way possible, bearing witness to the sensory phenomena she experiences, Bernard’s experiments in articulation offer the promise of authorial control, a shaping of experience into art through the deployment of crafted phrases. As Susan continues: ‘[b]ut you wander off; you slip away; you rise higher, with words and words in phrases.’¹³⁴ Though there is a sort of fetishisation of visionary childhood here, it is one defiantly controlled, ordered and written about rather than overheard.

¹³² Woolf, *The Waves*, p. 7.

¹³³ Woolf, *The Waves*, p. 15.

¹³⁴ Woolf, *The Waves*, p. 15.

Later in the novel Bernard outlines what amounts to a manifesto for Woolf's own method in *The Waves*: 'I notice externals only. I sit here like a convalescent, like a very simple man who knows only words of one syllable. "The sun is hot." I say. "The wind is cold."'”¹³⁵

As I suggested in the last chapter, these simple declarations of experience get us no closer to experiencing the sensations seen and felt by the characters within the novel. Woolf's strategy of defamiliarising objects, taking them apart so as to describe them in terms of colour or shape – the analytical equivalent of the phenomenological epoché – was a recurring feature both within analytical philosophy and across the arts. The linguistic pulling apart of the components of visual experience was akin to literary Impressionism's strategy of what Ian Watt calls 'delayed decoding' – describing objects not as objects but in terms of their component parts, and through doing so shocking the reader with the thrill of recognition. Such atomisations of action are typical of modernism. As Karen Lawrence argues of Joyce, 'the description of certain common events like a handshake, a sunrise, a bump on the head, are documented with such precision they are almost unrecognizable.'¹³⁶ As Michael Whitworth has noted, when Lily cries in *To The Lighthouse*, 'she "experiences the sensation of her eyes being full of a hot liquid" before she thinks of tears'¹³⁷. By atomising the symbolically laden term 'crying' into its constituent sensory parts, Woolf suggests that the primacy of felt experience is what can identify the sensitive mind in action, or being acted upon.

Throughout her fiction Woolf presents us with descriptions of visual sensations in ways analogous to or in dialogue with Conrad's strategy of delayed

¹³⁵ Woolf, *The Waves*, p. 201.

¹³⁶ Karen Lawrence, *The Odyssey of Style in 'Ulysses'* (Princeton, N.J.: Princeton University Press, 1981), p. 187.

¹³⁷ Whitworth, *Virginia Woolf*, p. 118.

decoding, descriptions which strip the visual field of its linguistic and object-orientated specificity, forcing the reader to reconstruct the image-as-perceived through attempts to 'work out' what the flashes of colour, the shapes and movements described, might represent. Denied definitions which would allow us to instantly perceive some scene or visual motif, much of Woolf's work is interested in fragmenting the visual field and exploring individual units of sensation in an impressionist mode. But she never suggests that in doing so her method aims at the re-creation of such effects in the sensory organs of the reader.

The paradox that lies at the heart of Impressionism's celebration of the authenticity of childhood experience, and the anxieties which attend the naïve eye in the philosophical tradition, is that such faithful correlation between thought and sense can never be communicated. The artist who attempts to present this relationship must inevitably rely on linguistic or graphic representational strategies. As soon as language is mastered, as soon as we can speak, grip and control the pen or brush, and begin to represent to others our own internal 'reality' then we undermine any claim we may have of remaining faithful to that experience. We project instead our mind's (perhaps instinctive, perhaps learned) formalising, classificatory, tendencies. With this notion in mind, then, artists who attempt to convey the subjective 'reality' of childhood experience have two options. They can either artificially re-create the limited, fragmentary nature of the child's limited linguistic ability (as Joyce does so effectively in the opening sentences of *A Portrait of the Artist as a Young Man*), or they can put questions of the 'appropriateness' of particular language aside, and present a sort of 'case study' in concrete, specific terms, whilst at the same time lamenting language's inability to bear sensation. This is Woolf's chosen solution to the problems of knowledge in an innocent mind.

V. Knowing Other Minds

As we have seen, in both her fiction and in her essays, Woolf displays a sustained theoretical interest in the ways in which we can ever ‘know’ another mind outside of a novel; can ever experience the consciousness of another human being for ourselves.

As I argued in the previous chapter, many contemporary manifestations of the fallacy of cognitive realism are founded on neo-behaviourist interpretations of empathy and intersubjectivity. Critics such as Lisa Zunshine, Kay Young and Alan Palmer have all been exercised by the application of psychological theories to the novel, in particular so-called ‘theory of mind’; the idea that, as Zunshine summarises ‘fiction engages, teases, and pushes to its tentative limits our mind-reading capacity’.¹³⁸ ‘Mind reading’ is the process by which we apply our ‘Theory of Mind’ to the world, and refers to ‘our ability to explain people’s behaviour in terms of their thoughts, feelings, beliefs and desires [...] we engage in mind-reading when we ascribe to a person a certain mental state on the basis of her observable action.’¹³⁹ For Zunshine and other cognitive narratologists, the way we read novels is akin to the ways in which we interpret human behaviour more generally.

In this Zunshine seems to align herself with Woolf’s theories of fiction, character and the status of knowledge. Her novels and short stories are full of references to the problems of intersubjectivity and of other minds, and she frequently proposed a model of empathy that depended on ‘reading’ or ‘writing’ the external world, including individual character, in order to access the thoughts of other people. On this account knowing another is by definition an active, if partial, process, borne

¹³⁸ Lisa Zunshine, *Why We Read Fiction: Theory of Mind and the Novel* (Columbus, Ohio: Ohio State University Press, 2006), p 4.

¹³⁹ Zunshine, *Why We Read Fiction*, p. 5.

of story telling and what we might call a ‘will to fiction’. As Lily Briscoe suggests in *To the Lighthouse*, knowing another person is an inherently literary activity:

And this, Lily thought, taking the green paint on her brush, this making up scenes about them, is what we call ‘knowing’ people, ‘thinking’ of them, ‘being fond’ of them.¹⁴⁰

And yet Woolf’s fiction should certainly not be read as a straightforward application or endorsement of ‘Theory of Mind’. *To the Lighthouse*, *The Waves*, *Mrs Dalloway* and *Jacob’s Room* all present the problem of other minds as central; consuming it so that it becomes an integral part of their plots. The question that recurs with such regularity throughout these novels is how can we know the inner lives of other people as we know our own? Lily Briscoe’s freewheeling, associative philosophising during the dinner scene in *To the Lighthouse* condenses many of the epistemological questions that interested Woolf during this period:

What art was there, known to love or cunning, by which one pressed through into those secret chambers? What device for becoming, like waters poured into one jar, inextricably the same, one with the object one adored? Could the body achieve it, or the mind, subtly mingling in the intricate passages of the brain? The heart? Could loving, as people called it, make her and Mrs. Ramsay one? For it was not knowledge but unity that she desired, not inscriptions on tablets, nothing that could be written in any language known to men [...].¹⁴¹

And, as she concludes later in the novel: ‘who knows what we are, what we feel?

Who knows even at the moment of intimacy, This is knowledge?’.¹⁴² The alienating qualities of modernity were of course a major theme for Woolf, and these vignettes of isolation can partly be seen as a manifestation of this interest in alienation in a world of political and social flux. However, as I have shown, the ways in which Woolf

¹⁴⁰ Woolf, *Lighthouse*, p. 267.

¹⁴¹ Woolf, *Lighthouse*, p. 82.

¹⁴² Woolf, *Lighthouse*, p. 265.

dramatizes such isolation are frequently focussed on specific and technical philosophical problems: with the relationship between sense and consciousness. Throughout the novels, thoughtful individuals retreat into their ‘shells’ to be exteriorised in terms of the actions they perform, or to be presented at times as soulless automata, lacking inner lives at all.

In *Mrs. Dalloway*, for instance, Septimus Smith’s pathology is described in terms of an affective emptiness, suggesting a behaviourist model of mind and action which, as I will argue in chapter six, Woolf was fundamentally opposed to. Within such a model of mind the recurring threat is that of solipsism, of the existence of individuals who themselves lack qualia, but behave as though they do indeed feel – the fear of what have been termed by contemporary philosophers of mind ‘philosophical zombies’. Septimus Smith’s madness is characterised by this sensorial neutering – returning from the shocks of war he is disconnected from the world of feeling: ‘he could not taste, he could not feel. In the tea-shop among the tables and the chattering waiters the appalling fear came over him – he could not feel.’¹⁴³ The only functions of consciousness he can still perform are those which Woolf elsewhere associates with cold, masculine values:

He could reason; he could read. Dante for example, quite easily [...] he could add up his bill: his brain was perfect; it was the fault of the world then – that he could not feel!¹⁴⁴

Though Septimus is rare in Woolf’s work in that his alienation becomes pathological, and ultimately self-destructive, he is in many respects simply a more extreme version of the generalised isolation that manifests itself throughout her work.

¹⁴³ Virginia Woolf, *Mrs Dalloway* (London: Hogarth, 1925), p. 133.

¹⁴⁴ Woolf, *Mrs. Dalloway*, p. 133-134.

Thus we are frequently presented in Woolf's fiction with individuals whose minds must be 'read'. It's a conceit that's suggested again and again in her novels, short fiction, and essays. In *Jacob's Room*, for instance, the faces of the crowd on a public bus are described in precisely these terms:

Each had his own business to think of. Each had his past shut in him like the leaves of a book known to him by heart; and his friends could only read the title, James Spalding, or Charles Bedgeon, and the passengers going the opposite way could read nothing at all – save 'a man with a red moustache,' 'a young man in grey smoking a pipe.'¹⁴⁵

In the urban environment in particular the endless faces in the crowd are again and again represented as little more than potential prose. '[T]he human face' we are told in 'An Unwritten Novel', 'the human face at the top of the fullest sheet of print holds more, withholds more.'¹⁴⁶ Although it would obviously be facetious to argue that Woolf, who was so interested in creating a literature that explored the inner lives of individuals as literary representations, was not interested in the ontologically subjective experiences those individuals could be said to have, the idea that faces could be 'read' sets up a dynamic which again suggests that it is only as an aid at decoding some material and tangible 'knowledge' that we should privilege sensation. Knowing character; knowing another person, is an inherently literary and therefore fundamentally alienating process. As we shall see in the following chapter, knowledge of 'what it is like' to *be* another mind is, as Woolf realised, forever doomed to exist outside of language.

¹⁴⁵ Woolf, *Jacob's Room*, p. 103.

¹⁴⁶ Woolf, *A Haunted House*, p. 20.

Chapter 3

What is it like to Be Leopold Bloom?

If a lion could talk, we could not understand him.

Ludwig Wittgenstein, *Philosophical Investigations*

What, reduced to their simplest reciprocal form, were Bloom's thoughts about Stephen's thoughts about Bloom and about Stephen's thoughts about Bloom's thoughts about Stephen?

James Joyce, *Ulysses*

I. What is it Likeness and the 'Umwelt'

In 1934, the Swedish philosopher and biologist Jakob Von Uexküll published *A Foray into the Worlds of Animals and Humans*, an exploration of animal physiology and phenomenology which became a founding text for the fledgling discipline of 'biosemiotics'. In it Uexküll fused Machian sensory analysis with a phenomenological and ecologically minded approach to consciousness, and in doing so promoted the notion of the 'umwelt' (literally 'environment'): the perceptual mantle which, so he argued, constituted every organism's uniquely subjective experience of the world. As Evan Thompson summarises, for Uexküll, '[a]n Umwelt is an animal's environment in the sense of its lived, phenomenal world, the world as it presents itself to that animal thanks to its sensorimotor repertoire.'¹ Uexküll's theory stressed the subjective specificity of perception, arguing that consciousness should not be thought of as a stable entity statically processing the objective sense-data of an

¹ Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind* (Cambridge, Mass.: Harvard University Press, 2007), p. 59.

external physical world, but as interactive and extended, influencing the very ways in which that world is presented to the subject. The external is given significance according to the particular biological needs of the organism perceiving it, such that *In-der-Welt-sein*, the Heideggerian ‘being in the world’, constitutes an act of interpretation in itself. This was phenomenological analysis as poetics; a semiotic view of consciousness according to which even the most basic of organisms ‘interpret’ the world rather than merely experiencing it.

Uexküll went on to suggest that all organisms should be thought of as being accompanied by a ‘soap bubble’ of consciousness (a term similar to Virginia Woolf’s notion of the ‘translucent envelope’ of consciousness described in ‘Modern Fiction’, and to Ezra Pound’s description of the classical conception of consciousness as ‘phantastikon’²), which sets the limits of experience and only occasionally overlaps with the ‘bubbles’ inhabited by other kinds of organism:

We must therefore imagine all the animals that animate Nature around us, be they beetles, butterflies, gnats, or dragonflies who populate a meadow, as having a soap bubble around them, closed on all sides, which closes off their visual space and in which everything visible for the subject is also enclosed.³

These bubbles constitute all that exists for these creatures; indeed they create the very notion of space itself, for, as Uexküll went on to comment, ‘[t]here is no space independent of subjects’.⁴ Organisms are isolated from one another not merely by an inability to communicate, but due to the inherent impossibility of inhabiting another’s

² ‘[T]he consciousness of some’, Pound wrote in ‘Psychology and Troubadours’, ‘seems to rest, or to have its center more properly, in what the Greek psychologists called the phantastikon. Their minds are, that is, circumvolved about them like soap-bubbles reflecting sundry patches of the macrocosmos.’ See Ezra Pound, ‘Psychology and Troubadours’ in *The Spirit of Romance* (London: Peter Owen, 1952), p. 92.

³ Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans: With A Theory of Meaning*, tr. Joseph D. O’Neill (Minneapolis, Minn: University of Minnesota Press), p. 69.

⁴ Uexküll, *A Foray*, p. 29.

umwelt. What we perceive when we attempt to conceive of such an umwelt is in fact a projection of our own environment, and the first task of the biosemiotician was, according to Uexküll, to deconstruct this nascent familiarity:

The animal's environment [...] is only a piece cut out of its surroundings, which we see stretching out on all sides around the animal – and these surroundings are nothing else but our own human environment. The first task of research on such environments consists in seeking out the animal's perception signs and, with them, to construct the animal's environment.⁵

In contrast to Heidegger, who considered animals to be 'poor in world'⁶, and whose phenomenological project demoted animal consciousness as *less* rich than that of the human, and to the Cartesian characterisation of animals as mere automata (a thesis which was being channelled, as we shall see in chapter six, into J. B. Watson's 'behaviorist' psychology during the period), Uexküll argued that the 'first principle of umwelt theory' was that 'all animal subjects, from the simplest to the most complex, are inserted into their environments to the same degree of perfection. The simple animal has a simple environment; the multiform animal has an environment just as richly articulated as it is.'⁷

Uexküll's project was therefore founded on the imagination. The job of the biosemiotician, he argued, was to navigate the umwelt of various animal consciousnesses through acts of imaginative positioning; to re-interpret the world as it was experienced by various types of organism, and thus to 'read' the 'perception marks' and 'search images' by which those organisms themselves navigated the world. Using the example of a tick, which recent research had shown was devoid of

⁵ Uexküll, *A Foray*, p. 53.

⁶ Martin Heidegger, *The Fundamental Concepts of Metaphysics: World, Finitude, Solitude*, tr. William McNeill and Nicholas Walker (Bloomington, Ind: Indiana University Press, 1995), p. 192. '[T]he stone', Heidegger continued, 'is worldless.'

⁷ Uexküll, *A Foray*, p. 50.

the senses of taste, hearing and sight, Uexküll wrote a short narrative about what it might be like to be possessed of such a limited sensorium:

The tick hangs inert on the tip of a branch in a forest clearing. Its position allows it to fall onto a mammal running past. From its entire environment, no stimulus penetrates the tick. But here comes a mammal, which the tick needs for the production of offspring.

And now something miraculous happens. Of all the effects emanating from the mammal's body, only three become stimuli, and then only in a certain sequence. From the enormous world surrounding the tick, three stimuli glow like signal lights in the darkness and serve as directional signs that lead the tick surely to its target. [...] The whole rich world surrounding the tick is constricted and transformed into an impoverished structure that, most importantly of all, consists of only three features and three effect marks – the tick's [umwelt]. However, the poverty of this [umwelt] is needful for the certainty of action, and certainty is more important than riches.⁸

The tick, according to Uexküll, lives in a world composed solely of the sense-data of scent and temperature which, although apparently limited, are just as rich in meaning, in significance, as our own more complex world of signs. The biosemiotician was therefore ultimately engaged in an act of literary interpretation, leading to the creation of a paradoxical functionalism that denied the mechanistic nature of the Cartesian vision, but which was also uninterested in qualia. For Uexküll, the umwelt theorist must become a *reader* of environments rather than a dweller within them:

Just as a gourmet picks only the raisins out of the cake, the tick only distinguishes butyric acid from among the things in its surroundings. We are not interested in what taste sensations the raisins produce in the gourmet but only in the fact that they become perception marks of his environment because they are of special biological significance for him; we also do not ask how the butyric acid tastes or smells to the tick, but rather, we only register the fact that butyric acid, as biologically significant, becomes a perception mark for the tick.⁹

⁸ Uexküll, *A Foray*, p. 51. Joseph D. O'Neill translates 'umwelt' as 'environment', but for the sake of clarity I have retained Uexküll's terminology.

⁹ Uexküll, *A Foray*, p. 53.

In his introduction to *A Foray* Uexküll called his work a ‘travelogue’ and called upon his readers to ‘come along as we wander through these worlds.’¹⁰ To illustrate his theory further, Uexküll commissioned a series of pictures with which he attempted to portray the world as it was perceived by various organisms. In his discussion of ‘perception marks’ (those features of the external world which are singled out as important by particular organisms depending on their sensorimotor needs) for instance, he argued that ‘bees prefer to land on shapes that [have] a more opened form, such as stars and crosses; they avoid closed forms, such as squares and circles’, accompanying this assertion with a ‘bee’s-eye’ view of a field.¹¹ The first picture reproduced a meadow as perceived by a human observer, and is suggestive of Ernst Mach’s much reproduced picture illustrating his perceptions of his study that we saw in chapter one (fig. 2):



Figure 2: ‘Surroundings’.¹²

The second (fig. 3) presented an abstracted version of the same scene:

¹⁰ Uexküll, *A Foray*, p. 43.

¹¹ Uexküll, *A Foray*, p. 84.

¹² Uexküll, *A Foray*, p. 85.

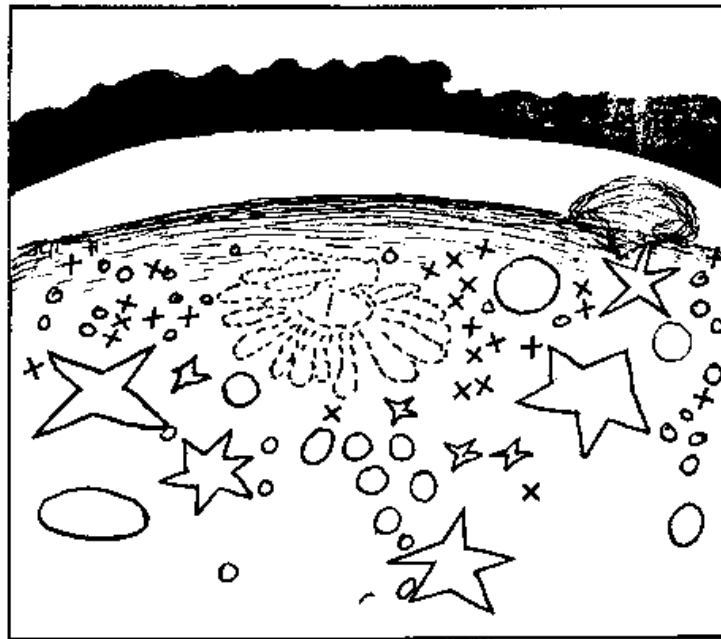


Figure 3: 'Umwelt'.¹³

The first picture represents a straight forward schematic of a meadow of flowers pictured as a human subject might perceive it. In the second image, however, objects are reduced in form so as to become almost abstract symbols. The horizon is simplified; the buds of the flowers become signified rather than realistically represented. Where humans 'see the bees in their surroundings, a meadow in bloom, in which blossoming flowers alternate with closed buds' Uexküll argued, '[o]nly the blooms, not the buds, have meaning for the bees.'¹⁴

Later in *A Foray* Uexküll included several visual interpretations of a street-scene as it might be perceived by various different organisms. The first picture in this series was a photograph of a typical street in what looks like an alpine town, with a car in the foreground and a church spire peeping above the rooftops at the back of the image (fig. 4):

¹³ Uexküll, *A Foray*, p. 85.

¹⁴ Uexküll, *A Foray*, p. 84.



Figure 4: 'Photograph of a village street'.¹⁵

The next image shows the same scene as perceived by a fly (fig. 5). The bulk of the buildings is lessened, their walls and roofs warped; the human figures and the car in the foreground are reduced to blocks of colour. Everything is simplified and edges are softened. The image has become impressionistic. A final interpretation of the scene presents the street as seen through the eye of a mollusc (fig 6).¹⁶ Here the move to abstraction is almost complete; objects have lost all quiddity, and a field of slightly modulated greys, devoid of perspective or colour, is all that remains of the scene.

¹⁵ Uexküll, *A Foray*, p. 64.

¹⁶ There is a suggestion of Max Nordau's conception of 'degeneration' in this. Synaesthesia, in Nordau's words, represented a desire 'to designate as progress the return from the consciousness of man to that of the oyster'. See Max Nordau, *Degeneration* (London, 1913), p. 142. It is an image echoed in the numerous allusions to 'oyster eyes' in *Ulysses*. See, for instance, Joe Menton's 'oyster eyes' noticed several times by Bloom in 'Hades'; James Joyce, *Ulysses*, ed. Hans Walter Gabler (London: Bodley Head, 1986), 6.1031, 8.322; or Blazes Boylan's 'winebig oyster eyes' described in 'Wandering Rocks', *Ulysses*, 10.1230.



Figure 5: 'The same village for a fly's eye.'¹⁷

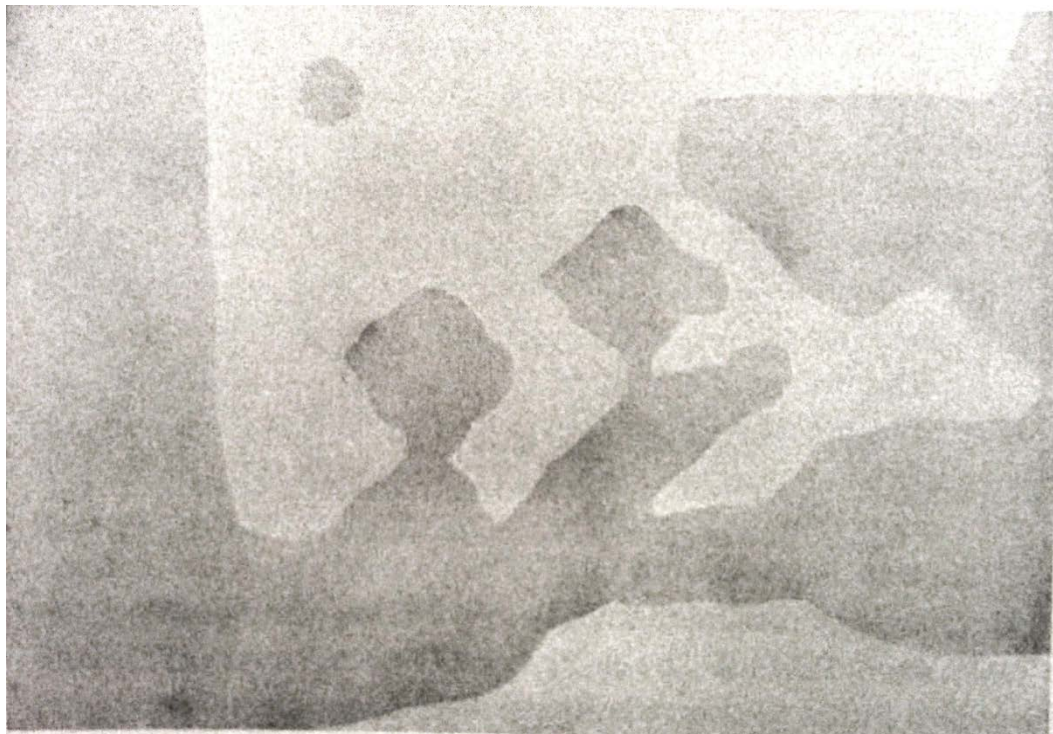


Figure 6: 'Village street for a mollusk's[sic] eye.'¹⁸

¹⁷ Uexküll, *A Foray*, p. 65.

¹⁸ Uexküll, *A Foray*, p. 65.

What's so striking about the images Uexküll used to outline his thesis, and what I want to draw attention to in this chapter, is the degree to which attempts to inhabit alien consciousnesses in this way are *always* and *inevitably* indebted to cultural and aesthetic practices more generally. In attempting to visualise what it might be like to see the world from the perspective of a bee, a fly, or a mollusc, Uexküll employs what were by 1934 quite conventional, even perhaps canonical, representative schema. In the above series the visual language of Impressionism pre-empted the neutrality of positioning – these are naïve ‘reductions’ of the visual field that, as we saw in chapter two, were typical of both the psychological and the artistic practices of the period. The fly's eye view of the street might have been visually exciting fifty years earlier, but by 1934 it was already something of a cliché. The mollusc's perspective, though more abstract still, is merely a continuation of the principle of naïve visual reduction. Even when Uexküll's illustrations attempt a more post-Impressionist form of abstraction, as in the bee's-eye view of the meadow, they end up looking like nothing so much as enthusiastic pastiches of Matisse.

When answering the question of what it might be like to perceive the *umwelt* of another life form, therefore, Uexküll was forced to employ pre-established representational codes. In one sense this is unsurprising, and Uexküll might have responded to this criticism by pointing out that he was a scientist and philosopher, not an artist: it was not his job to create new ways of seeing the world, but to suggest new ways of thinking about it. However my point here is that Uexküll doesn't merely *illustrate* his theory using established visual forms, but that he derives the very notion of asking what it might be like to be a fly or a mollusc – derives the methodological schema enshrined in the notion of an ‘*umwelt*’ itself – from ideas that were abroad within culture more generally in the period. As we saw in the previous chapter, the

vogue for the primitive, the desire to decontextualise perception so as to rid it of narrative and get back to ‘things in themselves’, was a fundamental driving force behind much modernist art. Uexküll’s umwelt theory, I would suggest, is the direct product of these impulses.

Similarly, as I argued in chapter one, the fallacy of cognitive realism, and the central argument in this thesis, is that literature and the arts do more than merely represent a world in novel ways; they feed back into those representations, making things thinkable that previously were not. Uexküll’s illustrations of the animal umwelt, like Ernst Mach’s picture of his study, testify to the impossibility of moving outside of the established representational codes of the period in order to truly represent the eco-phenomenology of other organisms. Like representations of the ‘alien’ in much contemporary cinema – exoskeletoned composites of deep-sea fish and strange forms of life from earth – the other can only ever be envisioned by figuring it through the known. Art does not – cannot – render the world neutrally perceived. Instead it creates the very conditions in which and by which such representations can be conceived.

In this chapter I will suggest that the same thing is true of the representational strategies of literature also, especially as manifested within the work of James Joyce. The novel, as I will argue, is a literary form particularly engaged with the question of what it might be like to inhabit another mind, and *Ulysses* in particular asks this question repeatedly. In the previous chapter I read the work of Virginia Woolf through the prism of Frank Jackson’s essay ‘What Mary Didn’t Know’, arguing that competition between ways of ‘knowing’ in the period conditioned both what a character could be said to ‘know’ of the literary world they inhabited, and what a reader could be said to know about that world through reading about it. In this chapter

I want to consider Joyce's novel alongside another influential pro-qualia thought experiment that engages with questions of knowledge, Thomas Nagel's influential essay 'What Is It Like to Be a Bat?'

II. What is it Like to Be a Bat?

Nagel's essay addresses the limitations of physicalist and functionalist reduction (of the kind that will be examined in detail in chapter five) by attending closely to the problems of encoding sense-experience, particularly the sense experiences associated with alien consciousnesses, in language. Written in 1974 in response to a 'wave of recent reductionist euphoria', in it Nagel characterises consciousness in terms strikingly similar to Uexküll's, famously defining qualia as 'what it is like' for a particular consciousness to experience the world.¹⁹ 'Facts about what it is like to be an *X* are very peculiar', Nagel writes, 'so peculiar that some may be inclined to doubt their reality, or the significance of claims about them.'²⁰ '[T]he fact that an organism has conscious experience *at all*', he argues:

means, basically, that there is something it is like to *be* that organism. There may even (though I doubt it), be implications about the behaviour of the organism. But fundamentally an organism has conscious mental states if and only if there is something that it is like to *be* that organism – something that it is like *for* that organism.²¹

This qualitative nature of experience, so Nagel continues, 'is not captured by any of the familiar, recently devised reductive analyses of the mental, for all of them are

¹⁹ Nagel, 'What Is It Like to Be a Bat?', *The Philosophical Review*, lxxxiii (1974), 435-450, p. 435.

²⁰ Nagel, 'What Is It Like to Be a Bat?', p. 437.

²¹ Nagel, 'What Is It Like to Be a Bat?', p. 436.

logically compatible with its absence.’²² Knowledge of qualia, in Nagel’s terms, is knowledge of what it is like to have a particular perceptual experience; knowledge of what it is like to inhabit the mind of another.

Nagel’s thought experiment, like Uexküll’s umwelt theory, begins by attempting to imagine the perceptual field of an organism – in this case a bat – possessed of sensory modalities that are fundamentally alien in their processes. Though we are generally happy to accept that bats possess minds and thus have phenomenological knowledge of the world, we can’t begin to imagine, other than analytically, what it would be like to have such minds ourselves. ‘I assume we all believe bats have experience’, Nagel continues:

I have chosen bats instead of wasps or flounders because if one travels too far down the phylogenetic tree, people gradually shed all their faith that there is experience there at all. Bats, although more closely related to us than those other species, nevertheless present a range of activity and a sensory apparatus so different from ours that the problem I want to pose is exceptionally vivid (though it certainly could be raised with other species). Even without the benefit of philosophical reflection, anyone who has spent some time in an enclosed space with an excited bat knows what it is to encounter a fundamentally *alien* form of life.²³

Bats are attractive agents for this kind of speculation because, though they are mammals and physiologically similar to humans, what Uexküll would term their ‘perceptual marks’ have a fundamentally alien and rather exotic otherness about them.

Nagel goes on to argue that the question of what it is like to *be* another being, especially when asked of the ‘fundamentally *alien*’ umwelt of the bat, cannot ever be

²² Nagel cites a roster of functionalist reductive arguments here, including J. C. C. Smart’s *Philosophy and Scientific Realism* (London: Routledge & Kegan Paul, 1963); Hilary Putnam’s ‘Psychological Predicates’ in *Art, Mind, and Religion*, ed. W. H. Capitan and D. D. Merrill (Pittsburgh: University of Pittsburgh Press, 1967); David M. Rosenthal’s *Materialism and the Mind-Body Problem* (Englewood Cliffs; London: Prentice-Hall, 1971); and D. M. Armstrong’s *A Materialist Theory of Mind* (London: Routledge & Kegan Paul, 1968). To which list could be added the prominent voice of Daniel Dennett. I will explore the implications of modernism’s reductive impulses in the following chapter.

²³ Nagel, ‘What Is It Like to Be a Bat?’, p. 438.

satisfactorily answered. Though we can understand the science of echo-location in objective, third-person²⁴ terms, know, as Nagel writes, that ‘most bats (the microchiroptera, to be precise) perceive the external world primarily by sonar, or echolocation, detecting the reflections, from objects within range, of their own rapid, subtly modulated, high-frequency shrieks’, this knowledge can only get us so far in our attempts to know what it is like to be a bat.²⁵ ‘Bat sonar’, Nagel summarises:

though clearly a form of perception, is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine. This appears to create difficulties for the notion of what it is like to be a bat.²⁶

Our application of objective knowledge of bat phenomenology as an abstraction is useless when it comes to truly knowing bat-experiences, which would involve replicating these experiences within our own consciousness. As Nagel continues:

Reflection on what it is like to be a bat seems to lead us, therefore, to the conclusion that there are facts that do not consist in the truth of propositions expressible in a human language. We can be compelled to recognize the existence of such facts without being able to state or comprehend them.²⁷

This is not to say that we will *never* be able to experience bat consciousness, argues Nagel, for eventually technological advances might well provide us with ways of having such experiences. But the possibility of such replication cannot be taken as evidence for the non-existence of qualia. As he remarks in a footnote dealing with the

²⁴ As we saw in chapter one, quite what is meant by ‘third-person’ in this context is difficult to define. Frequently the term is invoked in discussions about consciousness in order to draw a distinction between ‘subjective’ (and therefore more ‘literary’) accounts of a mental phenomena and ‘objective’ descriptions of the same phenomena. In terms of qualia, I have suggested that our relationship with a piece of writing is always in the ‘third person’: the use of the first person pronoun does nothing to alter the ontology of that which is described.

²⁵ Nagel, ‘What Is It Like to Be a Bat?’, p. 438.

²⁶ Nagel, ‘What Is It Like to Be a Bat?’, p. 438.

²⁷ Nagel, ‘What Is It Like to Be a Bat?’, p. 441.

possibility of constructing artificially intelligent robots: '[p]erhaps there could not actually be such robots. Perhaps anything complex enough to behave like a person would have experiences. But that, if true, is a fact which cannot be discovered merely by analyzing the concept of experience.'²⁸

What is true of bats, Nagel argues, is true of all other minds whatever. 'The subjective character of the experience of a person deaf and blind from birth is not accessible to me, for example, nor is mine to him.'²⁹ We do, however, know what it is like to be us, and 'while we do not possess the vocabulary to describe it adequately', knowledge of 'its subjective character is highly specific, and in some respects describable in terms that can be understood only by creatures like us.'³⁰ There is a fundamental difference between understanding the cognitive capabilities of other organisms in a scientific or literary sense and knowing what it is like for those organisms to experience the world as they do, therefore. It is only through familiarity with public and shared experiences expressed in public language (understandable 'only by creatures like us') that the illusion of the 'shareability' of conscious states emerges. Any attempt to enter another organism's *umwelt*, either through the discourses of science or of literature, is doomed to come up against the problem of qualia, and thus to fail.

Presented in this way, the problem of qualia asserts itself as one concerned with communicability and with the role and availability of public languages within culture more generally. Nagel's answer, or lack of an answer, challenged physicalist accounts of cognition, and dramatised the problems inherent in attempts to encode the kind of knowledge associated with sense-experience in language. However, as Peter Hacker has argued, Nagel's question is one that can be glossed in a number of ways.

²⁸ Nagel, 'What Is It Like to Be a Bat?', p. 436 (footnote).

²⁹ Nagel, 'What Is It Like to Be a Bat?', p. 440.

³⁰ Nagel, 'What Is It Like to Be a Bat?', p. 440.

To pose a challenge to physicalism the question of ‘what is it likeness’ should not be interpreted as seeking to draw *figurative* comparisons, which would suggest that we *can* know what a particular experience is like by comparing it to some other, known, experience. As Hacker summarises:

It is important to note that the phrase ‘there is something *which it is like* for a subject to have experience E’ does *not* indicate *a comparison*. Nagel does not claim that to have a given conscious experience *resembles* something (e.g. some other experience), but rather that there is something which it is like *for the subject* to have it, i.e. ‘what it is like’ is intended to signify ‘how it is for the subject himself.’³¹

As we have seen previously, to interpret figurative language as capable of carrying a burden of signification denied to more straightforward forms of language use is to fundamentally misunderstand the implications of knowledge arguments for the existence of qualia. The slipperiness of the formulation suggests one reason so many critics have failed to recognise the challenge Nagel’s formulation poses to literary descriptions of sensation. ‘What is it likeness’ in Nagel’s sense is not a figurative comparison, but describes an ontologically discrete property of consciousness itself.

Many critics have commented on the similarities between the thought experiment as a philosophical tool and pro-qualia arguments such as Nagel’s. As I have suggested, the question of ‘what is it like to be’ another mind is asked again and again in many modernist novels, implicitly, through the formal strategies associated with modernist literary aesthetics, and explicitly, as a question asked by characters within those novels. In *Flush* Virginia Woolf wrote an entire novel from the perspective of a dog, dramatising what she termed ‘the widest gulf that can separate one being from another. She spoke. He was dumb. She was a woman; he was a dog.

³¹ M. R. Bennet, Peter Hacker, *The Philosophical Foundations of Neuroscience* (Oxford: Blackwell, 2003), p. 273.

Thus closely united, thus immensely divided, they gazed at each other.’³² In a manuscript draft of *The Years*, she had formulated the question in regards to the consciousness of a baby: ‘He’s still asleep. Fast asleep. That’s why I fell asleep, looking at him, thinking, whats[sic] it like being a baby? What d’you think its[sic] like, being a baby?’³³

In ‘Modernist Life Writing and Nonhuman Lives: Ecologies of Experience in Virginia Woolf’s *Flush*’ David Herman argues that much of Woolf’s fiction ‘emerges from a rejection of Cartesian dualism’, and that it thus constitutes an engagement with the notion of the ‘extended mind’ that has become increasingly theorized by writers like Antonio Damasio:

If there is no dichotomy between the mind in here and the world out there; if minds are not closed-off, inner spaces but rather lodged in and partly constituted by the social and material structures that scaffold people’s encounters with one another and the world; then access to what Kate Hamburger called the I-originary of another is no longer uniquely enabled by engagement with fictional narratives.³⁴

As I demonstrated in the previous chapter, in this thesis I argue the opposite: that, because there *does* seem to be an ontologically significant dualism between mind and world, access to Kate Hamburger’s ‘I-originary’ (equivalent to Herman’s ‘consciousness factor’ which, we have seen, is frequently conflated with qualia), is equally *inaccessible* no matter what modes of discourse you employ. Genre distinctions become philosophically insignificant not because *all* discourse can potentially grant access to the mind, but because *none* can.

³² Virginia Woolf, *Flush* (London: The Hogarth Press, 1933), p. 27.

³³ New York Public Library, Berg Coll., MSS Woolf, *The Pargiters*, M42, vol. v, pp. 2-3.

³⁴ David Herman, ‘Modernist Life Writing and Nonhuman Lives: Ecologies of Experience in Virginia Woolf’s *Flush*’ (article under review), p. 6.

The novel-form in particular is often held up, as we saw in chapter one, as a mode of literature which seeks to encode qualia in language and to pass it on to other minds. In David Lodge's novel *Thinks...*, the connection between the novel and Nagel's thought experiment becomes a central feature of the plot when Helen Reed, a lecturer in English literature, encounters the qualiaphile philosopher Ralph Messenger. Messenger explains Nagel's thought experiment to her, and she then uses it as the basis of a creative writing exercise for her students. One of them answers Nagel's question by producing a pastiche of Beckett:

Where? When? Why? Squeak. I am in the dark. I am always in the dark. It was not always so. Once there were periods of light, or shades of darkness. Squeak. There would be a faint luminosity from the mouth of the cave. When it faded I knew it would soon be time to leave the cave, with the others, to go flittering through the dusk. Squeak. Now it is always dark, uniformly dark. Whether at any given moment it is dark outside my head as well as inside, I do not know.³⁵

As Andrew Gaedkte has argued, in her exegesis of the passage Reed, and consequently Lodge himself, interprets Nagel's category of 'what is it likeness' as merely a function of style:

For Helen, the fact that this endo-psychic, Beckettian world can be convincingly inhabited by the student writer suggests that something like literary qualia – style – can be shared and circulated with little loss. This parody of the opening sequence of *The Unnameable* comes quite close to the original, and, like all parodies, it demonstrates that the most distinctive literary styles are the most susceptible to reappropriation and resignification.³⁶

But that 'something like' is inevitably misleading, begging the ontological question at issue in much the same way that, as we have seen, the idea of 'rendering' sensations

³⁵ David Lodge, *Thinks...* (London: Secker & Warburg, 2001), p. 95.

³⁶ Andrew Gaedkte, 'Cognitive Investigations: The Problems of Qualia and Style in the Contemporary Neuronovel', *Novel: A Forum on Fiction*, vl (2012), 184-201, p. 193.

does in many critical discussions of cognitive realism. A style can be inhabited, parodied and replicated. A first-person consciousness cannot. It is this very poverty of language I will suggest, that Joyce was so interested in dramatising within *Ulysses*.³⁷

III. Bloom and the Bat

Ulysses can be read as an ‘experimental novel’ in one of two ways: as an exercise in style, a novelistic experiment in form, or as a sort of epistemological laboratory which experiments *on* its readers. These two interpretations are themselves fictionalised within the novel, which represents a sort of compendium of epistemological thought experiments. In ‘Proteus’, for instance, Stephen famously walks upon the beach (that recurring symbol of epistemological uncertainty in the British empirical tradition – one thinks of Isaac Newton declaring himself ‘like a boy playing on the seashore, and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.’³⁸), and engages in a bout of extended sensory introspection:

Ineluctable modality of the visible: at least that if no more, thought through my eyes. Signatures of all things I am here to read, seaspawn and seawrack, the nearing tide, that rusty boot. Snotgreen, bluesilver, rust: coloured signs.³⁹

The passage is, ultimately, a meditation on qualia; on the ‘ineluctable modality of the visible’ and the ineffable and infallible nature of the world you ‘damn well have to see’.⁴⁰ As Sara Danius argues, the scene is:

³⁷ Samuel Becket, *Three Novels: Molloy, Malone Dies, The Unnameable* (New York: Grove Press, 2009), p. 11.

³⁸ Qtd in David Brewster, *Memoirs of the Life, Writings, and Discoveries of Sir Isaac Newton*, 2 vols. (Edinburgh: Thomas Constable and Co., 1855), vol. ii, p. 407.

³⁹ Joyce, *Ulysses*, 3.1-3.

A practical experiment in apperception, the opening of the episode revolves around what Stephen calls the 'ineluctable modality of the visible,' then proceeds to that of the audible. It thus stages the question of how sight and hearing mediate his knowledge and experience of the physical world, that is, how they read sense data.⁴¹

In his interpretative meditation Stephen trips from Aristotelian interpretations of perception, through Bishop Berkley's Idealism and Jacob Böhme's epistemological thesis outlined in *The Signature of All Things*. Descartes' argument from illusion, an observation from his fourth meditation in which he notices that the image of a stick which appears broken when placed in a glass of water is contradicted by the act of touching it, lies behind Stephen's next observation: 'If you can put your five fingers through it, it is a gate, if not a door. Shut your eyes and see.'⁴²

The scene is justly celebrated as an evocation of Stephen's precocious learning. In 'Proteus' he brings his classical knowledge to bear on the scene presented to his senses, but which cannot exist for his readers. This is epistemological enquiry *as fiction*: the qualia of the seascape, those ineluctable starting-points of perceptual experience, are there to be 'read' by the young scholar, and thus placed in an interpretive framework, just as we must read his own analysis of the scene. The role of public language in making accessible sensory phenomena that generally are occluded because unnamed lies behind the notion of a 'snotgreen' sea, which, as we are told in 'Telemachus', is a 'new art colour for our Irish poets',⁴³ and suggests the apocryphal notion that Homer's 'wine-dark' descriptor was employed not due to a

⁴⁰ Joyce, *Ulysses*, 3.9.

⁴¹ Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002), p. 171.

⁴² Joyce, *Ulysses*, 3.8.

⁴³ Joyce, *Ulysses*, 1.73.

poverty of language, but of perception.⁴⁴ ‘Open your eyes now’, Stephen continues, ‘I will. One moment. Has all vanished since? If I open and am for ever in the black adiphane. *Basta!* I will see if I can see.’⁴⁵ Blind readers that we are, ‘Proteus’ sets up an interpretive schema that recurs throughout *Ulysses*, asking what the world is like for a character by engaging with the epistemological assumptions they bring to their own interpretations of the world.

Throughout *Ulysses* Leopold Bloom ponders the consciousnesses of other beings in ways which are strikingly analytical, trying to imagine himself into the consciousnesses of others, both human and animal. Again and again he fails to provide an altogether convincing answer to the question of what it might be like to inhabit another mind. In ‘Calypso’, as he prepares his breakfast of mutton kidney, his cat becomes the subject for analysis:

They call them stupid. They understand us better than we understand them. She understands all she wants to. Vindictive too. Wonder what I look like to her. Height of a tower? No, she can jump me. [...] He watched the bristles shining wirily in the weak light as she tipped three times and licked lightly. Wonder is it true if you clip them they can't mouse after. Why? They shine in the dark, perhaps, the tips. Or kind of feelers in the dark, perhaps.⁴⁶

Here the shift from first person to third person narration, from Bloom speculating about the cat's point of view (asking ‘[w]onder what I look like to her’), to us speculating about Bloom watching the cat (‘[h]e watched the bristles shining wirily in the weak light’), force us to confront the ontological limits of focalisation as a literary technique. Are we really any closer to knowing what it is like to be Leopold Bloom, to experiencing Bloom's perspective, when we are offered his thoughts ‘directly’

⁴⁴ See R. Rutherford-Dyer in ‘Homer's Wine-dark Sea’, *Greece & Rome Second Series*, xxx (1983) 125-128.

⁴⁵ Joyce, *Ulysses*, 3.25-26.

⁴⁶ Joyce, *Ulysses*, 4.26-42.

through techniques associated with the stream of consciousness method than he is to experiencing his cat's when he wonders what he looks like to her? I would suggest that Joyce's manipulation of what Gérard Genette called 'internal focalisation' and Franz Stanzel termed 'figural narration' was not an attempt to portray the mind at all, but, among other things, a way of dramatising and interrogating the limits of knowledge, and of literature's ability to convey conscious experience to readers.⁴⁷

Later, in 'Nausicaa', as he cleans himself up on the beach after his fleeting encounter with Gerty MacDowell, Bloom looks up and sees something flying about in the evening air:

Ba. What is that flying about? Swallow? Bat probably. Thinks I'm a tree, so blind. Have birds no smell? [...] Ba. There he goes. Funny little beggar. Wonder where he lives. Belfry up there. Very likely. Hanging by his heels in the odour of sanctity. Bell scared him out, I suppose. [...] Ba. Again. Wonder why they come out at night like mice. They're a mixed breed. Birds are like hopping mice. What frightens them, light or noise? Better sit still. All instinct like the bird in drouth got water out of the end of a jar by throwing pebbles. Like a little man in a cloak he is with tiny hands. Weeny bones. Almost see them shimmering, kind of a bluey white. [...] Ba. Who knows what they're always flying for. Insects?⁴⁸

The bat, each sweep of whose flight is announced by the interruption of a phonetic identifier, 'Ba', flies through Bloom's mind as a metaphor for thought itself. But at the level of his *articulated* thoughts it represents a fundamentally alien form of life; an epistemological 'other' prompting a stream of Nagelian speculation. Are bats blind? Do they, like birds, lack a sense of smell? Why do they come out at night? Are animals even conscious, are they sensorially aware, or are they 'all instinct', merely displaying autonomous and mechanical problem-solving behaviour, like the bird in

⁴⁷ See Gérard Genette, *Narrative discourse: An Essay in Method*, tr. Jane Lewin (Ithaca, N.Y.: Cornell University Press, 1980), pp 189-194, and F. K. Stanzel, *A theory of Narrative* (Cambridge: Cambridge University Press, 1984).

⁴⁸ Joyce, *Ulysses*, 13.1117-1143.

drouth, with no accompanying qualia? Is there really *anything* that it is like to be a bat? Ultimately the bat serves as mute witness to Bloom's imagined dalliance with Gerty:

That was their secret, only theirs, alone in the hiding twilight and there was none to know or tell save the little bat that flew so softly through the evening to and fro and little bats don't tell.⁴⁹

Little bats don't tell. And, even if they did, we could not understand them.

'Nausicaa' is, of course, above all an exploration of the peculiarities of focalisation and narrative perspective. A single event, an encounter during which, as an 'irritated' Joyce told Arthur Power, '[n]othing happened between them [...] It all took place in Bloom's imagination', is presented as being shared between Gerty and Bloom, and is then interpreted and presented to us in two very different ways.⁵⁰

Whether Gerty's cliché-ridden narrative is the product of her own consciousness or of Bloom's misogynistic attempts to imagine what it might be like to be *her* isn't particularly important for my argument, for both perspectives are, ultimately, the product of Joyce's own narrative. Whether Joyce or Bloom is doing the imagining, in both cases Gerty's narrative is the product of a man imagining what it might be like to be a young romantic woman, employing the cliché-strewn language of women's magazines to construct an *umwelt* fundamentally alien to his own. What's so remarkable about the episode, and about *Ulysses* in generally, however, is the way in which it can accommodate these competing readings, resisting all attempts to formulate epistemological certainties internally.

⁴⁹ Joyce, *Ulysses*, 13.750-753.

⁵⁰ Arthur Power, *Conversations with James Joyce* (London: Millington, 1974), p. 32.

Ulysses is full of representations of what, as I will argue in chapter five, is a peculiarly modern anxiety: the possibility of a methodologically reductive science of brain and mind. Bloom frequently articulates the division between sensation and causation in terms of different levels of discourse. Throughout the novel Bloom is presented as an amateur scientist of perception, experimenting on himself by engaging with the material world in all its sensory manifestations; mapping the ineluctable modality of all sensory modes onto their physical correlates. He is an astute reader of odours, confronting the olfactory assaults of contemporary Dublin (piss-reeking kidney and ‘potted herrings gone stale’ as well as the seductive delights of Gerty MacDowell’s Heliotrope perfume and Molly’s Peau D’Espagne) with a scientist’s rigour.⁵¹ He conducts furtive haptic experiments on himself; stroking his stomach to ascertain whether he can feel colour with his fingertips.⁵² He ponders the fact that fish that swim in the sea don’t taste salty, and confidently misinterprets the science of optical illusions, investigating the notion of ‘parallax’ in pop-scientific terms.⁵³

Bloom’s speculations frequently involve the creation of an environmentally mediated conception of sensation in which the signatures of the world are ‘read’, rather than experienced, in all their sensory manifestations. As Bloom speculates on the blind stripling in ‘Lestrygonians’:

Poor young fellow! How on earth did he know that van was there ? Must have felt it. See things in their forehead perhaps. Kind of sense of volume. Weight would he feel if something was removed. Feel a gap. Queer idea of Dublin he must have, tapping his way round by the stones. Could he walk in a beeline if he hadn’t that cane? [...] Look at all the things they can learn to do. Read with their fingers. Tune pianos. Or we are surprised they have any brains.⁵⁴

⁵¹ Joyce, *Ulysses*, 4.4, 13.1033, 18.864.

⁵² Joyce, *Ulysses*, 8.1142.

⁵³ Joyce, *Ulysses*, 8.110-113.

⁵⁴ Joyce, *Ulysses*, 8.1106-1111.

Again, Bloom's speculations on the minds of others fuses the proto- or pseudo-scientific with the anecdotal, singularly failing to grant us access to these other minds: we are 'surprised they have any brains' because the brain, as a physical organ, is all we can ever access.

As he watches the blind stripling tap his way down Molesworth Street, Bloom offers him help to cross the road:

– Do you want to cross? Mr Bloom asked.

The blind stripling did not answer. His wall face frowned weakly. He moved his head uncertainly.

– You're in Dawson street, Mr Bloom said. Molesworth street is opposite. Do you want to cross? There's nothing in the way.

The cane moved out trembling to the left. Mr Bloom's eye followed its line and saw again the dyeworks' van drawn up before Drago's. Where I saw his brillantined hair just when I was. Horse droppings. Driver in John Long's. Slaking his drouth.

– There's a van there, Mr Bloom said, but it's not moving. I'll see you across. Do you want to go to Molesworth street?

– Yes, the stripling answered. South Frederick street.

– Come, Mr Bloom said.⁵⁵

In *A Foray into the Worlds of Animals and Humans*, Jakob von Uexküll had included an image of a blind man being led around town by his guide dog (fig. 7), arguing that 'the blind man's environment is very limited; he knows it only insofar as he can feel out his path with his cane and feet. The street through which he strolls is for him plunged into darkness, but his dog is supposed to lead him home via a certain path.'⁵⁶ This symbiotic map of the city he called the blind man's 'familiar path'.

⁵⁵ Joyce, *Ulysses*, 8.1077-1089

⁵⁶ Uexküll, *A Foray*, p. 100.

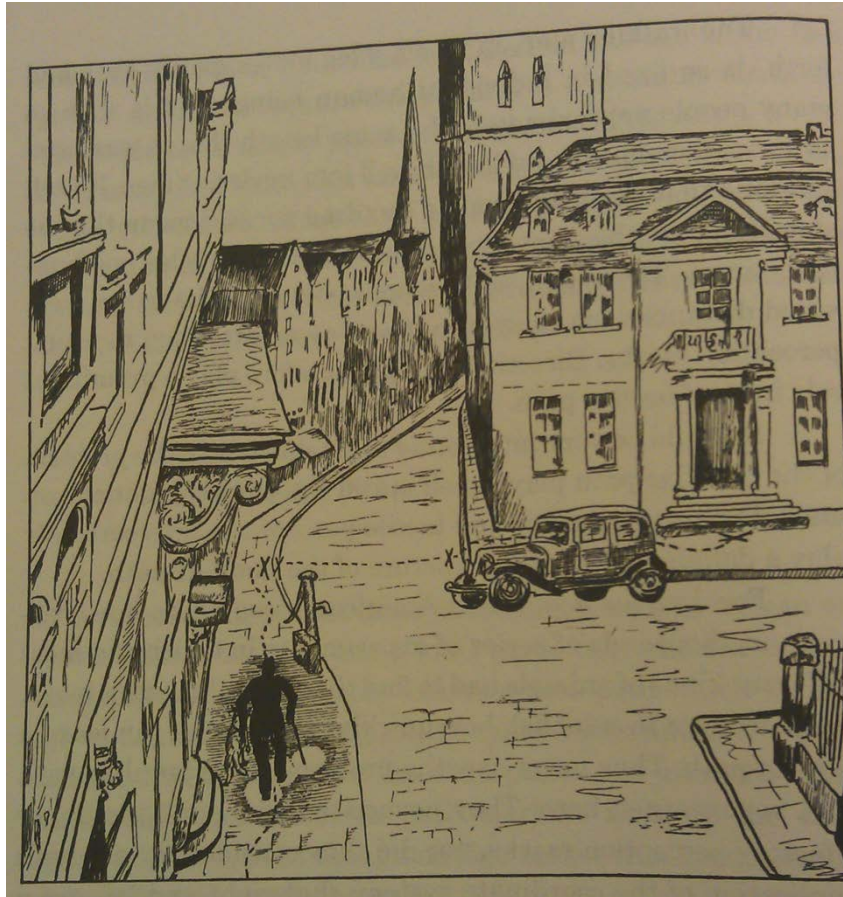


Figure 7: 'Blind man and dog.'⁵⁷

In *Ulysses*, Joyce's description of Bloom leading the blind stripling is as much for our benefit as it is for his. Joyce famously told Frank Budgen that with *Ulysses* he wanted 'to give a picture of Dublin so complete that if the city one day suddenly disappeared from the earth it could be reconstructed out of my book', and there is a sense in which all of the novel is a map, not just of Dublin, but of the minds of the characters within it.⁵⁸ The imaginative cartography of *Ulysses* always implies a critical distance, therefore. The map should not be mistaken for the territory, and, as readers, we too are blind to Bloom's Dublin, receiving it only through the map of the text, which itself constitutes a set of instructions issued against a background of white noise.

⁵⁷ Uexküll, *A Foray*, p. 100.

⁵⁸ Frank Budgen, *James Joyce and the Making of Ulysses* (Indiana: Indiana University Press, 1960), p.67.

As we saw in chapter one, Sara Danius suggests that in *Ulysses* Joyce ‘aligns himself with an aesthetic that aims to render what is perceived rather than what is known’ but as I argued in the last chapter the question of the representability of knowledge goes to the heart of the problem of qualia.⁵⁹ Thus Danius’s identification of *Ulysses* as engaged with what she calls ‘an aesthetics of immediacy’, in which ‘the everyday has to be named anew, and continually, in order to retain its desired immediacy, and this is why, in Joyce, the imperative to make you *see* is so often an aesthetic end in itself’ is fundamentally problematic.⁶⁰ Taking as her example the description of the journey to Paddy Dignam’s funeral in ‘Hades’, in which Bloom travels through Dublin, watching the city through the frame of a carriage window, Danius argues that:

The proper content of the passage [...] is the mourner’s processing of a number of sense data, as though the implicit narrator endeavours to report what they actually see, not what they know is there.⁶¹

As we saw in the last chapter, the implications of a character’s apparent ‘knowledge’ of a scene impacts on the narrative voice in provoking ways, but it is impossible to maintain a distinction between a character’s description of a scene and their knowledge of the ‘sense data’ of that scene which they are presented as perceiving. From the reader’s perspective they are identical. In the above passage, as I have suggested, Bloom maps Dublin’s spaces for *us* as well as for the stripling. The knowingness of all this is evoked in ‘Proteus’ when Stephen asks ‘[w]ho watches me here? Who ever anywhere will read these written words? Signs on a white field’, to

⁵⁹ Danius, *Senses*, p. 156.

⁶⁰ Danius, *Senses*, p. 163.

⁶¹ Danius, *Senses*, p. 164.

which the answer, obviously, is us: the readers of *Ulysses*.⁶² In recreating the *umwelt* of Joyce's characters, we are inevitably forced to read over the shoulders of Bloom and Stephen, and we are imperfect readers. 'The *absolute* is synonymous with *perfection*', wrote Henri Bergson in *An Introduction to Metaphysics*. 'Were all the photographs of a town, taken from all possible points of view, to go on indefinitely completing one another, they would never be equivalent to the solid town in which we walk about.'⁶³

IV. The Epic of the Human Body

A critical tendency to insist upon the epistemologically transcendental status of Joycean literature has asserted itself since Samuel Beckett wrote, of *Finnegans Wake*, that:

it is not written at all. It is not to be read – or rather, it is not only to be read. It is to be looked at and listened to. His writing is not *about* something, *it is that something itself*.⁶⁴

Beckett's acclamation has often been read as raising *Finnegans Wake* to the status of the literary *Gesamtkunstwerk*, suggesting that by virtue of its complexity as a literary artefact it takes on the material properties of the experiential – it is able to convey to us what it is like to look at and listen to the world. As a critical endorsement, this kind of breathlessness had its precedent in Symbolism. Zola wrote of Daudet that his work

⁶² Joyce, *Ulysses*, 3.414-415.

⁶³ Henri Bergson, *An Introduction to Metaphysics*, tr. T. E Hulme (London: 1912), p. 22.

⁶⁴ Samuel Beckett, 'Dante... Bruno. Vico... Joyce' in *Our Exagmination Round his Factification for Incamination of Work in Progress*, ed. Samuel Beckett (Paris: Shakespeare and Company, 1929), p. 14.

had ‘a color, a perfume, a sound’ compared to other works in which ‘one hears the rhetoric, the stiffness of the sentence, an odor of ink flows from the pages.’⁶⁵

Almost from its inception *Ulysses* was read as a work of cognitive realism therefore. Guided by Joyce’s various schemata for the novel, which (though they did not always agree) suggested associations between various episodes and various sensory organs, the novel has for a long time been interpreted as what Joyce told Frank Budgen it was, an ‘epic of the human body’.⁶⁶ Many critics have taken this to mean that, because Joyce went on to conflate body and mind, *Ulysses* was mimetic of the body; of its processes and of its experiences. John Rodker identified *Finnegans Wake*’s most fundamental question as that of sensory communication:

With this work some enquiry into the symbols that govern the communication through writing of thought and emotion becomes imperative. [...] How do men then, through literature, communicate with each other and what is it they succeed in conveying.⁶⁷

For Rodker, the *Wake* broke down the barriers between subject and object; between reader and text, allowing us to access what it is like to inhabit another mind. As he continued, Joyce ‘brings to fruition [...] the possibility of a complete symbiosis of reader and writer.’⁶⁸

Maud Ellmann’s assessment of the *Wake* is typical of the sort of cryptomystical argument inculcated by Rodker that has continued to dominate Joycean criticism. ‘[I]n the *Wake*,’ she writes, ‘words do things that bodies do, performing rather than describing bodily experience,’ and suggests that ‘*Ulysses* strives to unite word and flesh in a secular version of the Incarnation, to make the English language

⁶⁵ Qtd. in Hans Rindisbacher, *The Smell of Books: A Cultural-historical Study of Olfactory Perception in Literature* (Ann Arbor: University of Michigan Press, 1992), p. 203.

⁶⁶ Frank Budgen, *James Joyce and the Making of Ulysses*, p. 21.

⁶⁷ Rodker, ‘Joyce’s Dynamic’ in *Our Exagmination*, p. 143

⁶⁸ Rodker, ‘Joyce’s Dynamic’, p. 143.

breathe, digest, excrete, parturite.’⁶⁹ Just as philosophical attempts to reify consciousness relocated the burden of proof outside the reader’s own mind, conflating mind with world, in much Joycean criticism agency is located within the text: the book is thought to have been made conscious of itself.

It is undoubtedly the case that *Ulysses* is scandalously corporeal. What unites many of Bloom’s investigations into alien umwelts is their focus on the under-represented senses: especially on the proximate senses of taste and smell. Just as in Uexküll’s thesis and Nagel’s thought experiment, it is our underused, often ignored senses that provide the biggest challenges to literary representations of sensation. Yet a theoretical conflation of body and mind should not be interpreted as the same thing as a conflation between language and world. Clearly, we are as divorced from the corporeal phenomenological experiences of literary characters, from the qualia of fictional individuals, from what it is like to truly *be* them, as Bloom is when he considers what it might be like to be Gerty, a blind stripling, a cat, or a bat. The problem of qualia, as elucidated by Nagel, is, like so much else, *fictionalised* within *Ulysses*, hinted at obliquely and encoded in the very fabric of the novel. It is a philosophical conundrum that is consumed metafictionally, with Bloom’s musings offering a self-referential commentary on the limits of literature itself. They get us no closer to knowing what it might be like to be a bat, or a cat, or a blind stripling, but they do give us a literary understanding of what it might be like to be Bloom. This is Hugh Kenner’s ‘Uncle Charles principle’ writ large, exemplifying the limitations of fiction whilst coercing us with a vivid account of a man’s *articulated* thoughts. The behaviourist question that remains is one that haunted the development of the novel-

⁶⁹ Maud Ellman, ‘Ulysses: The epic of the Human Body’ in *A Companion to James Joyce*, ed. Richard Brown (Oxford: Blackwell, 2008), p. 54.

form in the period: is knowing another person any different from knowing a fictional character?

In light of this, is it true to suggest, as does David Lodge in *Consciousness and the Novel*, that:

Joyce's representation of consciousness was a quite new combination of third-person and first person discourse. The third-person narrative is impersonal and objective—there is no trace of an authorial persona, a confiding, commenting, ruminating authorial 'I' such as Fielding's or Dickens' or George Eliot's. [Joyce] came as close to representing the phenomenon of consciousness as perhaps any writer has ever done in the history of literature.⁷⁰

As I argued in chapter one, it makes little sense to refer to narrative fiction in terms of a hierarchy of cognitive fidelity in this way. Because of the qualial fallacy, it is simply nonsensical to claim that Joyce came closer to 'representing the phenomenon of consciousness', if this is taken to mean the qualia of consciousness, than any other writer has done previously. Certainly there is an enormous (and enormously important) difference between reading a scientific, third-person description of a sense-experience and reading a more poetically nuanced narrative of the same experience, but does this really mean that we are any closer to experiencing the 'phenomenon' of another person's consciousness in the latter case?

Just how 'new' Joyce's 'combination of third-person and first person discourse' was is likewise a matter of some debate. Clearly, as Herman summarises, it is difficult to ascertain 'how much of a shift in accent, a departure from the practices of nineteenth-century realism [...] these modernist methods actually entail[ed].'⁷¹

Indeed Percy Wyndham Lewis's early critique of Joyce's 'interior' method, as

⁷⁰ David Lodge, *Consciousness and the Novel: Connected Essays* (London: Secker & Warburg, 2002), p. 55.

⁷¹ Herman, 'Re-minding Modernism' in *The Emergence of Mind: Representations of Consciousness in Narrative Discourse in English*, ed. David Herman (Lincoln and London: University of Nebraska Press, 2011), p. 248.

articulated in *The Art of Being Ruled*, was that it did not seem all that different to Dickens's method of characterisation in *The Pickwick Papers*. Lewis quotes an extract from *A Portrait of the Artist as a Young Man* where Stephen's observations become entangled with his feelings towards the Provost, knitting quotation, perception and articulated thought together in one synthesised whole:

Provost's house. The revered Dr. Salmon: tinned salmon. Well tinned in there. Wouldn't live in it if they paid me. Hope they have liver and bacon to-day. Nature abhors a vacuum. There he is: the brother. Image of him. Haunting face. Now that's a coincidence.⁷²

In *The Pickwick Papers* Mr. Jingle is introduced in a very similar manner:

Rather short in the waist, ain't I? —Like a general postman's coat—queer coats those—made by contract—no measuring—mysterious dispensations of Providence—all the short men get the long coats—all the long men short ones.⁷³

In *The Art of Being Ruled* Lewis drew attention to the fundamental artificiality of such methods, arguing that in *Ulysses*, Joyce 'had to pretend that we were really surprising the private thought of a real and average human creature. But the fact is that Mr. Bloom was abnormally *wordy*. He *thought in words*, not images, for our benefit, in a fashion as unreal, from the point of view of the strictest naturalist dogma, as a Hamlet soliloquy'.⁷⁴ In 'showing' us the content of his characters' minds, Joyce was inevitably engaged in a process of translation, transforming mental states into literary utterances, and like all authors was forced to use words as his tools. For Lewis the results were degenerative: 'so by the devious route of a fashionable naturalist device',

⁷² Qtd. in Percy Wyndham Lewis, *The Art of Being Ruled* (Santa Rosa: Black Sparrow Press, 1989), p. 402.

⁷³ Qtd. in Lewis, *The Art of Being Ruled*, p. 402.

⁷⁴ Lewis, *The Art of Being Ruled*, p. 401.

he concluded, ‘that usually described as “presenting the character from the *inside*” [...] Mr. Joyce reaches the half-demented *crank* figure of traditional english[sic] humour.’⁷⁵ Whether we agree with Lewis’s aesthetic assessment or not, his philosophical objection is surely correct.

As we shall see in the following chapter, Vike Plock suggests that ‘it could be argued that Joyce’s literary experimentation and neurophysiology as an academic science are equally significant manifestations of modernity.’⁷⁶ Concentrating on ‘Eumaeus’ Plock argues that Joyce develops this ‘associative relationship’ by ‘reproducing vocabulary relating to thought processes, brain activity, and neuroscientific manifestations’.⁷⁷ She goes on to read the episode as mimetic of the cognitive dissonance associated by contemporary medicine with nervous agitation and with ergography, the study of nervous exhaustion. I will explore the implications of a burgeoning neurology for the novel-form and the question of qualia in the following chapter, but for now it is worth noting that Joyce himself was explicitly uninterested in what I have termed a cognitive realist approach to writing about consciousness. Richard Ellmann records that ‘when Joyce was told that the representational validity of the internal monologue had been questioned by critics, he replied, “From my point of view, it hardly matters whether the technique is “veracious” or not; it has served me as a bridge over which to march my eighteen episodes, and once I have got the troops across, the opposing forces can, for all I care, blow the bridge sky high.”’⁷⁸

Instead of reading *Ulysses* in search of a portrayal of what it is like to be other fictional minds, I believe it is important to read it as a radical interrogation of any such claims. We probably know more about Leopold Bloom than we do about any

⁷⁵ Lewis, *The Art of Being Ruled*, p. 401.

⁷⁶ Vike Plock, *Joyce, Medicine, and Modernity* (Gainesville, FL: University Press of Florida, 2010), p. 89.

⁷⁷ Plock, *Joyce*, pp. 90-91.

⁷⁸ Richard Ellmann, *Ulysses on the Liffey* (London: Faber, 1972), p. 109.

other figure in the western literary canon. We know what he likes for breakfast; we know his opinion on various political and aesthetic questions; we know what he reads, and what he thinks about while on the toilet, his sexual proclivities, and on and on. And yet, despite all this, we can't know and will never know what it feels like to *be* him. In *Ulysses* Joyce's radical and encyclopaedic cataloguing of cognitive processes alongside the matter of twentieth century Dublin draws attention to the void between mind and world rather than closing it. Indeed the radical polyphony of his novel should force us to be very careful when defining any sort of hierarchy of style within it. As we shall see in chapter five, the tension between an episode like 'Ithaca', in which the exhaustive description of certain types of information functions to interrogate the apparent attempts at cognitive realism of many in the other episodes, serves to undermine any straightforward interpretation of *Ulysses* as super-mimetic replication of mind. Instead I would contend that we feel that certain parts of *Ulysses* are a more immediate or verisimilitudinous record of human consciousness than, say, a scientific paper about the operations of neurons, largely because we live in its and in modernism's wake. *Ulysses* can be seen to have set the terms of the debate, providing a model of consciousness which is influential to this day: creating, rather than recording, modern conceptions of the mental. It is little wonder that Daniel Dennett, the most hostile qualiaphobic philosopher of our time, calls his materialist model of consciousness the 'Joycean Machine'.⁷⁹ In asking what is it like to be Leopold Bloom, therefore, we must beware of mistaking the richness of Joyce's prose for that of the richness of the mind itself. For it is surely in realism's failures, in the gaps between mind and world, that Bloom lives.

⁷⁹ Daniel Dennett, *Consciousness Explained* (London: Allen Lane, 1991), p. 254.

Chapter 4

Neuromodernism and the Explanatory Gap

But is there nothing new under the sun? It remains to be seen. What! My head has been X-rayed. I have seen, while I live, my own cranium, and that would be nothing new?

Guillaume Apollinaire, 'The New Spirit and the Poets'

But as if a magic lantern threw nerves in patterns on a screen

T. S. Eliot, 'The Love Song of J. Alfred Prufrock'

I. Neuromodernism

In the last two chapters we saw how, during the early twentieth century, developments in science and philosophy influenced the various forms of knowledge that literature in general, and the novel in particular, was thought capable of representing. Enormous upheavals within the physical sciences led to a profound renegotiation of the relationship between mind and world, and gave rise to the representational abstractions associated with modernism whilst at the same time drawing attention to the nomological danglers associated with qualia. The abstract nature of advanced physics led to an epistemological crisis as profound as that previously associated with Cartesian doubt, forcing philosophers to settle on the nebulous certainties of 'sense data' as a foundation for the new physics. As we saw in the previous chapter, the problem of other minds was also reinterpreted as having been caused by a poverty of knowledge during the period.

The abstractions of advanced physics were not the only kinds of new knowledge being popularised and shared abroad during the modernist moment, however. Anxieties over what it might be like to be another mind were accompanied by huge advances in the field of neurology and brain science. The relationship between the mind and the brain came to represent another faultline in modernity's battles over knowledge, and it is this faultline that most characterises contemporary debates over literature's ability to represent consciousness. 'It must be frankly confessed' wrote William James:

that in no fundamental sense do we know where our successive fields of consciousness come from, or why they have the precise inner constitution which they do have. They certainly follow or accompany our brain states, [...] [b]ut, if we ask just *how* the brain conditions them, we have not the remotest inkling of an answer to give.¹

This chapter will consider some of the ways in which inklings of answers to this question were formulated during the period, and how these answers continue to influence critical interpretations of modernist fiction and the problem of qualia. As such it represents something of a hinge between the first three chapters, which addressed the introspectionist practices ascribed to Woolf and Joyce, and the expressionist, exteriorising functions of the prose of Samuel Beckett and Percy Wyndham Lewis that provide the focus of the second half of this thesis. Neuromodernism, I will suggest, sought to reconcile the insides of people with the outsides; their brain states with their mind states, but in so doing ended up reinforcing the neo-Cartesian binaries it sought to annihilate.

¹ William James, 'The Stream of Consciousness' in *Writings, 1878-1899* (New York: Library of America, 1992), p. 722.

‘To speak of neurology *and* modernity’, argue Laura Salisbury and Andrew Shail in *Neurology and Modernity*, ‘is to describe a relationship of mutual constitution.’² During the late nineteenth and early twentieth centuries, technological and diagnostic revolutions cast neuroscience as the dominant paradigm according to which consciousness would have to be ‘explained’; enshrining the nerves at the heart of contemporary models of consciousness as the basic physical units of cognition. Once discovered, however, the neuron became more than a physiological entity, a new scientific object requiring measurement and a functional ‘explanation’. The practice of neurology gave rise to new pathologies and to new anxieties, whilst neurological theories provided rich new metaphors for the nature of the self and for consciousness more generally, and established the reductive (and – as we shall see – philosophically problematic) models of neuroscience which will be explored in the following chapter. It is a problematic paradigm under which we still labour. Like the atom, the wave and, later, the gene – objects of science whose properties and significances underwent profound intellectual shifts during the period – the neuron, as Shail and Salisbury contend, should be interpreted as constitutive of modernity itself.

In *The Life of Sir Humphrey Davy* John Paris records an admirer who, puzzled by Coleridge’s attendance of Davy’s lectures on chemistry, asked the poet ‘what attractions he could find in a study so unconnected with his known pursuits. “I attend Davy’s lectures”, Coleridge replied, “to increase my stock of metaphors.”³ In this chapter I will consider the ways in which the invention of the neuron increased modernity’s common stock of metaphors, and redefined the limits of enquiries into the nature of the mind. I shall therefore employ Kirsten Shepherd-Barr’s notion of

² Laura Salisbury and Andrew Shail ‘Introduction: Neurology and Modernity’ in *Neurology and Modernity*, ed. Laura Salisbury and Andrew Shail (Basingstoke: Palgrave Macmillan, 2010), p. 1.

³ John Ayrton Paris, *The Life of Sir Humphrey Davy*, 2 vols. (London: Colburn & Bentley, 1831), vol. i, p. 138.

‘neuromodernism’, described by her as the ‘use of science by scholars in the humanities trying to understand modernist writings and mechanisms’, not in an attempt to *explain* modernist aesthetics in scientific terms, as somehow anticipating or mirroring the discoveries of contemporary neuroscience, but to show how many of modernist fiction’s epistemological and philosophical preoccupations were contingent upon modernity’s material and technological contexts, contexts which continue to create problems for critical approaches to literature broadly defined as ‘neuroaesthetic’.⁴ Such questions relate directly to the question of qualia as properties of conscious states which, as we shall see in the following chapter, are resistant to conceptual reductions of the kind most often associated with neurology.

The development of mnemonic technologies able to store and transmit the data of sense – camera, cinematograph, phonograph – which accompanied the development of introspective technologies of the brain, created a relationship between nerve and world that can best be described as a dialogue. Under the new paradigm, as we have seen, sensations became essentially relative and context-specific, dependent for their quality on the particular nerves they agitated. ‘In the same way as rays throw on to my nerves pictures they would like to see’ noted Friedrich Kittler in *Discourse Networks 1800/1900*, ‘I too can [...] produce pictures for the rays which I want them to see.’⁵ In *Discourse Networks* Kittler went on to argue that the burgeoning neurology of the period led to the triumph of information over matter, but the process by which such relationships were formed was, as I shall argue in chapter five, essentially reductive. ‘The modern spirit is vivisective’ Stephen Dedalus remarks

⁴ See Kirsten Shepherd-Barr and Gordon M. Shepherd, ‘Madeleines and Neuromodernism: Reassessing Mechanisms of Autobiographical Memory in Proust’ in *Auto/Biography Studies*, xiii (1998), 39- 60. Shepherd-Barr and Shepherd cite Bruce E. Fleming as one of the originators of the term: See Bruce E. Fleming, ‘The Smell of Success: A Reassessment of Patrick Susskind’s *Das Parfum*’, *South Atlantic Review*, lvi, (1991), 71-86.

⁵ Friedrich Kittler, *Discourse Networks 1800/1900*, tr. Michael Metteer and Chris Cullens (Stanford, California: Stanford University Press, 1990), p. 7.

somewhat wearily to Cranly in *Stephen Hero*; '[v]ivisection itself is the most modern process one can conceive'.⁶ Neuromodernism was undoubtedly a product of this viviseptive spirit, of a desire to analyse, measure and categorise the world of material and mental objects. The 'inward turn' associated with modernist narrative aesthetics, which was the focus of the first half of this thesis, was therefore accompanied in the psychological disciplines by a thorough re-evaluation of the status of the body-in-perception, and in medicine by an analysis of the gross matter of the sense organs. The language of such analysis quickly entered literary discourse. Thus the locus of interaction between literature and psychological case study was decidedly two-way.

As Mark S. Micale summarises:

Before the final quarter of the nineteenth century, psychiatric cases published in medical textbooks and monographs tended to be short and mechanical recitations of hereditary background, symptom profile, diagnosis and prognosis. Dynamic models of mental functioning, however, were centrally concerned with the *consciousness* and the inner mental life of that patient; accordingly, a new aim of psychiatric case histories beginning around 1890 became the representation of individual emotional experience and intrapsychic subjectivity.⁷

Attempts to map this 'intrapsychic subjectivity' onto physical brain states became the dominant methodology of contemporary neuropsychology, which represented the most sustained attempt to trace correlative connections between these two apparently separate realms. As Kittler summarises, such approaches tended to annex theoretical or theological objections, literally murdering the flesh in order to dissect. The first move of behaviourism, which as we shall see in chapter six in its most extreme form denies the existence of qualia completely, was to concentrate neurology on the study of reflex. As Kittler summarises:

⁶ James Joyce, *Stephen Hero* (London: Jonathan Cape, 1960), p. 186.

⁷ Mark S. Micale, *The Mind of Modernism* (Stanford: Stanford University Press, 2004), p. 4.

The soul consists of nervous tissue, which makes in vivo investigation impossible, but the nerves are perfect data recorders and for that reason will yield all their secrets to the clinical eye at the moment of dissection. [...] Psychophysics banned all introspection, and theology complied; [Paul] Flechsig restricted all diagnoses to corpses, and pious [Daniel Paul] Schreber, performing the written dissection of his nerves, could only accommodate him. What Schreber fabricated, to the joy of Freud, once a neurologist, the impossible piece of evidence for psychoanalysis: endopsychic perceptions of brain functions.⁸

The mysteries of consciousness that remained even after (indeed which were, as we shall see, caused by) the isolation and description of neuronal systems was gleefully appropriated by both by progenitors of the ‘stream of consciousness’ as a psychological principle and by novelists themselves. For some writers, the promise of subjective fragmentation inculcated by the material paradigm was something to be welcomed. As F. T. Marinetti declared in his ‘Technical Manifesto of Futurist Literature’ the aim of the Futurist should be to:

Destroy the ‘I’ in literature – that is, all psychology. Man, utterly ruined by libraries and museums, ruled by a fearful logic and wisdom, is of absolutely no more interest. So abolish him in literature. Replace him with matter, whose essence must be grasped by flashes of intuition, something physicists and chemists can never do.

Auscultate, through things in freedom and capricious engines, the breath, the sensibility, and the instincts of metal, stone, wood., etc. Replace the psychology of man, now spent, with a **Lyrical Obsession with matter.**⁹

Others felt that the physical fragmentation of the brain brought about by the new neurology threatened the unity of the human person, creating space for the role of the novelist as unifier of newly atomised subjects. As D. H. Lawrence lamented in 1925,

⁸ Kittler, *Discourse Networks*, p. 296.

⁹ Filippo Tommaso Marinetti, ‘Technical Manifesto of Futurist Literature’ in *Selected Poems and Related Prose*, tr. Barbara Ryder (London: Yale University Press, 2002), p. 79.

the reductive methodologies of neuroscience seemed to foretell the death of the subject:

To the scientist, I am dead. He puts under the microscope a bit of dead me, and calls it me. He takes me to pieces, and says first one piece, and then another piece, is me. My heart, my liver, my stomach have all been scientifically me, according to the scientist; and nowadays I am either a brain, or nerves, or glands, or something more up-to-date in the tissue line. Now I flatly deny that I am a soul, or a body, or a mind, or an intelligence, or a brain, or a nervous system, or a bunch of glands, or any of the rest of these bits of me. The whole is greater than the part. [...] For this reason I am a novelist.¹⁰

As we saw in chapter one, for Lawrence the novel-form itself promised to save the subject from this conceptual fragmentation by giving voice to the emergent properties of the mind which transcend the material conditions of the body.

Abandoning the notion of spirit-as-substance in favour of the apparent immateriality of 'information', a model bolstered by the newly vital technology of electricity, meant that the impression, the sense-datum and the 'given' in experience were seen as occupying an increasingly uncertain ontological position: such phenomena were not quite physical, but neither were they quite mental. 'Are sense data physical or mental? Asked H. H. Price in his *Perception* 'or are they vital, in the sense in which breathing and digestion are vital?''¹¹ The invocation of an abstract notion of 'vitality', so typical of aesthetic manifestoes of the period, suggests that Price too was fudging the issue, unable to provide a fully satisfactory answer to his question. It is my contention that the neuron supplied the other term in this debate; the material analogue to the sensation, sense-content or 'given' in experience.

Though the idea that the brain is the seat of the mind goes back at least to the time of Hippocrates, the thesis that the mind could be *fully* identified with the brain,

¹⁰ D. H. Lawrence, 'Why The Novel Matters' in *Study of Thomas Hardy and Other Essays*, ed. Bruce Steele (Cambridge: Cambridge University Press, 1985), p. 195.

¹¹ H. H. Price, *Perception* (London: Methuen, 1932), p. 128.

and explained solely in terms of a localized study of nerve fibres, was therefore largely a product of modern medicine.¹² In the early nineteenth century the Galenic theory of the nerves, which held that neurons were the conduits of pneumatic ‘animal spirits’, analogous to the other bodily fluids or humours, and thus fundamentally mechanistic in nature, was abandoned in favour of a neurological model based on ‘nervous energy’: apparently insubstantial, or at any rate materially paradoxical, electro-chemical impulses. By the 1830s, it was increasingly apparent that pneumatic theories of the nerves were incorrect. In 1837, when Johannes Müller’s multi-volume *Elements of Physiology* was published in London, he noted that the ‘new orthodoxy that there is no nervous fluid’ was well established.¹³

This transition from analysis of substance to analysis of system had its origins, argues Michael Foucault, in the eighteenth century, during which period ‘the image [...] of animal spirits in the channels of the nerves [...] with all its mechanical and metaphysical implications, [...] was frequently replaced by the image, more strictly physical but of an even more symbolic value, of a tension to which nerves, vessels, and the entire system of organic fibers were subject.’¹⁴ This trend towards a gradual de-materialising the contents of the nervous system, even as that system itself was coming into ever-sharper focus as a plottable or mappable physical entity, continued during the nineteenth century. Cartographic or modal studies of the brain, such as Franz Joseph Gall’s much maligned theory of phrenology (which held that mental faculties could be mapped onto the physical attributes of brain and skull), and Paul Broca’s seminal 1861 study of language production in the left frontal gyrus, began to

¹² The account which follows is derived from Salisbury and Shail (eds.), *Neurology and Modernity*; Mark S. Micale, *The Mind of Modernism*, and George S. Rousseau, *Nervous Acts: Essays on Literature, Culture and Sensibility*, (London: Palgrave, 2004).

¹³ Johannes Müller, *Elements of Physiology*, 4 vols., tr. William Baly (Bristol: Thoemmes, 2000), vol. i, p. 12.

¹⁴ Michael Foucault, *Madness and Civilisation* (London: Routledge, 1989), p. 120.

dominate interpretations of the mind-brain dichotomy.¹⁵ Experimental psychology and the burgeoning cognitive sciences were thus seen primarily as cartographic endeavours, quests for correlative relations that had no qualms deferring the causal or qualial questions such approaches inevitably brought to the fore.

The conceptual and technological breakthrough which allowed modernity to engage with the notion of the individual nerve-cell can be traced to 1873, when Camillo Golgi developed his silver-chromate staining technique. The Golgi method allowed individual neurons to be isolated and analysed as stand-alone units, eventually proving conclusively the existence of the synaptic gap, and consequently problematising cohesive and unitary models of the self (fig. 8). The neuroscientist Santiago Ramón y Cajal, who shared the Nobel Prize with Golgi in 1906, described the experience of seeing individual nerve-cells for the first time as a moment of aesthetic as well as conceptual revelation:

What an unexpected sight! Sparse, smooth and thin black filaments, or thorny, thick, triangular, stellate, or fusiform black cells could be seen against a perfectly translucent yellow background. One might almost like the images to Chinese ink drawings on transparent Japanese paper.¹⁶

Thus the narrative of modernism's 'inward turn' was accompanied by a vivisection or diagnostic impulse focussed on the material insides of subjects. 'If I can imagine that, while I am having sensations, I myself or someone else could observe my brain with all the necessary physical and chemical appliances' wrote Ernst Mach in his *The Analysis of the Sensations, and the Relation of the Physical to the Psychological*

¹⁵ See Salisbury and Shail, *Neurology and Modernity*, pp. 7-13.

¹⁶ Ramon y Cajal, *Histology of the Nervous System of Man and Vertebrates*, 2 vols., tr. L. Azoulay, Neely Swanson and L. W Swanson (New York, Oxford: Oxford University Press, 1995), vol. i, p. 26.

(1900), ‘it would then be possible to ascertain with what processes of the organism sensations of a particular kind are connected.’¹⁷

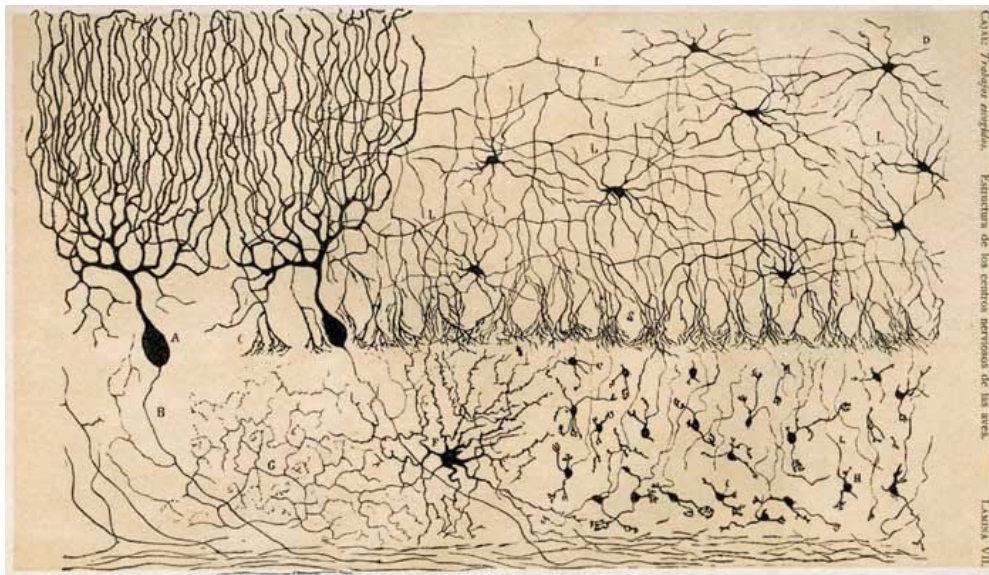


Figure 8: Illustration of a Golgi-stained cerebellum by Santiago Ramón y Cajal.¹⁸

Mach’s correlative and localising methodology, which as we have seen built on the work of Hermann von Helmholtz and sought a solution to the Cartesian impasse in the increasingly visible nexus of nerve fibres and brain-functions that were seen to dominate the structures of consciousness, had a huge influence both on the introspective psychologies of the analytical and phenomenological traditions, and on the psycho-physical manifestos released in a stream during the early years of the twentieth century.¹⁹

Whilst some philosophers and psychologists appropriated the techniques associated with the ‘inward turn’ in literature to investigate the phenomena of

¹⁷ Ernst Mach, *The Analysis of Sensations and the Relation of the Physical to the Psychological*, tr. C. M. Williams (Chicago and London: The Open Court Publishing Company, 1914), p. 242.

¹⁸ Rpt. in Constantino Sotelo, ‘Viewing the Brain Through the Master hand of Ramon y Cajal’, *Nature Reviews Neuroscience*, iv (2003), 71-77.

¹⁹ I will examine some of these in greater detail below, but the principle exhibits that we have encountered previously are Mach’s *Analysis of the Sensations*, Karl Pearson’s *The Grammar of Science* (London: Walter Scott, 1892), E. G. Boring’s *The Physical Dimensions of Consciousness*, (New York; London: The Century Co., 1933), and C. I. Lewis’ *Mind and the World Order*, (New York: Charles Scribner’s Sons, 1929).

consciousness, other theoretical interventions treated the human subject as a machine, ignoring subjective experiences in favour of measuring reaction times and reading abilities solely as mechanical manifestations of behavioural impulses. ‘Following the procedure of Helmholtz, who built device after device to measure reaction-time thresholds’, notes Friedrich Kittler, ‘the psychophysics of the [eighteen] nineties went to work measuring reading with kymographs, tachistoscopes, horopterscopes, and chronographs.’²⁰ The rise of behaviourism, which I shall examine in detail in chapter six, denied introspection as a legitimate psychological technique (and in its most extreme forms denied that there were such things as internal mental states at all). ‘Psychophysics’ Kittler continues, citing F. T. Marinetti, investigated ‘only the movements of matter, which are not subject to the laws of intelligence and for that reason are much more significant.’²¹

Golgi’s method was, above all, a technology of visualisation. Much like the Röntgen rays which swept fashionable society in the late nineteenth century as an after dinner party-trick before they became a diagnostic tool, the beauty of the images produced by the Golgi method was as striking as any scientific ‘truth’ they might uncover.²² As such the method contributed to narratives of legibility of the human body more generally; to the modernist interest in looking ‘inside’ the self in different and often contradictory ways. Turning the brain inside out in this way, ‘as if’, as T. S. Eliot wrote in ‘The Love Song of J. Alfred Prufrock’, ‘a magic lantern threw the nerves in patterns on a screen’, exposed what David Herman terms the ‘Cartesian geographies’ of the modern brain, and such processes, as Vike Plock notes, gave a

²⁰ Kittler, *Discourse Networks*, p. 222.

²¹ Kittler, *Discourse Networks*, p. 224.

²² See, for instance, Sara Danius’s reading of the use of X-Rays in Thomas Mann’s *The Magic Mountain* in Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002), pp. 72-79; or Leopold Bloom’s speculative account of the movement of food round the body, James Joyce, *Ulysses*, ed. Hans Walter Gabler (London: Bodley Head, 1986), 8.1030.

new urgency to the philosophical problems associated with subjectivity, epistemology and the problem of qualia. '[N]euroscience,' Plock writes in *Joyce, Medicine and Modernity*, 'literally turned the subject inside out and made the individual's innermost and intimate physiological mechanisms the object of medical scrutiny.'²³

Neuromodernism was thus primarily concerned with 'reading' or analysing the inner worlds of its subjects, a process that drew attention to the metaphysical gaps that emerged between differing accounts of the same phenomena. '[N]eurology and modernity' Salisbury and Shail note, 'worked together to create narratives of legibility for previously occluded experiences and structures, registering as "data" occurrences that had previously been either unnoticed or unavailable', but in doing so it quickly demonstrated how these different narratives often seemed incompatible.²⁴ Almost as soon as Golgi's method threw the nerves in patterns on a screen the metaphysical implications, and limitations, of the new boundaries of science were felt. By turning the human subject inside out, cognitive scientists and neurologists were forced to radically alter their conception of traditional notions of the executive consciousness, the self, and the brain as a 'Cartesian theatre': a complex yet fundamentally mechanistic organ in which a material body somehow became connected with an immaterial mind.

II. The Explanatory Gap

Midway through John Middleton Murry's 1916 novel *Still Life*, during a lecture on the workings of the optic nerve, a doctor breaks from his notes to speculate on the limits of knowledge. Dennis Beauchamp is a disappointed physician facing a romantic

²³ Vike Martina Plock, *Joyce, Medicine, and Modernity* (Gainesville, FL: University Press of Florida, 2010), p. 88.

²⁴ Salisbury and Shail, *Neurology*, p. 16.

crisis, and is beginning to feel constrained by the ‘mathematical regularity’ of his life, a regularity which is deemed ‘appropriate to the utter remoteness of the matter of his analysis.’²⁵ In many ways *Still Life* is a rather crudely drawn caricature of the sympathetic awakening of a coldly objective man of science, yet it provides a case-study for the kinds of anxiety over neurological explanations of sensation that are typical of literature of the period. Dr Beauchamp comprehensively fails to connect. He frets about his alienation from society at large and his inability to appreciate aesthetic pleasure, yet he clothes these aporia in the cold language of science.

During the lecture he surveys the crowd of medical students in front of him and ‘[a] puff of anger and disgust’ sweeps over him.²⁶ Struck by the absurdly limited purview of science, with its claims to ‘explain’ sensation, he begins wilfully to undermine the authority of his own lecture. He goes off the record, remarking that ‘it would be more correct and more honest if I were to acknowledge here and now that this approach, the normal medical approach, to psychology is only a *pis-aller*.’²⁷ To explain the workings of visual perception only in scientific terms is, Dr. Beauchamp suggests, to ignore the real problem that is raised by conceiving of sensations solely in terms of brain-processes. ‘We explain and explain’ he tells his students:

We speak of a sensation being communicated along a nerve fibre. We point out these nerve fibres on a chart, and follow them out in the dissecting-room. We imagine we have said something of account concerning them. What is the fact of the matter? By our use of the word sensation we have begged the whole question. What is a sensation but something which has been present to our consciousness? How can this something be communicated along a nerve-fibre? [...] At one end of the nerve-fibre is some material stimulus, at the other end a sensation, painful or pleasant. And what is a sensation? Something at any rate of which we are conscious, for otherwise it could not be. A miracle has occurred. Material shock has been communicated, and it ends in consciousness of material shock. Between these two things is an abyss.

²⁵ John Middleton Murry, *Still Life* (London, 1918), p. 137.

²⁶ Murry, *Still Life*, p. 137.

²⁷ Murry, *Still Life*, p. 139.

Physiology is so lucid concerning the mechanism of sensation only because it takes account of nothing but mechanism. In other words, it ignores entirely the abyss between stimulus and consciousness of stimulus. What kind of an explanation can that be where there is no conception of the thing to be explained? It is a delusion.²⁸

In drawing attention to the distinction between the objective knowledge of sensory processes provided by science and the experiential knowledge of sensory consciousness as it is experienced – to qualia – the passage articulates the epistemological limits of modern scientific accounts of the senses founded on a neurological methodology. Despite the fact that we *can* ascertain that certain brain states (optic nerves firing) are associated with certain mental states (visual perception), the latter do not seem to be reducible to the former. When it comes to accounting for sensation, neuro-scientific knowledge appears only to address half the problem.

In *Still Life* these questions are framed in terms of the technological advances of modernity, anticipating what Joseph Levine has termed ‘the explanatory gap’. In his essay ‘Materialism and Qualia: The Explanatory Gap’ Levine reacts to the discovery that sensations of pain are always accompanied by the firing of certain specific nerve fibres (called ‘c-fibers’), by asking whether such knowledge will ever allow us to provide an ‘explanation’ of pain, will ever allow us to reduce the former to the latter.²⁹ Does the discovery that c-fibres fire whenever we are in pain mean that such mechanisms are *sufficient* to account for pain-experiences? Or are they merely *necessary* conditions for the feeling of pain? According to Levine, although mapping

²⁸ Murry, *Still Life*, pp. 139-140.

²⁹ The idea that pain-sensations constitute some special sensory case has proved attractive to many critics and philosophers. See, for instance, C. S. Lewis, *The Problem of Pain* (London: Centenary Press, 1940), and Elaine Scarry, *The Body in Pain: the Making and Unmaking of the World* (Oxford: Oxford University Press 1984). Pain, considered as a sense modality, is particularly attractive in these discussions as it seems clear what precisely is at issue. Pains feel like a clear-cut binary case of experience (we are either in pain, or we are not), in a way that other sense-modalities sometimes often do not.

neuronal activity might allow us to explain with greater clarity certain correlative relations between brain-states and mental-states, it gets us no closer to solving what David Chalmers calls the ‘hard problem’ of consciousness associated with the existence of qualia: precisely *how it is* that brains can cause conscious sensory experiences.³⁰ As Levine comments:

What is explained by learning that pain is the firing of C-fibers? Well, one might say that in fact quite a bit is explained. If we believe that part of the concept expressed by the term ‘pain’ is that of a state which plays a certain causal role in our interaction with the environment (e.g. it warns us of damage, it causes us to attempt to avoid situations we believe will result in it, etc.), [then such a conception] explains the mechanisms underlying the performance of these functions. [...] However, there is more to our concept of pain than its causal role, there is its qualitative character, how it feels; and what is left unexplained by the discovery of C-fiber firing is *why pain should feel the way it does!*³¹ [italics in original].

The qualia of pain, which as we saw in the last chapter can be glossed as the ‘what is it likeness’ of such experience, is inevitably ignored by functionalist accounts of sensory experience founded on neurology. Qualia prove impossibly difficult to explain in terms of neuronal activity. ‘The really hard problem of consciousness’ argues David Chalmers:

is the problem of *experience*. When we think and perceive, there is a whirr of information-processing, but there is also a subjective aspect. As Nagel (1974) has put it, there is *something it is like* to be a conscious organism. This subjective aspect is experience. When we see, for example, we *experience* visual sensations: the felt quality of redness, the experience of dark and light, the quality of depth in a visual field. Other experiences go along with perception in different modalities: the sound of a clarinet, the smell of mothballs. Then there are bodily sensations, from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion, and the experience of a stream of conscious thought. What unites all of these states is

³¹ Joseph Levine, ‘Materialism and Qualia: The Explanatory Gap’, *Pacific Philosophical Quarterly*, lxiv (1983), 354-361.

that there is something it is like to be in them. All of them are states of experience. [Italics in original] ³²

By defining neuromodernism as a cultural-historical process, I wish to draw attention to the myriad interpretative approaches that immediately spring up in response to the problem of identifying brain states with their mental correlates. In order for the debate to be framed in this way, as a question of competing forms of ‘experience’ or ‘knowledge’, a quite sophisticated model of brain processes is a prerequisite. In describing the relationship between knowledge of brain states and introspective knowledge of sensory states in terms of an ‘explanatory gap’ therefore, Levine was attacking the various doctrines of physical monism, which denies any form of dualism, including that associated with qualia. A particular target of his analysis was the ‘identity thesis’ of consciousness conceived by E. G. Boring, which holds that ‘mental events are (that is, are identical with) physical-biological processes in the brain.’³³ Identity physicalism is intertheoretically reductive, claiming that mental events simply are brain events, analogous in its reasoning to claims such as ‘temperature *is* mean kinetic molecular energy’, ‘light *is* electromagnetic radiation’ and so on. And yet the nature of the phenomena under discussion – mental states, including sensations – is as we saw in chapter one different in kind to things like temperature and radiation as physical phenomena. As both Murry and Levine suggest, to hold that brain events are *identical* with mental events seems instinctively unsatisfactory. ‘[P]sycho-physical identity statements’ Levine concludes, ‘leave a

³² David Chalmers, ‘Facing up to the Problem of Consciousness’, *Journal of Consciousness Studies*, ii (1995), 200-219, p. 200.

³³ Ted Honderich (ed.), *The Oxford Companion to Philosophy* (Oxford: Oxford University Press, 1995), p. 392.

significant *explanatory gap*, and, as a corollary, [...] we don't have any way of determining exactly which psycho-physical identity statements are true.'³⁴

1933 E. G. Boring's *The Physical Dimensions of Consciousness* was an early and influential philosophical response to the new paradigm of neuroscience, and did much to develop the 'identity theory' of mind, as well as summarising the recent history of experimental psychology's attempts to pin down consciousness as a biological phenomenon. To do so Boring was ultimately forced to question the existence of qualia (though he didn't use the term directly, framing his objections in terms of 'the given' in experience). As U. T. Place notes, Boring was not the first material monist, a position which 'is at least as old as our earliest records of speculation on such matters', but he was 'undoubtedly the first to formulate this position in terms of the relation of identity.'³⁵ The identity thesis shares many of the limitations of figuration that were explored in relation to asking what it is *like* to be a bat in the previous chapter: for the type identity thesis to be true, neuronal states must be both necessary and sufficient causes of mental states.

Boring's cognitive methodology was explicitly modelled on the classical sciences. He argued that during the first quarter of the twentieth century psychologists had been 'inspired by the chemists' successes in filling in Mendel'ev's table' and in imitation were engaged in attempts to 'seek [...] new kinds of mental elements'.³⁶ Such elements he associated with the entities uncovered by the narratives of 'perceiving subjects' which were examined in chapter two; with the quest for a scientific basis for 'sense data', 'sense-contents', 'impressions' and 'the given'. The discovery of the neuron provided a physical analogue to those properties named by

³⁴ Levine, 'Materialism and Qualia', p. 355.

³⁵ U. T. Place, 'E. G. Boring and the Mind-Brain Identity Theory', *British Psychological Society, History and Philosophy of Science Newsletter*, xi (1990), 20-31, p. 20.

³⁶ E. G. Boring, *Physical Dimensions*, p. 18.

the ‘elemental’ sciences of the mind, and a methodology for cognitive science, conducted explicitly along the lines of the classical sciences, seemed complete. Neurology had found an object that promised to provide a basic physical correlative to psychical states.

One problem that presented itself forcefully to the vivisectionists of the nervous system and proponents of type-identity theory, however, was that the newly discovered properties of the neuronal brain seemed in no way similar to those of the mind we are familiar with through introspection. As H. H. Price summarised in his *Perception*:

To say that when a man looks at a tomato he is acquainted with a reddened portion of his own brain, or with a sounding tract of it when he hears a noise, is very singular.³⁷

Price continued to attack Machian ‘descriptionist’ accounts of science, which he felt were limited by the fact that they sought similarities between two very different sets of data, and as such tended to commit category mistakes. What we might term the mimetic theory of sense-perception – the argument that the qualia of a representation of a mental state in any way resembles the qualia of that which it is purporting to represent – is a problem of resemblances, and as such is threatened by Leibniz’s law.³⁸ As Price continued:

³⁷ Boring, *Physical Dimensions*, p. 128.

³⁸ Briefly, this states that ‘no two distinct things exactly resemble each other’ and is ‘typically understood to mean that no two objects have exactly the same properties.’ (<http://plato.stanford.edu/entries/identity-indiscernible/>, retrieved 17 Jan., 2013). In other words, as Bishop Butler commented, somewhat more epigrammatically, in the preface to his *Sermons*, ‘every thing is what it is, and not another thing.’ Joseph Butler, ‘Fifteen Sermons Preached at the Rolls Chapel’ in *The Works of Bishop Butler*, ed. David E. White (Rochester, NY: University of Rochester Press, 2006), p. 44.

It has been held that sense-data are related to material things merely by a relation of indirect causal dependence (sometimes resemblance has been added); and that perceptual consciousness either is, or at any rate ought to be, and argument from effects to causes. This theory has of course been attacked, almost from the beginning [...] and its hold upon educated opinion has been further weakened of late years by the spread of the 'descriptive' view of Science.³⁹

Instead of differentiating between the physical and psychical properties of cognition as mutually oppositional, Price invoked the notion of a Bergsonian 'vitality' as a unifying concept to explain away the contradictions, establishing a position that has come to be termed 'the double aspect theory' of psycho-physical correspondence⁴⁰:

It might be said that the total process going on in the brain at any one time has both its physico-chemical 'aspect' and its vital 'aspect', and that sense-data belong to the vital 'aspect': the total process, one would insist, includes both of them together, and cannot be fully understood in physico-chemical or in vital (*inter alia* sensuous) terms. In so far as cerebral processes have this sensuous aspect, the brain, one would say, is also the *sensorium*: if so, the thesis is that it is the sensorium which is sonorous when we hear a bell, and red when we see a tomato. Or one might use the language of the Emergent Theory, and hold that sensuous qualities like red and loud emergently qualify certain physico-chemical processes in the brain when these reach a certain degree of complexity.⁴¹

More recently, as we saw in chapter one, V. S. Ramachandran and William Hirstein have re-worked the 'double aspect theory' of consciousness as one of discourse,

³⁹ H. H. Price, *Perception*, p. 1.

⁴⁰ As Raymond Tallis summarises, the theory 'assert[s] that experiences (such as the colour yellow) and the neural activity seen in the visual cortex in association with that experience are two *aspects* of the same item.' It does rather beg the question of what an 'aspect' might be, and what distinguishes it from a property. See Raymond Tallis, *Aping mankind: Neuromania, Darwinitis and the Misrepresentation of Humanity* (Durham: Acumen Publishing Ltd, 2011).

⁴¹ H. H. Price, *Perception*, p. 128.

arguing that the barrier between knowledge of neuronal activity and knowledge of qualia: 'is only apparent and that it arises due to *language*.'⁴²

What is so striking about all of these approaches is the way in which they diagnose the problem of qualia as emerging from language itself. Far from representing a form of mimetic sensory immediacy, for Ramachandran and Hirstein symbolic language is the cause of all our woes. They go on to propose a technological solution to the problem of other minds, noting that qualia are 'only private *so long as* [one] *uses spoken language* as an intermediary. If you, the colour blind superscientist, avoid that and take a cable made of neurons from X's area V4 [...] and connect it directly to the same area in your brain, then perhaps you'll see colour after all'.⁴³ But in relation to the question of representing consciousness within literature such moves beg the entire question. No one is doubting that technology can provide ways of encoding and transmitting sense data, rather the problem is what precisely the representational codes of public language *do* refer to.

The discovery of the neuron, therefore, directly gave rise to the notion of an explanatory gap between the having of an experience and the mapping of that experience into scientific, literary or any symbolic language. Objections to neuronal 'readings' of consciousness thus tended to privilege the individual over the general; the specific experience and its apparent ineffability over its potential 'meaning', and as such, as I will suggest, conformed to the dominant aesthetic trends of the period.

As I have suggested, the limitations of the reductive brain/mind identity project were clearly acknowledged by contemporary experimental psychologists, who noted that it made little sense to seek self-contained and atomistic units of 'sensation'

⁴² V. S. Ramachandran and William Hirstein, 'Three Laws of Qualia: What Neurology Tells Us about the Biological Functions of Consciousness, Qualia and the Self', *Journal of Consciousness Studies*, iv (1997), 429-57, p. 429.

⁴³ Ramachandran and Hirstein, 'Three Laws of Qualia', p. 432.

that could be identified with the excitation of distinguishable types of nerve fibres in this way. To endorse such a conception was to ignore or deny the ‘phenomenological field’; the fact that the visual sensation of seeing a stick, for instance, inevitably takes place against a background (both literal – as a part of the visual field – and psychological: the object ‘stick’ is recognised as such and brings with it all sorts of associations and meanings) of some sort. Contrast seems pre-established as a necessary condition for the recognition of objects.

But, taken to extremes, proponents of identity physicality were forced to deny the very data which their model of cognition was concerned to interpret. E. G. Boring’s eventual response to the apparent contradictions exposed by the new neurology was to deny that individual sensations actually existed. ‘The reign of the attribute was, however, short-lived’, he confidently asserted in his history of experimental psychology, ‘[t]he phenomenology of Gestalt psychology has in the last decade been making great headway. It doomed elementarism and with it the sensations.’⁴⁴ Boring’s solution was to deny that there was any such thing as ‘the given’ in experience whatsoever. Despite the fact that ‘[e]very sensation can be said to have an attribute of *quality*, which designates it as red or yellow or bitter or cold or C#’, there is no instance, he suggested, in which the beguiling and rhetorically slippery phenomenon of ‘experiencing pure sensation’, of being aware only of a pre-linguistic category of ‘sense data’ actually occurs. ‘Even in the simplest case’, notes Boring:

as when an observer notes the presence of a tone, he is not merely catching a fleeting phenomenon and fixing it in a report. He is making an interpretive

⁴⁴ Boring was, I think rightly, wary of the ‘discipline’ of phenomenology, however, arguing that ‘Phenomenology provides no rigid rubrics for analysis and there lies in it the danger of a chaotic multiplication of descriptive terms and a consequent loss of the systematic integration that is necessary in a satisfactory science.’ (See Boring, *Physical Dimensions*, pp 21-22).

judgement under the influence of a particular intent. [...] In all experimental observation, physical or introspective, one is working with realities by way of their symbols. One never comes directly to grips with that in which one is primarily interested.⁴⁵

We are inevitably doomed to dwell in a world of symbols, thought Boring, and rather than indulge in misguided attempts to get back to ‘things in themselves’ either within the discourses of science or of the arts, we should be content to employ the abstracted categories culture has provided us with. Boring’s faith in the explanatory power of brain science thus allowed him to confidently assert that ‘[n]owadays the gaps are being filled’, with none of the messy nomological danglers associated with qualia left over, and to outline a proposal, in terms very similar to those used by Murry in *Still Life*, for how we may go about closing the explanatory gap even further:

Let us take the case of visual sensation. If we start with the visual stimulus-object, we know from physical and physiological optics what the situation is when the light strikes the retina. We know just a little about the process in the receptors in the retina and much more about the nervous impulse that follows in the fibers of the optic nerve. For instance we are pretty sure that a bright light gives rise to a greater frequency of discharges in the nerve than is the case with a dimmer light. [...] Certainty gets less as we go inward, but it is conceivable that some day we might establish certain physiological events all the way from the retina to the vocimotor muscles that utter the sounds that describe the stimulus. Where does the sensation appear in such a causal series?⁴⁶

‘[M]ystery remains’ concludes Boring, only ‘so long as we hold that consciousness is direct experience.’⁴⁷ Boring subscribed to a notion of eliminative materialism in which ‘folk’ psychological concepts – common-sense descriptors of emotional and psychological states – were being gradually eroded, explained away, by the advances of physics and neuroscience. As we shall see in the following chapter, the reductive

⁴⁵ Boring, *Physical Dimensions*, p. 11.

⁴⁶ Boring, *Physical Dimensions*, p. 12.

⁴⁷ Boring, *Physical Dimensions*, p. 13.

impulses of such forms of materialism were mirrored in modernism's own focus on abstraction, concentration and efficiency as aesthetic principles.

III. The Aesthetics of the Reflex Arc

Eliminative materialism was not the only proposed solution to the mind-brain impasse which emerged from advances in neurology, just as the neuron was not the only unit of study that emerged from the impulse to apply the discoveries of the classical sciences to the cerebral realm. As Melissa Littlefield has shown, the 'psychon' or 'psychone' was an equally attractive potential scientific object in the first decades of the twentieth century; the psychic corollary to the behaviourist model of stimulus and response supported by the nervous system's more visible manifestations.⁴⁸ The notion found support by appealing to the scientific metanarrative. 'Ethereal protons and electrons we know as the constituents of matter' noted one proponent of the psychon, Henry Lane Eno, in *Activism* (1920), '[a]s the basis of the 'immaterial substance' we may postulate a second order of 'ons' which are, like protons and electrons, fashioned out of the ether. Let us call these 'ons' by the name "psychons".'⁴⁹

In terms very similar to contemporary quantum theories of consciousness, which tend to invoke the counter-intuitive behaviour of the quark as a sufficient explanation for the paradoxes of consciousness⁵⁰, the psychon stood as a cipher for an apparently immaterial object – mind – which could interact with the physical nervous

⁴⁸ See Melissa M. Littlefield, 'Matter for Thought: The Psychon in Neurology, Psychology and American Culture' in Salisbury and Shail, *Neurology and Modernity*, pp. 267-286.

⁴⁹ Qtd in Littlefield, 'Matter for Thought', p. 274.

⁵⁰ Most of these 'quantum' arguments for consciousness take the form of the syllogism: consciousness is a complex phenomenon, quantum mechanics is complex, therefore quantum mechanics must explain consciousness.

system through the mysterious mechanisms of the synaptic gap.⁵¹ As we have seen, the precise status of the ‘sensation’ was an ongoing field of debate for philosophers and physicians in the period, and the emergence of the ‘psychon’ can be read as an attempt to ease the explanatory difficulties associated with the neuron, relocating the Cartesian solution to mental causation, which held that the pineal gland was the principal seat of the soul, to the individual synapses themselves.

Indeed at first the psychon was explicitly a conceptual unit, a way of drawing attention to the explanatory gap, and as such it resisted full integration into cognitive discourse. Early adopters of the term were generally wary of fully endorsing the concept as ‘real’. Littlefield notes that for August Forel, who coined the term ‘psychome’, the concept referred not to a ‘material object; it [was] a hypothetical term – a conceptual placeholder – introduced for “brevity’s sake” from which Forel spun his larger theories about mind, brain and matter.’⁵² Whilst Forel was tentative in his definition, William Marston, a later champion of the concept, was far more enthusiastic about the explanatory potential of the new concept. ‘Psychology’s proper object of study is consciousness’ he wrote in 1927, and ‘consciousness is to be identified with synaptic energy.’⁵³ According to Marston, the psychon was to be identified ‘with the totality of energy generated within the junctional tissue between any two neurons.’⁵⁴ ‘In short’, Littlefield summarises, ‘the psychon was a way to describe the energy transferred between neurons – energy that, in its ultimate translation, is equal to consciousness itself.’⁵⁵ Yet one limitation of the psychon as what we might term a ‘phenomenon of the gaps’ was that it could not be observed by

⁵¹ In the 1990s Sir John Eccles reanimated the ‘psychon’ as a unit of consciousness in his ill-advised neo-dualist tract *How the Self Controls its Brain* (Berlin; New York: Springer-Verlag, 1994).

⁵² Littlefield, ‘Matter for Thought’, p. 273.

⁵³ Qtd. in Littlefield, ‘Matter for Thought’, p. 276.

⁵⁴ Littlefield, ‘Matter for Thought’, p. 273.

⁵⁵ Littlefield, ‘Matter for Thought’, p. 273.

scientific instruments; it existed solely as an endlessly deferred hypothetical unit (somewhat like the quale), waiting to be explained away, similar in function to the notion of ‘luminiferous aether’, the theoretical medium for the propagation of light that had been proposed by nineteenth century physicists.

Compared to the ephemerality of the psychon, the neuron was recognised as a robust and, once made visible through the silver chromate staining technique, beautiful object. Almost as soon as it was discovered, the visual power of the Golgi method stimulated imaginary models of brain/mind relations, as the nerve was almost instantly appropriated as the dominant cultural metaphor of the day. Most frequently commentators were interested in the nervous system as a model of communication, an image which seemed to mesh with that other technology of modernity: the telegraph. One of the most striking properties of the new nervous system was its ability to translate various competing sensory stimuli into a common language of impulse and response. ‘The nervous fiber’ notes Foucault, ‘is endowed with remarkable properties, which permit it to integrate the most heterogeneous elements. Is it not astonishing that, responsible for transmitting the most diverse impressions, the nerves should be of the same nature everywhere, and in every organ?’⁵⁶

Interpreting the nervous system as a telegraph system or telephone exchange, able to convert whatever material stimulus it received into pure and neutral *information*, became a popular figurative strategy. Nerve impulses, notes Lawrence Rainey, ‘were associated with velocity and thus with the modern world and its enthralling manifestations.’⁵⁷ Even by the time Karl Pearson illustrated his theory of cognition by ‘comparing the brain to the central office of a telephone exchange, from which wires radiate to the subscribers A, B, C, D, E, F, &c., who are senders, and to

⁵⁶ Foucault, *Madness*, p. 143.

⁵⁷ Lawrence Rainey, ‘Shock Effects: Marinetti, Pathology, and Italian Avant-Garde Poetics’ in *The Mind of Modernism*, p. 199.

W, X, Y, Z, &c., who are receivers of messages' in 1897, he was already invoking something of an explanatory cliché. As Cornelius Borck notes, citing Wilhelm Wundt, by the late nineteenth century scientists 'had already begun to lament "this frequently used metaphor", which depended on "[s]peaking of the cable network as the "nervous system of the state" – or vice versa of the body's "telegraph system".'⁵⁸ The appropriation and biologisation of the images of a telephonic system of 'listening', and a cinematic system of 'seeing', became well established in the popular scientific press also, with the brain schematised as a machine. Under the machine gaze of neuromodernism, man was trapped by his nervous system, unable to get outside of it to evaluate properly how it worked. Karl Pearson noted that we 'are accustomed to talk of the "external world", of the "reality" outside us', and yet this external world is only available to us with the aid of those sensory nerves themselves – if we lose them, then the world ceases to exist:

How close can we then actually get to this supposed world outside ourselves? Just as near but no nearer than the brain terminals of the sensory nerves. We are like the clerk in the telephone exchange who cannot get nearer to his customers than his end of the telephone wires. We are, indeed, worse off than the clerk, for to carry out the analogy properly we must suppose him *never to have been outside the telephone exchange, never to have seen a customer or any one like a customer – in short, never, except through the telephone wire, to have come in contact with the outside universe.*⁵⁹

Modernism's sustained focus on automatic processes – which will be the focus of chapter six – as both pathology and as an aesthetic trope, was therefore explicitly associated with the systems uncovered by the new neurologists. Sara Danius's identification of the 'autonomy of the eye and ear' as central to Joyce's concerns in

⁵⁸ Cornelius Borck, 'Communicating the Modern Body: Fritz Kahn's Popular Images of Human Physiology as an Industrialized World', *Canadian Journal of Communication*, xxxii (2007), 495-520, p. 511.

⁵⁹ Pearson, *Grammar*, p. 74.

Ulysses in which, she claims, ‘eyes [...] claim autonomy for themselves, not just from the other senses and the human body at large but also from the central processing instance, the hermeneutic switchboard called the brain’⁶⁰ is therefore the almost inevitable outcome of a physiology which stressed the division, fragmentation and isolation of the component parts of the nervous system. As Friedrich Kittler has argued, the striking thing about the new orthodoxy was that intellect as well as labour was subsumed by machine functionality. During the period ‘[m]achines [took] over functions of the central nervous system’, Kittler argues, ‘and no longer, as in times past, merely those of muscles. And with this differentiation – and not with steam engines and railroads – a clear division occurs between matter and information, the real and the symbolic. [...] So-called man is split up into physiology and information technology.’⁶¹ The division between information and matter outlined by Kittler will be examined further in the following chapter.

As I have suggested, this division had enormous repercussions for the status of consciousness itself; recasting it as an emergent and not particularly important by-product of the nervous system that was automatic and reflex-driven. Under such a paradigm, argues Kittler:

Thought is replaced by Boolean algebra, and consciousness by the unconscious, which, (at least since Lacan’s reading) makes of Poe’s ‘Purloined Letter’ a Markoff chain. And that the symbolic is called the world of the machine undermines Man’s delusion of possessing a ‘quality’ called ‘consciousness’, which identifies him as something other and better than a calculating machine.⁶²

⁶⁰ Sara Danius, *The Senses of Modernism: Technology, Perception and Aesthetics* (London: Cornell University Press, 2002), p. 160.

⁶¹ Kittler, *Discourse Networks*, p. 16.

⁶² Kittler, *Discourse Networks*, p. 16.

The French materialist philosopher Pierre Cabanis believed that the brain secretes thought as the liver secretes bile: neuromodernism tended to deny that there was anything to secrete in the first place.

Analyses of what we might term the ‘material unconscious’ in the period were in many cases developments of Marshall Hall’s notion of the ‘reflex arc’, outlined in a paper in 1832, which provided an atomised, rhizomatic model for the human sensorium, suggesting a level of neurological sensuous autonomy not available to models of the Cartesian executive consciousness. Throughout the late nineteenth and early twentieth centuries it became apparent that groups of such arcs could account for complex networks of action, and so the neuron itself promised to automatise behaviour, federalising the body and dividing its labour between a series of independent self-governing systems. As John Unzer noted in his *Principles of Physiology* in 1851:

External impressions may [...] excite a whole chain of apparently volitional acts, without one of them being felt, or any conception whatever excited. Hence an animal may, by external impressions only, perform all the organic and apparently volitional movements necessary to its existence, without having either brain or mind, if its body be so constituted (as is quite possible) that all external impressions on its nerves can produce their direct and indirect nerve actions, without having to excite material ideas in the brain, or conceptions in the mind, connected therewith.⁶³

By 1930, E. G. Boring was able confidently to assert that ‘A true reflex is supposed to be fixed, automatic and unconscious, involving few neurons. [...] However, the reflex arc may be very long and complicated indeed, and now-a-days psychologists speak of variable, learned, conscious reflexes as *conditioned reflexes*.’⁶⁴ Freud’s associationism located this automatism in the subconscious. Errors and mistakes –

⁶³ John Augustus Unzer, *The Principles of Physiology* (London: Printed for the Sydenham Society, 1851), p. 241.

⁶⁴ Boring, *The Physical Dimensions of Consciousness*, p. 37.

Freudian slips – were the results of the ‘relaxation’ of the attention of an executive consciousness, allowing the automatic processes of the body to take over and that ‘uninhibited stream of associations’ to ‘come [...] into action.’⁶⁵

Thus by the early twentieth century, it had been established that even apparently sophisticated behavioural processes could, as Karl Pearson argued in *The Grammar of Science*, be wholly and comprehensively explained in mechanistic terms according to neurological theories, especially if you included memory within the psycho-physical repertoire:

Everything up to the receipt of the sense-impression by the brain is what we are accustomed to term physical or mechanical, it is a legitimate inference to suppose that what from the psychical aspect we term memory, has also a physical side, that the brain takes for every memory a physical impress, whether by change in the molecular constitution or in the elementary motions of the brain-substance, and that such physical impress is our stored sense-impress.⁶⁶

In 1934 Jakob von Uexküll, whose *Foray into the Worlds of Animals and Humans* was examined in the previous chapter, argued that the new mechanisms uncovered by neuroscience meant that:

One can [...] speak of a ‘reflex republic’ in which, in spite of the complete autonomy of all reflex persons, a total civil peace reigns, for the tender suction feet of the sea urchin are never fallen upon by the biting, grasping pincers, which would otherwise grab any other approaching object.⁶⁷

In *The Grammar of Science* Pearson described several different responses to the stimulus of banging his knee on a table. In the first scenario he rubs his knee,

⁶⁵ Sigmund Freud, *The Psychopathology of Everyday Life*, tr. A. A. Brill (London: T. Fisher Unwin, 1914), p. 61.

⁶⁶ Pearson, *Grammar*, p. 51.

⁶⁷ Jakob von Uexküll, *A Foray Into the Worlds of Animals and Humans: With A Theory of Meaning*, tr. Joseph D. O’Neill (Minneapolis, Minn: University of Minnesota Press), p. 76.

‘involuntarily’: ‘[t]he whole process may be so rapid, I may be so absorbed in my work, that I never realized the message from the sensory nerve at all. I do not even say to myself, “I have knocked my knee and rubbed it.” Only a spectator, perhaps, has been conscious of the whole process’.⁶⁸ From this it seems clear, concludes Pearson, that one ‘can receive a sense-impression without recognizing it, or a sense-impression does not involve consciousness.’⁶⁹ It is only when he turns the experience into a narrative, a description of events with ascribed motives, interpretations and the positing of another character (the spectator) that the full paradox of consciousness emerges. ‘Thus what we term consciousness’ he concludes, ‘is largely, if not wholly, the stock of stored sense-impressions, and to the manner in which these condition the messages given them by the motor nerves when a sensory nerve has conveyed a message to the brain.’⁷⁰

I will examine the repercussions of this internalisation of automatic processes in the period – what David Trotter identifies as modernism’s ‘will-to-automatism’ – in chapter six, but for now it is worth noting how directly Hall’s discovery influenced everything from philosophy to literary criticism in the period, leading to a conception of a neurological ‘material unconscious’ that was for a time as attractive to investigators as the psychological subconscious that would eventually replace it.⁷¹ Equipped with autonomous behavioural systems, the body was increasingly seen as divided, as divorced from the self or the ego and even at war with its other impulses.

⁶⁸ Pearson, *Grammar*, p. 51.

⁶⁹ Pearson, *Grammar*, p. 51.

⁷⁰ Pearson, *Grammar*, p. 51.

⁷¹ Strikingly, Freud’s project had at first been conceived of along neurological lines. His intention originally was to ‘furnish a psychology that shall be a natural science: that is, to represent psychical processes as quantitatively determinate states of specifiable material particles, this making those processes perspicuous and free from contradiction [...] The neurons are to be taken as the material particle.’ Qtd in Littlefield, ‘Matter for Thought’, p. 271.

As Laura Salisbury summarises, Hall's identification of the 'diastaltic nervous system' meant that nerves were not:

the mere messengers of sensation or voluntary action between nerve endings and the brain; instead, nerves themselves undertook a kind of intellection, interpreting stimuli independently of the brain.⁷²

Thus the previously occluded experiences of the neuron contributed to an understanding of the human subject as fragmented; to the self as a distributed, and often self-deceiving, system of impulse and reflex, leading to the identification of all sorts of modern maladies, neuroses and nerve-ailments that were understood to be caused by the disconnect between self and organism, or between nervous system and world. 'Trauma' Lawrence Rainey reminds us, 'was thought by early psychologists to be characterized by a dissociative process of the self or the ego, which undergoes a process of dissociation (*desagregation*) that generates multiple strands of independent selves functioning automatically.'⁷³

As Friedrich Kittler has argued, the theoretical assault on unified conceptions of an executive consciousness of this kind was the direct result of the dissolving of unified brain-systems as physiological realities. 'Because not every local [nerve] center has direct nerve connections to every other' Kittler argues, 'there is no unity of the transcendental signified capable of organically developing speaking and hearing, writing and reading out of one another. The pedagogical uncoupling of the cultural-technological subroutines simply followed cuts made by the scalpel.'⁷⁴ Neurons were specialized, associated with certain perceptual functions, and as such would be conceptualised as functioning independently of a central consciousness or ego. In his

⁷² Salisbury and Shail, *Neurology and Modernity*, p. 8.

⁷³ Lawrence Rainey, 'Shock Effects: Marinetti, Pathology, and Italian Avant-Garde Poetics' in *The Mind of Modernism*, p. 206.

⁷⁴ Kittler, *Discourse Networks*, p. 216.

1925 work *Mind and its Place in Nature*, C. D. Broad outlined what he termed the ‘argument from the nervous system’ to question the very existence of a classical conception of a stable mind:

Now we know the nervous structure which is used in such acts as these. A stimulus is given to the outer end of an afferent nerve; some change or other runs up this nerve, crosses a synapsis [sic] between this and an afferent nerve, travels down the latter to a muscle, causes the muscle to contract, and so produces a bodily movement. There seems no reason to believe that the mind plays any essential part in this process.⁷⁵

Later, Broad turned his objection into a critique of the neurological metaphor of the telephone exchange, writing, in terms strikingly similar to Joseph Levine’s:

They think of the mind as sitting somewhere in a hole in the brain, surrounded by telephones. And they think of the afferent disturbance as coming to an end at one of these telephones and there affecting the mind. The mind is then supposed to respond by sending an afferent impulse down another of these telephones. As no such hole, with afferent nerves stopping at its walls and afferent nerves starting from them, can be found, they conclude that the mind can play no part in the transaction. But another alternative is that this picture of how the mind must act if it acts at all is wrong. To put it shortly, the mistake is to confuse a gap in an explanation with a spatio-temporal gap, and to argue from the absence of the latter to the absence of the former.⁷⁶

‘It is admitted’, Broad concluded, ‘that the mind has nothing to do with the causation of purely reflex actions. But the nervous structure and the nervous processes involved in deliberate action do not differ in kind from those involved in reflex action; they differ only in degree of complexity. [...] So it is unreasonable to suppose that the mind has any more to do with causing deliberate actions than it has to do with causing reflex actions.’⁷⁷

⁷⁵ C. D. Broad, *Mind and its Place in Nature* (London: Routledge & Kegan Paul, 1925), p. 110.

⁷⁶ Broad, *The Mind*, p. 111.

⁷⁷ Broad, *The Mind*, p. 110.

In his *Principles of Literary Criticism*, I. A. Richards had endorsed a neuromodernist view of literary criticism, incorporating the notion of an egoless or mindless critical response into his critical project by outlining a theory of the ‘impulse’ as ‘the basic unit of conscious experience, whether of pleasure, pain, desire, memory, insight etc.’⁷⁸ Richards’ ‘impulse’ was the critical equivalent of the reflex arc, and was ‘loosely understood as a unit, or packet, of nervous activity whose combination with others of its kind composes our conscious experience.’⁷⁹ Richards argued that ‘impulses’ were distinct from sensations or perceptions, and that they were ‘the essential and fundamental things in any experience. All else, whether intellectual or emotional, arises as a consequence of their activity.’⁸⁰ Misreadings of literature, arising from Pater’s insistence that the critic’s job was to discern her own impression of objects seen, meant that, according to Richards, too much importance had been:

attached to the sensory qualities of images. What gives an image efficacy is less its vividness as an image than its character as a mental event peculiarly connected with sensation. It is, in a way which no one yet knows how to explain, a relict of sensation and our intellectual and emotional response to it depends far more upon its being, through this fact, a representative of sensation, than upon its sensory resemblance to one. An image may lose almost all its sensory nature to the point of becoming scarcely an image at all, a mere skeleton, and yet represent a sensation quite as adequately as if it were flaring with hallucinatory vividity. In other words, what matters is not the sensory *resemblance* of an image to the sensation which is its prototype, but some other relation, at present hidden from us in the jungles of neurology.⁸¹

Richards accompanied his theory with a schematic outlining how a line of poetry could produce such an ‘impulse’, and how the reading of a poem interacted

⁷⁸ I. A. Richards, *Principles of Literary Criticism* (London: Kegan Paul, Trench, Trübner, 1925), p. 8.

⁷⁹ Richards, *Principles*, p. 8.

⁸⁰ Richards, *Principles*, p. 125.

⁸¹ Richards, *Principles*, pp. 119-20.

with the neural networks that had come to dominate conceptions of the mind/body problem (fig. 9):

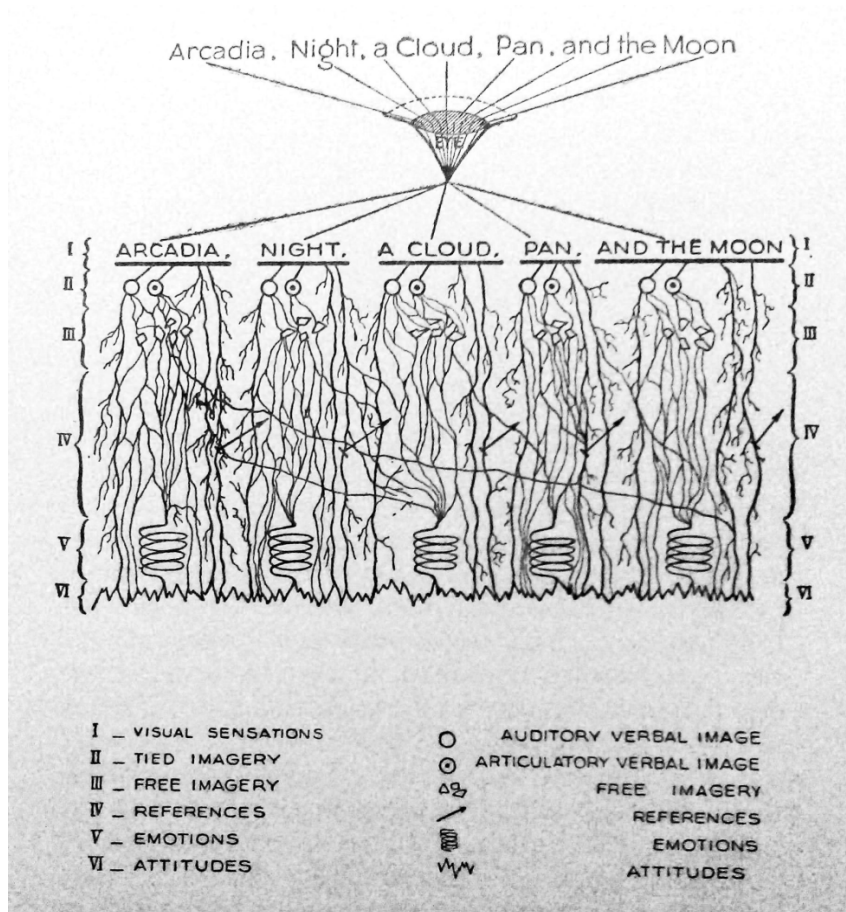


Figure 9: I. A. Richards's diagram of the 'impulse'.⁸²

In *A Philosophy of Rhetoric*, Richards moved away from the a criticism founded on the notion of the 'impulse' as identical with certain neurophysiological conditions, remarking that: 'I will only say that I hold, that an identification of Thought with an activity of the nervous system is to me an acceptable hypothesis, but too large to have interesting applications. It may be left until more is known about both; when possibly it may be developed to a point at which it might become useful.'⁸³ 'Today', argues Edward Jayne, 'Richards' neurological paradigm seems

⁸² Richards, *Principles*, p. 116.

⁸³ I. A. Richards, *The Philosophy of Rhetoric* (New York; London: Oxford University Press, 1936), p. 13.

best appreciated as metaphor, as in fact his notion of impulse may also be granted metaphoric value in depicting conscious dynamics otherwise resistant to analysis.’⁸⁴ Nevertheless, Richards’s use of the notion of the ‘impulse’ demonstrates the degree to which paradigms provided by neuroscience were adopted and adapted by humanist critics to serve the anti-mimetic ends of modernism.

Similarly Gertrude Stein, who studied automatic writing with Leon M. Solomon under William James, concluded one of her experiments (which involved a subject slowly reciting a dull story whilst transcribing another narrative read to her by an experimenter – usually very successfully) noting: ‘[w]e may sum up the experiment by saying that a large number of acts ordinarily called intelligent, such as reading, writing, etc., can go on quite automatically in ordinary people.’⁸⁵ Indeed the reflex arc quickly garnered support as a metaphor for aesthetic experience itself: for the immediate and unconscious reception of the significant form of a painting, piece of music, or poem, unimpeded by the interruptions of the higher cognitive faculties. By 1953 Clement Greenberg, a fierce defender of atomistic conceptions of an art designed for ‘eyesight alone’, was able to declare that ‘[a]esthetic judgements are immediate, intuitive, undeliberate, and involuntary.’⁸⁶

Much modernist literary experimentation was therefore concerned to capture this reflexive autonomy, or to apply it to the production of the literary text and thus to bypass the controlling intervention of the executive consciousness. Spiritualism and automatic writing were obvious attempts to render the will-to-automatism associated with incorporating the neuronal reflex into critical discourse performative. Indeed, as Lawrence Rainey argues, the notion of the medium as a conduit of some transcendent

⁸⁴ Edward Jane, ‘I.A. Richards: Theory of Metaphor, Theory as Metaphoric Variation Affective Criticism: Theories of Emotion and Synaesthesia in the Experience of Literature’ (Diss. S.U.N.Y. at Buffalo, 1970, print), p. 9.

⁸⁵ Qtd in Kittler, *Discourse*, p. 214.

⁸⁶ Clement Greenberg, ‘Complaints of an Art Critic’ in *Artforum*, lxi (1967), 38-9.

source of knowledge was intimately associated with the technological matrices of modernity, and of the nerves as the basis of knowledge of the world. The medium was often figured as a wireless of telegraph receiver, complicating the imagery of this pseudo-spiritual/mechanical endeavour:

For its followers, spiritualism may well have offered the promise of messages and consolation from another world; but in reality its communications were always uttered in the silent syntax of capital, murmured to the rhythms of its machines.⁸⁷

Thus neuromodernism appropriated the language of neuroscience and fused it with images of the machine, finding common ground and points of comparison that were themselves fed into novels and poetry of the period. Futurism's obsession with the nerve-jangling affects of velocity; Virginia Woolf's meticulous descriptions of the state of her nerves (and her fierce suspicion of neurologists like Sir William Bradshaw in *Mrs Dalloway*); and Gertrude Stein's endeavours to produce linguistic and neuronal 'maps' of utterances all represent an impulse to consume and re-appropriate the discourses of brain science. As I have suggested, one of the central question facing both neurological accounts of mind and modernist fictional representations of consciousness is 'can consciousness be written?' Rather than providing answers to this question, I think it would be more profitable to read modernist narrative fiction as a way of asking a more speculative question: 'what *could* constitute a neuroscientific 'explanation' of consciousness'? It is a question that is addressed directly in Joyce's *Ulysses*, in 'Eumaeus' (associated in the Linati schema with 'the nerves'), as Stephen and Bloom, 'Stoom' and 'Blephen', argue at cross-purposes about the nature of the soul.⁸⁸ 'You, as a good catholic' observes Bloom:

⁸⁷ Lawrence Rainey, 'Shock Effects', p. 197.

⁸⁸ James Joyce, *Ulysses*, 17.549-51.

talking of body and soul, believe in the soul. Or do you mean the intelligence, the brainpower as such, as distinct from any outside object, the table, let us say, that cup. I believe in that myself because it has been explained by competent men as the convolutions of the grey matter. Otherwise we would never have such inventions as X rays, for instance. Do you?⁸⁹

In answer Stephen invokes Aquinas and the notion of the simple substance, indivisible (in the *Summa Theologica* Aquinas asserted that ‘the intellectual principle we call the human soul is incorruptible’) and constant.⁹⁰ The dialectic places the schoolman in conflict with the modern materialistic intellect, but ultimately both are shown to be preposterous. They are ‘poles apart’ in their thinking, but they are both equally wrong.⁹¹ Whereas Stephen idly considers the lessons of the schoolmen, Bloom places his faith in the symbols of modern science rather than in its knowledge; in Röntgen rays and the ‘Sherlock Holmsing’ of the medical method, concluding that thought ‘has been explained by competent men as the convolutions of the grey matter’.⁹² As we shall see in the following chapter, however, an anxiety over the rhetoric of such reductions, over the threats such methodologies might pose to the explanatory power of the arts, emerged in parallel with these very processes, leading to the creation of a host of competing narratives of reduction in the period. In the modern moment the ‘competent men’ singularly *failed* to reduce the mind to ‘convolutions of the grey matter’, and this failure itself became grist to the novelist’s mill.

⁸⁹ Joyce, *Ulysses*, 16.748-753.

⁹⁰ St Thomas Aquinas, *Summa Theologica*, 22 vols. (London: Burns, Oates & Washburne, 1918-1928), vol. ii, p. 80.

⁹¹ Joyce, *Ulysses*, 16.774.

⁹² Joyce, *Ulysses*, 16.751-52.

Chapter 5

Samuel Beckett and Modernism's Narratives of Reduction

The fact is, it seems, that the most you can hope is to be a little less...

Samuel Beckett, *Molloy*

For between the poet and the public, in fact, the same kind of relations exist as between two old friends. They can speak to each other with a half-word, a gesture, a wink.

F. T. Marinetti, *Destruction of Syntax*

I. Neurological Reductions

As I suggested in the previous chapter, a suspicion of science's explanatory powers in relation to consciousness emerged in parallel with the identification of the neuron and the reflex arc, discoveries which promised to provide ever more efficient models of cognition. Novelists were quick to affirm that what they offered differed from these new narratives of the self, whilst being equally quick to incorporate reflexive models of aesthetic response into their works. Despite the fundamentally localizing nature of his psycho-aesthetic project, for instance, which amounted to a quest to draw frequently fanciful inferences from various psycho-bodily correspondences, D. H. Lawrence was particularly wary of the threats posed by the reductive strategies of modern medicine, especially those associated with neuromodernism. In 'Why the Novel Matters' Lawrence expanded on ideas he'd articulated in *Fantasia of the Unconscious*, noting that the tendency to 'think of ourselves as a body with a spirit in it, or a body with a soul in it, or a body with a mind in it' seems to run counter to observation. 'It is a funny sort of superstition', he notes:

Why should I look at my hand, as it so cleverly writes these words, and decide that it is a mere nothing compared to the mind that directs it? Is there really any huge difference between my hand and my brain? Or my mind? My hand is alive, it flickers with a life of its own. It meets all the strange universe in touch, and learns a vast number of things, and knows a vast number of things. My hand, as it writes these words, slips gaily along, jumps like a grasshopper to dot an *i*, feels the table rather cold, gets a little bored if I write too long, has its own rudiments of thought, and is just as much *me* as is my brain, my mind, or my soul. Why should I imagine that there is a *me* which is more *me* than my hand is? Since my hand is absolutely alive, *me* alive.¹

Lawrence's notion of the 'blood consciousness' and embodied cognition seems less absurd if understood as describing a model of distributed consciousness, that is, as a means of problematising the straight-jacketing notion of the stable ego or executive mind; the centrally located or transcendent thinking thing which dwells as a homunculus in the pineal gland, taking in the data of the body, pondering it, and sending out commands via the nerves in response. Instead, Lawrence's point here is that we must understand that the body itself, in all its aspects, is somehow involved in cognition. Just as an individual nerve-cell didn't 'have' but simply *was* a sensation (despite the fact that *how* it was so defied explanation), so the whole body is called upon to participate in the process of living:

True, if I cut it it will bleed, like a can of cherries. But then the skin that is cut, and the veins that bleed, and the bones that should never be seen, they are all just as alive as the blood that flows. So the tin can business, or vessel of clay, is just bunk.²

Lawrence's great fear, as we saw in the last chapter, was that the scientist, reducing the person to a 'either a brain, or nerves, or glands, or something more up-to-date in

¹ D. H. Lawrence, 'Why The Novel Matters', *Study of Thomas Hardy and Other Essays*, ed. Bruce Steele (Cambridge: Cambridge University Press, 1985), p. 193.

² Lawrence, 'Why the Novel Matters', p. 192.

the tissue line', would pronounce the human subject dead.³ Reducing mind to body, or to nerve cell, threatens to leave out, as we have seen, what the novelist feels is most essential about personhood. It is a methodological threat to the idea of the person.

By the mid twentieth century Lawrence's fear had become widespread. In his 1947 essay 'The Meaning of a Literary Idea' Lionel Trilling identified a reductive 'spectre' that, he felt, 'haunts our culture':

it is that people will eventually be unable to say, 'They fell in love and married,' let alone understand the language of *Romeo and Juliet*, but will as a matter of course say 'Their libidinal impulses being reciprocal, they activated their individual erotic drives and integrated them within the same frame of reference.' [...] There can be no doubt whatever that [such language] constitutes a threat to the emotions and thus to life itself.⁴

Whereas Virginia Woolf had argued, in 'On Being Ill', that a rigorous language of science would give voice to our hitherto unspeakable pains and shivers, Trilling felt that scientific discourse threatened to usurp the language of humanism.

Though Trilling's anxiety now seems unfounded (the terminology of psychoanalysis has singularly *failed* to replace our suite of 'folk' or literary registers when describing love, or any other emotional state), its form is equally typical of anxieties over both the power and the insufficiency of the reductive discourses associated with modernity. Trilling traced his 'truism of contemporary thought' to the eighteenth century, arguing that it expresses horror 'at the prospect of life being intellectualized out of all spontaneity and reality', but in the first half of this chapter I will suggest that with modernism emerges another, more specific form of this fear: that of one register or discourse (the scientific) replacing the explanatory claims of another (the literary) in terms of its ability to contain qualia.

³ Lawrence, 'Why the Novel Matters', p. 195.

⁴ Lionel Trilling, 'The Meaning of a Literary Idea' in *The Liberal Imagination: Essays on Literature and Society* (London: Secker and Warburg, 1951), p. 285.

As I argued in the previous chapter, many humanist critiques of scientific discourses relating to consciousness during the first half of the twentieth century expressed a fear of science's attempts to 'reduce' the complexities of our mental lives to other phenomena; to psychoanalytical metanarratives; to the firing of neurons; or to genetically predisposed behavioural tendencies. Contemporary literary criticism continues to be both beguiled and appalled, in almost equal measure, by what Raymond Tallis terms 'neuromania': the propensity of contemporary culture to accept neuronal descriptions of behaviours as sufficient explanations for those behaviours themselves.⁵ Francis Crick's polemical statement, in *The Astonishing Hypothesis*, that '[y]ou, your joys and sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behaviour of a vast assembly of nerve cells and their associated molecules,' is typical of these arguments.⁶ It is that 'no more than' that so horrifies the humanist. Crick's brand of reductionism is radical, being both ontological, holding that one entity (consciousness) is no more than a structure of other kinds of entity (nerve cells and associated molecules), and explanatory, in that he argues that reductionism 'is the main theoretical method that has driven the development of physics, chemistry and molecular biology. It is largely responsible for the spectacular developments of modern science.'⁷ But often approaches to neurology and the problem of qualia tend to conflate the two forms of reduction less consciously. In *The Philosophical Foundations of Neuroscience*, M. R. Bennett and P. M. S. Hacker define reductionism 'in the broadest sense' as:

⁵ See Raymond Tallis, *Aping Mankind: Neuromania, Darwinitis, and the Misrepresentation of Humanity* (Durham: Acumen Publishing Ltd, 2011).

⁶ Francis Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul* (New York: Scribner, 1994), p. 3.

⁷ Crick, *Astonishing*, p. 8.

the commitment to a single unifying explanation of a type of phenomenon. In this sense, Marxism advocates a reductive theory of history, and psychoanalysis defends a reductive explanation of human behaviour. [...] The idea of ‘unified science’, advocated by the Vienna Circle positivists in the 1920s and 1930s and adopted by the logical empiricists in the 1950s, was committed to what has been called ‘classical reductionism’.⁸

It is this notion of ‘classical reduction’ that posed such a threat to Trilling’s interpretation of humanistic culture. However his argument fails to engage with the idea that much modernist practice inculcated what I would term an aesthetics of reduction, whereby literary value was ascribed to abstract notions of ‘efficiency’ and declarative economy.

In order to understand what precisely is at issue in debates over neuroscience’s ability to ‘reduce’ mental states to brain states and thus close the explanatory gap, it is worth briefly assessing contemporary philosophical formulations of what Patricia Churchland terms in her hugely influential *Neurophilosophy* ‘intertheoretic reductions’.⁹ ‘Reductionism’, notes Churchland, ‘has come in some quarters to be used as a general term of insult and abuse:

Sometimes it is used as a synonym for ‘behaviorism’ (which is a case of the vague hounding the vague), or as a synonym for such diverse sins as ‘materialism,’ ‘bourgeois capitalism,’ ‘experimentalism,’ ‘vivisectionism,’ ‘communism,’ ‘militarism,’ ‘socio-biology’, and ‘atheism.’ In the sense of ‘reduction’ that is relevant here, reduction is first and foremost a relation between theories. Most simply, one theory, the *reduced* theory Tr, stands in a certain relation [...] to another more basic theory Tb. Statements that a phenomenon Pr reduces to another phenomenon Pb are derivative upon the more basic claim that the *theory* that characterizes the first reduces to the *theory* that characterizes the second.¹⁰

⁸ M. Bennett & R. P. M. S Hacker *Philosophical Foundations of Neuroscience* (Malden, MA; Oxford: Blackwell, 2003), p. 357.

⁹ Patricia Churchland, *Neurophilosophy: Toward a Unified Science of the Mind-brain* (Cambridge, Mass; London: MIT Press, 1986), p. 278.

¹⁰ Churchland, *Neurophilosophy*, p. 278.

Churchland describes intertheoretic reduction as not concerned with the reduction of mental states, including perceptions and sensations, to brain states. It describes ‘a relation between theories’ rather than a relation between phenomena themselves. But what exactly do we deny when we deny the possibility of reducing mental states to brain states, whilst allowing that other instances of reductionism – temperature to mean kinetic energy, for instance – *can* occur? From the obfuscatory thicket of these competing terms, Churchland extrapolates two central questions. These can be paraphrased as:

1. Can our ‘folk-intuitions’ about states of consciousness, our belief in entities such as feelings, desires, beliefs themselves, and so on, be described more *efficiently* in other terms?
2. Can those experiences themselves be contained within their descriptive discourses, or is something always and inevitably lost in translation?

I would suggest that Churchland’s analysis of intertheoretic reduction, which functions so well as an analysis of the development of scientific concepts, does little to address the problems inherent to any attempt to provide an explanation of qualia based on brain science. Partly this difficulty is caused by the misattribution of historical examples of scientific reduction to the case of consciousness. ‘[I]n the eighteenth century’ Churchland argues,

it would have been true to say that temperature did not reduce, inasmuch as thermodynamics was still an autonomous science. This did not entail that it never would reduce to a more basic theory or that temperature is an emergent property. Indeed, by the late nineteenth century thermodynamics was the beneficiary of a triumphant reduction to statistical mechanics, at which time it was evident that temperature (of gases) is not emergent but is identical with mean molecular kinetic energy.¹¹

¹¹ Churchland, *Neurophilosophy*, p. 327.

Is this really the case? Certainly in the scenario Churchland describes above one set of pointer-readings (to borrow G. E. Moore's terminology) was replaced with a set of more finely grained pointer-readings, allowing her to claim that 'temperature is identical with mean molecular kinetic energy'. But experiencing the *affect* of temperature on the body, what the philosopher of mind seeks to 'explain' when the notion of 'temperature' is invoked, is still far from completion in the second formulation. In her example 'temperature' refers to a phenomenon in exactly the same way that 'high kinetic energy' refers to the same phenomenon. And yet the phenomenon itself – the feeling of temperature – is left unexplained. Churchland smuggles in the notion of phenomenological temperature, that is, the *qualia* of temperature, under the aegis of a physicalist, objective recounting of the physics of molecular energy. In her example 'temperature' is to 'the feeling of temperature' as 'kinetic energy' is to 'the feeling of temperature': neither term, or explanation, is sufficient. Clearly, intertheoretic reduction of temperature to mean kinetic energy goes no way to providing a model for the kind of reduction that would allow us to explain the *feeling* of heat solely in terms of physical processes.

Elsewhere Churchland notes that '[l]ight may seem completely different from electromagnetic radiation, yet light turns out to *be* electromagnetic radiation' again avoiding the real issue. In order to really provide a rebuke to apparent irreducibility of mind to brain, 'light' in this case would have to refer to something like 'light *as perceived by a human agent* turns out to *be* electromagnetic radiation *as perceived by a human agent*': a statement which, while true, explains little and is tautological. A truly reductive theory of light would necessarily encompass a neuroscientific explanation of light-perception to have really comprehensively demonstrated that 'light turns out to *be* electromagnetic radiation'. Science's great success at providing

ever-more efficient explanations and models of the physical world only seems metaphysically watertight when comparing theories of phenomena, not when it is invoked to ‘explain’ the functions of consciousness perceiving those phenomena.

Of course Churchland is right to object, as she does, that we seem to expect a higher explanatory capability from theories of consciousness than we do from other phenomena. Thus she suggests that we should no more expect that understanding a perfect model of photosynthesis would cause the brain to start breaking down CO² and producing food than we should that a perfect model of visual perception should cause visual perceptions to occur, for instance. ‘Just as the obstetrician does not become pregnant by knowing all about pregnancy’, argues Churchland, ‘so [the perceiving subject] does not have the sensation of redness by knowing all about the neurophysiology of perceiving and experiencing red. Clearly it is no argument in support of non-identity to say that Mary’s knowledge fails to cause the sensation of redness. Whyever suppose that it should?’¹² Yet, as we have seen, many literary critics who subscribe to the cognitive realist thesis argue precisely this: that, in some sense, literature *is* able to reduce sensory phenomena to symbolic language. They may not believe that literature can make us pregnant, but they do believe that it can make us see.

II. Modernism’s Ideologies of Reduction

As well as becoming the dominant methodology within the sciences, the various forms of reduction associated with modernity provided models for a new kind of literary value. As we saw in chapter three, Joyce’s most radical innovations,

¹² Churchland, *Neurophilosophy*, p. 332.

especially those associated with *Ulysses*, were encyclopaedic, expansive, and concerned to extend the form of the novel itself in terms of its ability to contain multifarious forms of knowledge. Describing his own work as a reaction against Joyce's method, Samuel Beckett argued that Joyce's innovations signalled the end of the novel's propensity to expand, writing:

I realised that Joyce had gone as far as one could in the direction of knowing more, [being] in control of one's material. He was always adding to it; you only have to look at his proofs to see that. I realised that my own way was an impoverishment, in lack of knowledge and in taking away, in subtracting rather than in adding.¹³

As Evelyn Cobley argues in *Modernism and the Culture of Efficiency*, modernity was characterised also by narratives of 'efficiency', a concept which was primarily mechanical and economic in origin but which was quickly extended to encompass all forms of human endeavour. As Cobley writes:

The culture of efficiency informing the modernist literary canon has its source in socio-economic transformations that can be traced to the invention of the steam engine, first manufactured by Watt and Boulton in 1794.¹⁴

In *The Mantra of Efficiency: From Waterwheel to Social Control*, Jennifer Karns Alexander describes the metaphorical appropriation of 'efficiency' as a sociological concept directly derived from the cult of the machine:

Efficiency had been a philosophical concept describing agents and causes of change, yet it dropped out of sight in the eighteenth century, only to resurface in the nineteenth in a different form, as a technical measurement of the performance of machines. It moved into economics and then, early in the

¹³ Qtd. in James Knowlson, *Damned to Fame: The Life of Samuel Beckett* (London: Bloomsbury, 1996), p. 319.

¹⁴ Evelyn Cobley, *Modernism and the Culture of Efficiency: Ideology and Fiction* (Toronto, Ont.; London: University of Toronto Press, 2009), pp. 5-6.

twentieth century, into more common use, as an efficiency craze swept through Europe and the United States.¹⁵

At first a technical term describing the increase of output through the minimisation of waste in a closed system – usually in mechanised systems such as steam engines – ‘efficiency’ became a *de facto* measure of value; a way of evaluating the input-output relationships of a wide variety of systems and social phenomena, including the literary, during the period.

Although Cobley considers the representations of the efficiency-impulse as an explicit theme in the work of D. H. Lawrence, E. M. Forster, Joseph Conrad and H. G. Wells, she fails to see that the application of the *principles* of efficiency to the writing of fiction lay at the heart of the modernist project in a more radical way. High modernism tended to celebrate the compressed statement and the pregnant kernel of meaning – to be a ‘little less’ – and as I argued in chapter two a conception of the reducibility of language itself was a central concern of the poetics of Impressionism, Symbolism and Imagism. In the novel, the experimental developments associated with modernist narrative, especially with the stream of consciousness technique, were and still are often commended primarily for their *efficiency*: these techniques are valued for their ability to compress meaning or significance into ever slighter and thus more polished utterances.

The paradigms provided by reproductive mnemonic technologies, especially the gramophone, complicate things further, providing a compelling model for the ways in which meaning could become reified as sensory event. With the advent of such technologies, a sound could be reduced, without loss of clarity, to a groove on a record, to an electrical impulse and, eventually, to a collection of 1s and 0s in any

¹⁵ Jennifer Karns Alexander, *The Mantra of Efficiency: from Waterwheel to Social Control* (Baltimore: Johns Hopkins University Press, 2008), p. 3.

abstract medium. The tendency towards an aesthetics of reduction in the arts was accompanied by theoretical approaches to information that formalised the rules of compression and transmission in the mid-twentieth century, reducing the mind, as we saw in the previous chapter, to a set of reflexive neuronal responses. According to Katherine Hayles, during the late '40s and early '50s, mainly through the work of Claude Shannon, 'information' became 'a more fundamental entity in the world than either matter or energy', coming to 'denote [...] a rigorously defined quantity that [could] be measured with scientific instruments and expressed by mathematical equations.'¹⁶ Friedrich Kittler argues that the 'discourse networks' of the late nineteenth and early twentieth centuries made of the body a machine for the transfer of information; by the mid twentieth century, information theory had formalised the rules by which such a body could operate.

In the last chapter we saw how the discovery of the neuron prompted a fundamental reappraisal of the sites and locations of 'consciousness' as a reified, and potentially material, cognitive phenomenon, and examined how this reappraisal influenced contemporary literature. In this chapter I wish to extend the discussion to consider more broadly the ways in which narratives of reduction asserted themselves in the period, both ideologically, through debates over the possibility of an inter-theoretic reduction of brain science to psychology, and aesthetically, within modernism's commitment to an efficiency of description at the level of the sentence. Further, I will suggest that these narratives of reduction pulled against each other. As I have suggested, modernism's various aesthetic ideologies were often motivated by a desire to simplify; to condense or distil utterances, seeking ever more efficient means of articulation, leaving no word wasted. This impulse was accompanied – perhaps

¹⁶ N. Katherine Hayles, "'Information or Noise?'" Economy of Explanation in Barthes's *S/Z* and Shannon's information Theory' in *One Culture: Essays in Science and Literature*, ed George Levine (Madison: University of Wisconsin Press, 1987), p. 120.

even caused by – movements within analytical philosophy which sought to find logical structures for such narratives of reduction, movements which were themselves often vehemently attacked by literary critics. Thus on the one hand modernist discourse suggested that reducing the world to representation was inherently impoverishing, whilst on the other hand many of the most polemical modernists endorsed an aesthetics of reduction that sought to make literary language functionally equivalent to the formula or the equation. The second half of this chapter will analyse these developments in relation to the work of Samuel Beckett, who, beguiled by the aesthetic possibilities of the new transmission technologies of radio, employed the categories of ‘information’ and ‘noise’ as significant criteria in what might be termed the ‘economies of transmission’ of the period.

In ‘The Ideology of Modernism’ George Lukács argued that ‘modernism leads not only to the destruction of traditional literary forms; it leads to the destruction of literature as such.’¹⁷ According to Lukács, classical realism’s status as a safe (and somewhat staid) harbour of literary artifice was directly challenged by modernism’s assaults on its formal structures. He viewed stream-of-consciousness narration, in particular, not as the articulation of some essential state of the mind in the world, but as the ‘reduction of reality to nightmare,’ and thus as indicative of an utter rejection of realism.¹⁸ Yet, as I argued in chapter one, contemporary critics such as David Herman, David Lodge, Monika Fludernik and Kay Young seem keen to interpret modernism’s formal experimentalism as a *continuation* of the realist project. Such readings tend to argue that, rather than rejecting realism, modernism redefined the ‘real’ so as to include mental events within its remit. According to these critics in the work of Virginia Woolf and James Joyce ideas, beliefs, perceptions and sensations are

¹⁷ Qtd. in Hayles, ‘Information’, p. 412.

¹⁸ Qtd. in Hayles, ‘Information’, p. 404.

treated as ontologically identical with marks on walls, bars of soap, ash-plants and offal. Thus modernism's radical experimentalism, argues Herman, can be read as an attempt 'to show not necessarily how things really are, but how things are experienced, what it feels like to be alive.'¹⁹

In chapter three I examined the problems of identifying modernist narrative as an expression of what Thomas Nagel calls the 'what it is likeness' of conscious experience, but Herman's formulation points to a more fundamental issue raised by mimetic theories of novels about consciousness. In *describing* a world one necessarily reduces it to representation, and thus even by the standards set by the cognitive realists, novels are inevitably doomed to leave something out. If it is accepted that the modernist narrative project was interested in conveying the object of consciousness as a distinct thing or phenomenon (and I am suggesting that it shouldn't be), rather than as a set of capacities, then is such a project doomed from the beginning? It is a question which is central to many of the critical projects of the twentieth century. As a critical strategy, reduction lies at the heart of structuralist and post-structuralist poetics, whose proponents often seem intent on re-writing their exhibits, fictional narratives, in the form of bullet-points or diagrams. We should be wary of such activities. As Seymour Chatman notes '[p]araphrase is not an innocent procedure, nor are its principles well understood'.²⁰

And yet, as I have suggested, many modernist authors and artists explicitly endorsed the notion of reducibility, building it into the very fabric of their work.

'Modernism is famous for its stripped-down, streamlined look', asserts Daniel

¹⁹ David Herman, 'Re-minding Modernism', *The Emergence of Mind: Representations of Consciousness in Narrative Discourse in English*, ed. David Herman (Lincoln and London: University of Nebraska Press, 2011), p. 250.

²⁰ Seymour Chatman, *Story and Discourse: Narrative Structure in Fiction and Film* (Ithaca: Cornell University Press, 1980), p. 92.

Albright in *Quantum Poetics*, and this ‘stripped down look’, he argues, was itself the product of a poetics of minimalism which owed much to the narratives of science:

From the very head of Mme. Cézanne to the geodesic dome, from the naked textures of Satie’s *Gymnopédies* to the fleshless limbs of Giacometti, Modernist art – or one aspect of it – alarms us through sheer absence of elaboration.²¹

Like modernist art, much modernist literature was described by its most polemical champions as committed to a minimalist, or minimalising, aesthetic. By stripping away the extraneous and inessential, the stuffy object-filled world of Victoriana could be replaced, it was felt, by sleek new images of modern efficiency. Virginia Woolf’s attack on the ‘materialists’ Wells, Bennett and Galsworthy in ‘Mr Bennett and Mrs Brown’, for instance, was partly based on the accusation that these authors tried to cram too much *material* into their novels, rather than seek the particular and telling phrase that would evoke character in an instant. In describing Mrs Brown, as Woolf argued in her essay ‘Character in Fiction’, Arnold Bennett:

would keep his eyes in the carriage. He, indeed, would observe every detail with immense care. He would notice the advertisements; the pictures of Swanage and Portsmouth; the way in which the cushion bulged between the buttons; how Mrs. Brown wore a brooch which had cost three-and-ten at Whitworth’s bazaar; and had mended both gloves – indeed the thumb of the left-hand glove had been replaced. And he would observe, at length, how this was the non-stop train from Windsor which calls at Richmond for the convenience of middle-class residents, who can afford to go to the theatre but have not reached the social rank which can afford motor-cars, though it is true, there are occasions (he would tell us what), when they hire them from a company (he would tell us which). And so he would gradually sidle sedately towards Mrs. Brown, and would remark how she had been left a little copyhold, not freehold, property at Datchet, which, however, was mortgaged

²¹ Albright, *Quantum Poetics: Yeats, Pound, Eliot and the Science of Modernism* (Cambridge: Cambridge University Press, 1997), p. 111.

to Mr. Bungay the solicitor [...] One line of insight would have done more than all those lines of description.²²

After this skilful parody of Bennett's obsessive detailing of matter, with every social and environmental property being recorded and catalogued, Woolf moves on to outline her conception of how character *should* be evoked in fiction: through the use of a single striking phrase or word, through the use of '[o]ne line of insight'. Similarly in *Jacob's Room*, after offering a limited account of Jacob's physiognomy, Woolf retreats from this formulaic and fossilizing habit of describing physical characteristics as a means of evoking character: '[t]hen his mouth—but surely, of all futile occupations this of cataloguing features is the worst. One word is sufficient. But if one cannot find it?',²³ Woolf's desire for the 'one word' capable of truly conveying character in place of endless plodding materialist description is shared by Bernard in *The Waves*, when he calls for 'some little language such as lovers use, broken words, inarticulate words, like the shuffling of feet on the pavement' that would allow him to 'record impressions with words of one syllable':²⁴

I need a little language such as lovers use, words of one syllable such as children speak when they come into the room and find their mother sewing and pick up some scrap of bright wool, a feather, or a shred of chintz. I need a howl; a cry.²⁵

All of which is not to say that Woolf's radical narrative minimalism was achievable, or even significantly different, ultimately, from the methods of the 'materialists' whom she attacked. As Anne Fernihough has argued, rather than

²² Virginia Woolf, 'Character in Fiction' in *The Essays of Virginia Woolf*, 6 vols., ed Andrew McNeillie and Stuart Clarke (London: The Hogarth Press, 1988), vol. iii, p. 428.

²³ Virginia Woolf, *Jacob's Room* (San Diego: Harvest/Harcourt Brace & Company, 1978), p. 71.

²⁴ Virginia Woolf, *The Waves* (London: The Hogarth Press, 1931), p. 323.

²⁵ Woolf, *The Waves*, p. 323.

reducing the amount of ‘matter’ in her novels, Woolf can be seen to have merely replaced one kind of stuff, world-stuff, with another kind of stuff, mind-stuff:

There is a sense in which the stream-of-consciousness writer transmutes physical into psychological clutter, into superabundance of impressions and memories.²⁶

‘They have given us a house in the hope that we may be able to deduce the human beings who live there’ concluded Woolf of the Edwardian ‘materialists’ in ‘Mr Bennett and Mrs Brown’, but if the interiors of Woolf’s ‘houses’ are said to be the minds of her characters, then they are just as stuffy as those of the Edwardian novelists she attacked.²⁷ And yet her desire, to evoke rather than to harangue, to approach character obliquely, to show rather than to tell, remains essentially a desire for narrative reduction. Despite the ontological shakiness of her theoretical foundations, it is clear that Woolf (and, as we shall see, modernist aesthetics more generally), was ideologically committed to stripping away what was viewed as extraneous or inessential in the novel or poem, in order to approach some more essential notion of aesthetic truth, and to approach it obliquely.

Often this desire was framed in terms of a scientifically derived concept of efficiency, manifested as a threat to the established formal structures of literature. In order to convey the essentials of literary meaning – the essence of the Vortex, the Image or of literary ‘character’ itself – the modernist writer aimed to get rid of all that was deemed *unnecessary* in literature. Thus the Futurist, as described by F. T. Marinetti in his essay entitled ‘Destruction of Syntax – Radio Imagination – Words-

²⁶ Anne Fernihough, ‘Consciousness as a Stream’ in *The Cambridge Companion to the Modernist Novel*, ed. Morag Shiach (Cambridge: Cambridge University Press, 2007), p. 71.

²⁷ Woolf, *Essays*, vol. iii, p. 432.

in-freedom', was essentially engaged in a poetics of reduction. The Futurist poet, like the traumatised witness to a horrific event, should:

begin by brutally destroying the syntax of his speech. He wastes not time in constructing periodic sentences. He could care less about punctuation or finding the right adjective. He disdains subtleties and shadings, and in haste he will assault your nerves with visual, auditory, olfactory sensations, just as their insistent pressure in him demands [...] [T]hus he will render the analogical ground of life, telegraphically, which is to say with the same economical rapidity that the telegraph imposes on war correspondents and journalists for their synoptic accounts.²⁸

This is not to say that the 'words-in-freedom' poet should write in the *style* of the journalist or telegraph-operator, for this would amount to mere accumulation of cliché. Marinetti went on to stress that 'at all costs we must avoid rhetoric and commonplaces expressed telegraphically.'²⁹ Instead Marinetti was proposing that the Futurist poet, abjuring the false 'freedoms' of free verse, should instead write a poetry which in some sense embodied the ideals of compression structurally; formally.

The symbolist project was similarly concerned to isolate the basic elements of poetic composition and foreground them within the poem. In *Axel's Castle*, Edmund Wilson's early study of symbolism and its influences on modernism, he defines symbolism as a struggle against the insufficiency of descriptive language to stimulate the senses directly, without the intervention of the intellect:

Every feeling or sensation we have, every moment of consciousness, is different from every other; and it is, in consequence, impossible to render our sensations as we actually experience them through the conventional and universal language of ordinary literature. [...] [I]t is the poet's task to find, to invent, the special language which will alone be capable of expressing his personality and feelings. Such a language must make use of symbols: what is

²⁸ F. T. Marinetti, 'Destruction of Syntax – Radio Imagination – Words-in-freedom' in *Futurism: An Anthology*, ed. Lawrence Rainey, Christine Poggi and Laura Wittman (New Haven; London: Yale University Press, 2009), p. 145.

²⁹ Marinetti, 'Destruction of Syntax', p. 146.

so special, so fleeting and so vague cannot be conveyed by direct statement or description, but only by a succession of words, of images, which will serve to suggest it to the reader.³⁰

In his hugely influential *The Symbolist Movement in Literature*, Arthur Symons had characterised the movement in similar terms. According to Symons, symbolism emerged as a reaction against ‘the age of Science, the age of material things; and words, with that facile elasticity which there is in them, did miracles in the exact representation of everything that visibly existed, exactly as it existed.’³¹

From the mid to late nineteenth century, therefore, faith in the ‘facile elasticity’ of language had been shaken, and symbolism, as Symons continued, constituted ‘an attempt to [...] evade the old bondage of rhetoric, the old bondage of exteriority.’³² An anxiety over the ‘bondage of exteriority’ motivated many of the authors and poets who would contribute to modernism in Britain also. Yeats’s poetic project, as summarised in his essay on ‘Symbolist Poetry’, was described in precisely these terms, applying a wistful desire for synaesthetic experience to the stuff of language:

All sounds, all colours, all forms, either because of their preordained energies or because of long association, evoke indefinable and yet precise emotions, or, as I prefer to think, call down among us certain disembodied powers, whose footsteps over our hearts we call emotions; and when sound, and colour, and form are in a musical relation, a beautiful relation to one another, they become, as it were, one sound, one colour, one form, and evoke an emotion that is made out of their distinct evocations and yet is one emotion.³³

³⁰ Edmond Wilson, *Axel’s Castle: A Study in the Imaginative Literature of 1870-1930* (Harmondsworth: Penguin, 1993), p. 2.

³¹ Arthur Symons, *The Symbolist Movement in Literature* (London: Constable, 1908), p. 6.

³² Symons, *The Symbolist Movement in Literature*, p. 6.

³³ W. B. Yeats, ‘Symbolist Poetry’ in *The Yeats Reader*, ed. Richard J Finneran (Basingstoke: Palgrave Macmillan, 2002), p. 377.

With these and other rubrics symbolism positioned itself as a formal engagement with the limits of language, with the ways in which discourse could be ruptured so as to describe the outline of fundamentally un-translatable, and therefore irreducible, mental experience. Unlike allegory, which records relations that could be described in an indeterminate, if not infinite, number of ways, the symbol was thought by Yeats to be complete within itself and therefore not to require interpretation – its meaning was implicit in its form. '[S]ymbolism said things which could not be said so perfectly in any other way' Yeats wrote in 'Symbolism in Painting', 'and needed but a right instinct for its understanding; while allegory said things which could be said as well, or better in another way, and needed a right knowledge for its understanding.'³⁴ For Ezra Pound the 'Image', like the symbol, was complete in itself and automatically decoded its own meanings without recourse to other knowledge. Literary modernism's often pronounced reliance on the paratextual, its obsession with schemata, commentaries and systems of interpretation (one thinks of T. S. Eliot's notes to 'The Waste Land', and the Gilbert and Linati schema for Joyce's *Ulysses*), was counterpointed by this self-sufficient poetics.

Symbolist and Imagist poetics were therefore fundamentally concerned, as Daniel Albright summarises, to identify the elemental, and irreducible, 'poememes' of literary expression. Such projects certainly reinvigorated poetry, allowing it to claim autonomy (and immunity) from paraphrase or narrative, from summary or exposition. 'The poet who insists that an anchor is just an anchor', Albright writes, 'not a code-word for hope, can plausibly avoid the charge that a poem is merely a way of uttering darkly some truth that could just as easily have been uttered clearly.'³⁵ Here the poem is defined as precisely that which *cannot* be written any other way. The symbol

³⁴ W. B. Yeats, *Essays and Introductions* (London: Macmillan, 1961), p 146.

³⁵ Albright, *Quantum*, p. 129.

offered a truth greater than those provided by metaphorical language. ‘We are developing a poetry of statement as against the old metaphor’ Yeats wrote, ‘[t]he poetry of to-morrow will be finely articulated fact.’³⁶ If metaphors were synthetic, dependant for meaning on their relationship to the world of things, then the Symbol or Image was taken to be analytic: self-contained, true by virtue of and in reference only to itself.

The impoverishments of such conceptual reductions were, however, immediately obvious. As Albright summarises, ‘Modernist poetry tried hard to see what could be dispensed with’, a process that quickly led to an anxiety over the end-point of such reductive projects.³⁷ ‘If figures of speech are rubbed out of poetry, will there be anything left?’ he asks:

The possibility arises that the Modernist poem will be reduced to something simple, unfigured, terse, direct and flattened, such as

DO NOT LEAN OUT OF THE WINDOW

– or, worse yet, that the poem will simply become a hole in the paper from which the tropes have been violently erased.³⁸

Who decides what is extraneous to a poem, the poet or the reader? And even apparently irrelevant details will inevitably mean *something*, to someone, at some point. More important than any of the poems themselves, therefore, are the theoretical justifications for them. Albright is surely right to interpret the reductive impulses of modernist poetry as an example of poets applying the metaphors of science (often ill-digested and misunderstood) to the writing of poetry. And yet he ignores the fact that, during the same period, science was undergoing its own eruptions and self-doubts

³⁶ W. B. Yeats, *W. B. Yeats: Interviews and Recollections*, 2 vols., ed. E. H. Mikhail (London: Macmillan, 1977), vol. ii, p. 200.

³⁷ Albright, *Quantum*, p. 114.

³⁸ Albright, *Quantum*, p. 115.

concerning the reducibility of world to representation, especially in the case, as we have seen, of the reduction of mind to language.

Neutrality of description – discourse stripped of all rhetorical flourishes – appeals to an ideal state of objectivity, seducing us with its claims to authority. As Gillian Beer has argued, it is the rhetoric of scientific discourse that most fully embraces the ideals of neutrality in description. ‘[T]he apparent neutrality of description’ Beer writes in ‘Problems of Description in the Language of Discovery’, ‘is the source of much of its authority; it is openly informative, but it is also more covertly predicative.’³⁹ As Michael Whitworth has argued in *Einstein’s Wake*, the notion that science’s power was descriptive rather than explanatory was a popular one in the early twentieth century. As we have seen, Ernst Mach’s explicitly descriptionist scientific project was founded on the notion that scientific discourse’s value lay in its ability to provide ever more efficient pictures of a world in flux. Mach introduced the notion of science as ‘the economy of thought’,⁴⁰ and, as Whitworth summarises: ‘the Machian school of science rejected the idea that science *explained* the universe, preferring instead the more modest claim that it provided economic descriptions.’⁴¹ Thus the descriptionist methodology was mechanistic, having much in common with the Helmholtzian quest for a science founded on the ‘elemental’ qualities of perception, and sharing with the scientific narrative more generally a faith in an economics of efficiency. As Whitworth summarises:

Underlying [the descriptionist project] is the thermodynamic and Darwinistic notion that any animal has a limited quantity of energy available to it, and that any action, including thought, causes the expenditure of this energy. The

³⁹ Gillian Beer, ‘Problems of Description in the Language of Discovery’ in *One Culture*, p. 46.

⁴⁰ Ernst Mach, ‘Ueber die oekonomische Natur der physikalischen Forschung’, *Almanach der Wiener Akademie* (1882), translated as ‘The Economical Nature of Physical Enquiry’ in *Popular Scientific Lectures*, tr. Thomas J. McCormack (Chicago: Open Court, 1898), pp. 186-213.

⁴¹ Whitworth, *Einstein’s Wake*, p. 86.

human mind cannot store all the sense impressions it receives, and so summarizes these impressions onto the generalizations of language.⁴²

The better the system of compression employed – the more efficient the language of description – the more value is placed on that system. That, I would contend, is the central claim of these seemingly disparate narratives of reduction.

In *The Grammar of Science*, for instance, Karl Pearson outlined a model of science which sought to replace our folk epistemologies, our partial intuitions of causation, with the more efficient languages of science and maths, suggesting that such laws could replace ‘a wide range of relationships between isolated phenomena’ with a condensed language of logic.⁴³ ‘For the descriptionist’, Whitworth continues, ‘there is no content, only surfaces: the surfaces of objects that are available to the senses, or, taking the theory to its logical extreme, simply the surface formed by nerve endings on the retina and the skin.’⁴⁴ In fiction, it was the reader whose sweat was thought to be spared by the new efficiencies of modernist reduction. Melvin Friedman’s assessment of the achievements of the innovations associated with modernist fiction is typical:

The novel of narration, attempting communication by means of conventional syntax, is troublesome and exhaustive; the stream of consciousness novel, on the contrary, carries on uninterruptedly without difficulty, with reminiscences and anticipations.⁴⁵

And yet, despite all this, the descriptionist project, and the reductive narratives of literary modernism, largely *failed* to provide the unified language of science and sensation its strongest proponents felt it inevitably would. Friedman’s assertion that

⁴² Whitworth, *Einstein’s Wake*, p. 85.

⁴³ Pearson, *Grammar*, p. 37-38.

⁴⁴ Whitworth, *Einstein’s Wake*, p. 93.

⁴⁵ Melvin J. Friedman, *Stream of Consciousness: a study in Literary Method* (New Haven: Yale University Press, 1955), p. 4.

modernist fiction can be read ‘uninterruptedly without difficulty’ rings particularly false in this regard: the fruits of high modernism, despite claims to the contrary, are not any more easily eidetic, immediate or straightforward than more conventional forms of literature. Indeed they are characterised by *difficulty*.⁴⁶

As we saw in the previous chapter, the notion of ‘emergence’ as a property of mind gained ground almost in parallel with those epistemological projects which sought to provide a common descriptive language of mind-brain relations. The kind of dualism described by the ‘dual aspect theory’ of consciousness, as we have seen, may not have committed the mortal metaphysical sin of substance dualism, but it still insisted on the essential irreducibility of certain mental states to symbolic language. Thus the descriptionist project led directly to a dualism based on levels of discourse, on registers, rather than on a belief in the existence of any ill-defined and non-physical, or pseudo-physical, substance. As Gillian Beer argues, this notion of a plurality of levels of discourse is essential to the very concept of ‘description’ itself:

description works at an agreed *upper* level of specification, and ignores (and is often ignorant of) shared and unmarked assumptions. When we describe the taken-for-granted we change its status: ‘an old yellow car *on wheels*’; the last phrase is either redundant or crucial.⁴⁷

Having the right background knowledge to interpret correctly, being part of the community of readers to which a piece of writing is addressed, are essential to the reading process. As Katherine Hayles summarises, Beer argues ‘that description, though it poses as a neutral and thus authoritative mode of discourse, has embedded within it latent significances that scientific discourse tries to control by restricting the presumed community of readers, and which literary discourse tries to liberate by

⁴⁶ For a stimulating account of the uses of such difficulty see George Steiner, ‘On Difficulty’ in *On Difficulty and Other Essays*, (Oxford: Oxford University Press, 1978).

⁴⁷ Beer, ‘Description’, p. 45.

moving between different descriptive levels.’⁴⁸ Beer sees literary language as a type of language use which can address readers on multiple levels at once. Literature, she states, ‘moves, often openly, and with great flexibility from level to level, achieving much of its intensity by means of allusion and connotation across levels.’⁴⁹ Problems arise only when we earnestly apply the discourses associated with one level of knowledge to those of another. As Steven Rose comments, it is simply incoherent, and scientifically dangerous, to apply scientific language across different levels:

Conventional scientific languages are quite successful when they are confined to descriptions and theories entirely within levels. It is relatively easy to describe the properties of atoms in the language of physics, of molecules in the language of chemistry, of cells in the language of biology. What is not so easy is to provide the translation rules for moving from one language to another. This is because as one moves up a level the properties of each larger whole are given not merely by the units of which it is composed but of the organising relations between them [...] their organising relationships mean that properties of matter relevant at one level are just inapplicable at other levels. Genes cannot be selfish or angry or spiteful or homosexual, as these are attributes of wholes much more complex than genes: human organisms.⁵⁰

With this in mind, does it make any sense to ask, as I did in the previous chapter, whether nerves are capable of ‘feeling’ anything at all? Feeling would seem to be a property associated with a complex interrelated system of nerves, persons, and, more generally, society and culture at large. It is simply nonsensical to attempt to translate concepts between these levels. And yet, thanks to the localizing project of neuromodernism, these kinds of reduction seem to be the only options open to scientist and neuroaesthetician alike.

Where do the origins of this confusion lie? In *The Logical Structure of the World*, written in the *annus mirabilis* of literary modernism, 1922, Rudolph Carnap

⁴⁸ Hayles, ‘Information’, p. 139.

⁴⁹ Beer, ‘Description’, p. 49.

⁵⁰ Steven Rose, *Not in Our Genes: Biology, Ideology and Human Nature* (Harmondsworth: Penguin, 1984), p. 278.

announced confidently that ‘it is in principle possible to reduce all concepts to the immediately given.’⁵¹ ‘The main problem’ that logical positivism sought to overcome, he continued, ‘concerns the possibility of the rational reconstruction of the concepts of all fields of knowledge on the basis of concepts that refer to the immediately given.’⁵² This was a more formal instantiation of the Helmholtzian and Machian projects, and it was also more comprehensive; more audacious. Carnap’s project sought to create a system that would place Mach’s mental ‘elements’ in relation to one another by deploying the formal rules of logic:

I should now consider for use as basic elements, not elementary experiences [...] but something similar to Mach’s elements, e.g., concrete sense data, as, for example, ‘a red of a certain type at a certain visual field at a certain place at a certain time.’ I would then choose as basic concepts some of the relations between such elements, for example ‘x is earlier than y’, the relation of spatial proximity in the visual field and in other sensory fields, and the relation of qualitative similarity, e.g., color similarity.⁵³

W. V. O. Quine’s influential 1951 paper ‘Two Dogmas of Empiricism’ characterised Carnap’s project as one of ‘radical reductionism’, and in doing so attacked the central premises of logical positivism. The first ‘dogma’ Quine attacked was the distinction the Carnap made between analytic and synthetic statements. The second dogma was that of ‘reductionism’ itself, defined by Quine as ‘the belief that each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience.’⁵⁴ Radical reductionism, Quine felt, held that:

⁵¹ Rudolph Carnap, *The Logical Structure of the World: Pseudoproblems in Philosophy*, tr. Rolf George (London: Routledge & Kegan Paul, 1967), p. vi.

⁵² Carnap, *Logical*, p. v.

⁵³ Carnap, *Logical*, p. vii.

⁵⁴ Willard Van Orman Quine, *From a Logical Point of View: 9 Logico-philosophical Essays* (Cambridge, Mass.: Harvard University Press, 1953), p. 20.

Every meaningful statement is [...] translatable into a statement (true or false) about immediate experience. Radical reductionism, in one form or another, well antedates the verification theory of meaning explicitly so called. [...] Carnap was the first empiricist who, not content with asserting the reducibility of science to terms of immediate experience, took serious steps toward carrying out the reduction.⁵⁵

‘Radical reductionism’, Quine concluded, ‘set itself the task of specifying a sense-datum language and showing how to translate the rest of significant discourse, statement by statement, into it.’⁵⁶ In *The Logical Structure of the World*, Carnap had attempted to map sensory qualities onto mathematical principles. And yet, Quine continued:

Carnap did not seem to recognize [...] that his treatment of physical objects fell short of reduction not merely through sketchiness, but in principle. Statements of the form ‘Quality *q* is at point-instant *x*; *y*; *z*; *t*’ were, according to his canons, to be apportioned truth values in such a way as to maximize and minimize certain over-all features, and with growth of experience the truth values were to be progressively revised in the same spirit.⁵⁷

Just as William James had argued that ‘no one ever had a sensation on its own’, and the phenomenological tradition rejected the possibility of experiencing a ‘sensation’ in isolation, so Quine argued that ‘our statements about the external world face the tribunal of sense experience not individually but only as a corporate body.’⁵⁸ The localizing project was doomed to fail when faced with the challenge of mapping the body as a cohesive whole.

How do these issues manifest themselves not in poetry, with its intimate and local concerns, or in science, which seeks general structural rules for such interpretations, but in the novel, a form which, I have suggested elsewhere, is

⁵⁵ Quine, *From a Logical Point of View*, p. 38.

⁵⁶ Quine, *From a Logical Point of View*, p. 39.

⁵⁷ Quine, *From a Logical Point of View*, p. 40.

⁵⁸ Quine, *From a Logical Point of View*, p. 41.

particularly concerned both to ask epistemological questions and to relate these questions to more general conceptual schemata? In the next part of this chapter I will consider the ways in which a range of modernist novelists engaged with the question of ‘radical reduction’, principally in their appropriation of metaphors of notation and reproduction derived from music.

III. Qualia as Emergent Properties

The opening chapter of Robert Musil’s *The Man Without Qualities* offers a consummation and synopsis of many of the oppositional dualisms I have examined above. In it Musil describes the weather in Vienna with minute attention to detail, using the specialised language of meteorology and astronomy:

the isotherms and isotheres were functioning as they should. The air temperature was appropriate relative to the annual mean temperature and to the aperiodic monthly fluctuations of the temperature. The rising and setting of the sun, the moon, the phases of Venus, of the rings of Saturn, and many other significant phenomena were all in accordance with the forecasts in the astronomical yearbooks. [...] In a word that characterizes the facts fairly accurately, even if it is a bit old-fashioned: It was a fine day in August 1913.⁵⁹

The playful juxtaposition of registers; the slight deflationary bathos of the final clause: all this brings to mind Beer’s distinctions between various ‘levels of description’, between what are sometimes termed our ‘folk’ intuitions about the world – indiscriminate yet largely accurate assumptions about physical or mental phenomena – and the specialized, more strictly accurate languages of maths and science which were thought to be replacing them. Throughout *The Man Without*

⁵⁹ Robert Musil, *The Man Without Qualities*, tr. Sophie Wilkins and Burton Pike (London: Picador, 1995), p. 3.

Qualities these different levels of interpretation are played off against each other.

Ulrich, the protagonist of the novel, a mathematician who finds it difficult to perceive the world except in terms of numbers, is a walking embodiment of the problem of qualia as it manifests itself within modernism. Ulrich is really a man without *qualia*. Asked what he would do if he were put in God's place he proclaims: 'I should be compelled to abolish reality', preferring instead to dwell in a silent, dark and odourless world stripped of its qualities.⁶⁰

It's tempting to read Ulrich as an embodiment of John Locke's influential distinction between the 'primary' and 'secondary' qualities of extended objects in *An Essay Concerning Human Understanding*. Locke's essay famously distinguished between primary qualities, which exist independently of our perception of an object, and which in apprehension produce 'ideas' (the term Locke used, analogous to 'mental event') similar to themselves; and secondary qualities, which need bear no relationship to those features of the object they are produced by. Thus according to Locke one can make an epistemological distinction between such properties as 'Solidity, Extension, Figure, and Mobility, [...] [which] I call *original* or *primary Qualities* of Body' and which 'are wholly inseparable from it', and secondary qualities (like smell, taste or colour), ideas of which are 'also produced, [...] by the operation of insensible particles on our senses', but which need not have any direct resemblance to the object itself.⁶¹

Ulrich's connoisseurship of primary qualities renders him a strangely passive, yet essentially analytical, presence in the novel, but it also creates some dramatic tension between our reading of his world and his own experience of it.

Counterintuitively, knowledge of mathematical primary qualities in the Lockean

⁶⁰ Musil, *Qualities*, p. 25.

⁶¹ John Locke, *An Essay Concerning Human Understanding*, ed. Peter H. Nidditch (Oxford: The Clarendon Press, 1975), pp. 135; 134 [variant footnote], 135.

mould, it is suggested, can be conveyed within language, and such knowledge is therefore necessarily more accurate and intimate than our knowledge of those sensory properties of objects which we might expect to be more familiar to us, but which are unavailable in language. I need not know the wavelength of a colour in order to see it. Conversely, Ulrich is able to deconstruct the world into its constituent parts with striking efficiency, and yet he is aware of, indeed haunted by, those ‘qualities’ of conscious states – qualia – that are inevitably left out of any such analytical description. The noise of the city, for instance, is described in *The Man Without Qualities* both as an untranslatable sensory reality, a noise ‘whose special quality cannot be captured in words’, and also as something to be *read*: the aural signature of a particular place. ‘[A] man returning after years of absence’ we are told, ‘would have been able to tell with his eyes shut that he was back in the Imperial Capital and Royal City of Vienna.’⁶²

The distinction between sensory and analytical knowledge which is, as we saw in chapters one and two, so central to discussions about the nature and existence of qualia, was largely instantiated by the logical positivists, like Carnap, who directly influenced Musil’s thought. ‘We overestimate the importance of knowing where we are’ Ulrich, or the Ulrich-narrator, writes:

because in nomadic times it was essential to recognize the tribal feeding grounds. Why are we satisfied to speak vaguely of a red rose, without specifying what shade of red, even though degrees of red can be stated precisely to the micromillimeter of a wavelength, while with something so infinitely more complicated as what city one happens to be in, we always insist on knowing it exactly?⁶³

⁶² Musil, *Qualities*, p. 3.

⁶³ Musil, *Qualities*, pp. 3-4.

Musil, who trained as a philosopher before becoming a novelist, wrote his PhD thesis on the work of Ernst Mach, and his mathematical definition of redness in terms of measurement clearly owes much to Mach's *Analysis of Sensations*.⁶⁴ In an essay on 'Mind in Experience', Musil came down firmly on the side of the mathematicians on the question of knowledge, writing:

Mathematical subjects [...] have the advantage over others in that they allow us to distinguish between real knowledge and the imitative fluency that belletristic minds can so quickly establish in any field.⁶⁵

Again the hierarchical organisation of different forms of knowledge that is so typical of modernist epistemological anxieties is stressed. Maths, Musil suggests, acquaints us with primary qualities, which are more valuable than knowledge of qualia: truer and less open to misinterpretation than the subjective 'belletristic' judgments of the senses.

In a letter written in 1921, James Joyce had described the process of writing the 'Ithaca' episode of *Ulysses* in similar terms. 'I am writing *Ithaca* in the form of a mathematical catechism', he wrote:

All events are resolved into their cosmic, physical, psychical etc. equivalents, e.g. Bloom jumping down the area, drawing water from the tap, the micturating in the garden, the cone of incense, lighted candle and statue so that the reader will know everything and know it in the baldest and coldest way, but Bloom and Stephen thereby become heavenly bodies, wanderers like the stars at which they gaze.⁶⁶

⁶⁴ Musil's thesis has been published as *On Mach's Theories*, tr. Kevin Mulligan (Washington, D. C.: The Catholic University of America Press, 1882). A good account of the influence of Mach on Musil's thought is provided by Thomas Sebastian, *The Intersection of Science and Literature in Musil's The Man Without Qualities* (Rochester, NY: Camden House, 2005).

⁶⁵ Robert Musil, *Precision and Soul: Essays and Addresses*, tr. David S. Luft and Burton Pike (Chicago; London: University of Chicago Press, 1990), p. 134.

⁶⁶ James Joyce, *Letters of James Joyce*, ed. Stuart Gilbert and Richard Ellmann (London; New York: Faber and Faber; Viking, 1957), pp. 159-60.

‘Ithaca’, like much of *The Man Without Qualities*, is an episode almost overburdened with its knowledge; dense with descriptions of physical processes, with interiors and objects and definitions and causal phenomena. It pays painstaking attention to things seen and heard, but makes little attempt to clothe these experiences in any naturalistic sensory or psychological context. As we saw in chapter three, *Ulysses* often dramatises the kinds of epistemological enquiries that contemporary popular science and philosophy was spreading abroad. But it always did so playfully. ‘What’, one of the catechisms asks, ‘reduced to their simplest reciprocal form, were Bloom’s thoughts about Stephen’s thoughts about Bloom and about Stephen’s thoughts about Bloom’s thoughts about Stephen?’⁶⁷ It’s a formulation that makes absurd the activity of laboriously pegging of utterances to characters so beloved by critics who espouse approaches to narrative founded on the notion of ‘Theory of Mind’, and also makes laughable the idea of reducing a ‘thought’ to an utterance. As we saw previously, in *Ulysses* Joyce was emphatically *not* trying to provide an interpretative scaffold for the reductive impulses of his project. More than any other episode in the novel, ‘Ithaca’ draws attention to the different levels of description that so complicate the reductionist project when applied to the writing of fiction. It leaves the question of reducibility tantalisingly unresolved.

In doing so *Ulysses* tends to deflate or undermine the ontological veracity of the narratives of naïveté which, as we have seen, were such a feature of much psychological and philosophical writing in the period. The witty thought experiment with which Arthur Eddington introduced his article on ‘Gravitation and the Principle of Relativity’ which appeared in *Nature* in 1918 began with a laboured description of

⁶⁷ Joyce, *Ulysses*, ed. Hans Walter Gabler (London: Bodley Head, 1986), 17.526-529.

him entering a room. 'There were a great many difficulties to encounter in entering the room just now', Eddington wrote:

To begin with, we had to bear the crushing load of the atmosphere amounting to 14 lb. on every square inch. At each step forwards it was necessary to tread gingerly on a piece of ground moving at the rate of twenty miles a second on its way round the sun. We were poised precariously on a globe, apparently hanging by our feet, head outwards into space. And this acrobatic feat was performed in the face of a tremendous wind of aether, blowing at I do not know how many miles a second literally through us.⁶⁸

Here a familiar process is laboriously deconstructed into its constituent parts to draw attention to the peculiar fertility of the reductive impulse. In recounting any every-day action in a scientifically reductive form one is forced to produce a seemingly endless stream of description of the minutiae of that action, so that the reduction barely registers as such.

In 'Ithaca', when Leopold Bloom enters 7 Eccles Street after urinating in the garden, his re-entry to the house is described in similarly atomised detail:

Did he remain?

With deep inspiration he returned, retraversing the garden, reentering the passage, reclosing the door. With brief suspiration he reassumed the candle, reascended the stairs, reapproached the door of the front room, hallfloor, and reentered.

What suddenly arrested his ingress?

The right temporal lobe of the hollow sphere of his cranium came into contact with a solid timber angle where, an infinitesimal but sensible fraction of a second later, a painful sensation was located in consequence of antecedent sensations transmitted and registered.⁶⁹

⁶⁸ Arthur Eddington, 'Gravitation and the Principle of Relativity', *Nature*, ci (1918), 15-17, p. 15.

⁶⁹ Joyce, *Ulysses*, 17.1268-1276.

In exhaustively cataloguing the causal phenomena of the most pedestrian activities, with *Ulysses* Joyce challenged claims to descriptive autolety, suggesting that it is only as part of a culture of knowledge more generally that any one form of descriptive discourse can be understood. In this the episode is typical of modernist strategies to challenge the hegemony of representative codes, a satire on the idea that ‘delayed decoding’ represented a sensorially immanent mode of discourse (an idea that was examined in chapter two). As Lawrence Rainey summarises:

modernism, whatever else it did, mounted a series of sustained and unprecedented interrogations of representational codes that had long been viewed not as conventions constructed by social orders, but as ‘discoveries’ of ‘real’ orders that offered transparent access to realities no less stable, no less grounded.⁷⁰

One representational code that promised to provide a model for the kind of reductions outlined above was that of musical notation. As we saw in chapter three, in many ways *Ulysses* constitutes a compendium of epistemological thought experiments, with Leopold Bloom presented as an amateur scientist of perception, speculating on the existence and experience of minds other than his own. In ‘Sirens’ Bloom subjects his hearing to rigorous analysis, pondering what he terms the ‘musemathmatics’ of music: the counterintuitive way in which simple vibrations in the air give can rise to the apparently epiphenomenal experience of sound. ‘It’s in the silence you feel you hear’ he observes, ‘[v]ibrations. Now silent air [...] Numbers it is’, he thinks:

All music when you come to think. Two multiplied by two divided by half is twice one. Vibrations: chords those are. One plus two plus six is seven. [...]

⁷⁰ Lawrence Rainey, ‘Shock Effects: Marinetti, Pathology and Italian Avant-Garde Poetics’ in *The Mind of Modernism: Medicine, Psychology, and the Cultural Arts in Europe and America, 1880-1940*, ed. Mark S. Micale (Stanford: Stanford University Press, 2004), p. 212.

Musemathmatics. And you think you're listening to the ethereal. But suppose you said it like: Martha, seven times nine minus x is thirtyfive thousand. Fall quite flat. It's on account of the sounds it is.⁷¹

Here Bloom, the arch-materialist, is beguiled by the emergent properties of sensory experience, by the emergence of qualia from matter, and by his inability to fully account for them, or to share them with other minds, in objective, mathematical terms. Translating sounds into symbols doesn't let you share their sensuous reality with others; an algebraic approach to music (one without qualities, of the kind Ulrich might indulge in) would 'fall quite flat'. The question that emerges in Bloom's attempt to 'read' sound mathematically is one which, as we have seen, haunts reductive physicalist accounts of consciousness, as well as modernist literary aesthetics more generally. How can mechanical encounters with colourless, odourless and soundless matter make us experience sensations, make us feel that we are 'listening to the ethereal'? The horrific circularity of Bloom's conclusion, that it is only 'on account of the sounds' that sounds sound the way that they sound, is one which motivated a whole host of competing epistemological theories and aesthetic strategies throughout the twentieth century, ultimately exploding the confident dictats of the reductive methodologies associated with science and leading directly, as I have shown, to the discovery (or invention) of qualia.

Nevertheless for many philosophers music *did* seem to provide a model for a kind of reduction that could be applied to the other sense modalities. Thus in *The Physical Dimensions of Consciousness* E. G. Boring wrote:

In *hearing* the qualitative dimension is probably just the linear series of tonal pitches from the lowest audible tone to the highest. The noises can be regarded as complex combinations of incompletely established tones. The problem as to

⁷¹ Joyce, *Ulysses*, 11.830-837.

what makes the tonal series repeat itself in successive octaves, in spite of changed pitch, is far from being solved. Perhaps the continuum is a spiral and thus bidimensional.⁷²

Once that knotty problem had been teased out, Boring thought, it would be relatively straightforward to ‘write’ abstract sounds just as we ‘write’ music: representing all sonorous phenomena symbolically on the page. Like Carnap, who had followed Mach and Helmholtz in attempting to map sensory experience onto mathematical space, Boring conceived of his project primarily as one of transcription, or notation. ‘Let us clarify the significance of quasi analysis through an example’ he continues, in terms very similar to Bloom’s:

As a domain of unanalyzable units, we use the so-called ‘compound’ chords. As a phenomenon, i.e., as it is given in sensation (in contrast to the viewpoint of physics and acoustics), a chord is a uniform totality which is not composed of constituents. [...] Now let us assume that we have not been given any qualitative characterization, but only a pair list of the chords which one can hear, for example, in a piano, that is to say, a pair list on the basis of tone kinship.⁷³

Music, of course, provides a model for a certain kind of reduction in that its very status as an art form is emergent and dependant on performance before it can be consumed. The musical score is a symbol of potential experience rather than an experience in itself, but it contains within it sufficient information to be translated into specific sounds when appropriate technology – a musical instrument – is employed by a skilled musician. As such the musical paradigm is often invoked in discussions over the reducibility of sensation to sense data, qualia to symbolic representation of them. Treating written language as though it engages with the senses in a similar way to musical notation was of course one of the declared aims of many modernist authors

⁷² E. G. Boring, *The Physical Dimensions of Consciousness* (New York; London: The Century Co., 1933), p. 25.

⁷³ Boring, *Physical Dimensions*, p. 114.

who followed Walter Pater in their belief that ‘[a]ll art constantly aspires to the condition of music.’⁷⁴ The popularity of onomatopoeic readings of modernist fiction lies in the promise of symbolic language as able to replace matter with information, generally according to the paradigms of neuromodernism which I explored in the preceding chapter. But in engaging with the phonic properties of language literature must inevitably undergo its own reductions, encoding sound only as speech. ‘What good are the poetic mnemonic techniques of rhyme and meter when wax rolls can store not only substance and tone but real sounds?’ asks Friedrich Kittler, for:

To record the sound sequences of speech, literature has to arrest them in a system of 26 letters, thereby categorically excluding all noise sequences. Not coincidentally, this system also contains as a subsystem the seven notes, whose diatonics – from A to G – form the basis of occidental music.⁷⁵

Mnemonic technologies such as the gramophone freed sense data from language, from what Kittler terms the ‘bottleneck of the signifier’. But in doing so they showed that sound could be stored in material form, and musical notation continued to provide a beguiling metaphor for the ways in which sensory experience could be represented in language.

IV. Musical Reductions: Notation and the Novel

‘Can one imagine anything in the arts,’ wrote the philosopher Louis-Bertrand Castel in 1763, ‘which would surpass the visible rendering of sound, which would enable the

⁷⁴ Walter Pater, *The Renaissance Studies in Art and Poetry* (Oxford: Oxford University Press, 1986), p 86.

⁷⁵ Kittler, *Discourse Networks 1800-1900*, tr. Michael Metteer and Chris Cullens (Stanford, Calif.: Stanford University Press, 1990), p. 236.

eyes to partake of all the pleasures which music gives to the ears?’⁷⁶ As I have suggested, of all the sense modalities it is hearing that most tantalisingly suggests a potential solution to the problem of qualia; a synaesthetic translation between sensory modalities. Language, as a system of notation, seems to be more attuned to the ear than to the eye: we are born equipped lungs and vocal chords, with the technologies of aural reproduction, and are therefore able to recreate sounds from written language in a way that is impossible for the other sense modalities. We cannot (generally speaking) emit smells at will. And yet, as Eric Prieto argues in *Listening In: Music and Mind in Modernist Narrative*, during the nineteenth and twentieth centuries the novel developed in such a way as to deny its relationship with the musical. Though, as Prieto points out, ‘like the musical score, the literary text determines a sequence of sounds ordered in time’, the novel has increasingly denied its status as a bearer of noise, instead preferring to consider itself a storehouse of information.⁷⁷ In contrast to poetry, which still demonstrates nostalgia for its own lyrical past, Prieto argues that:

modern narrative genres [...] have tended to identify themselves increasingly with writing and to forget or even actively repress the links that had traditionally bound narrative to music and performance. The novel provides the paradigmatic example of this tendency [...] [N]ovelists have tended to emphasize the denotive function of language over all else, subordinating the linguistic performance to the objects and events to which they refer.⁷⁸

Prieto traces the break between poetry and the novel and their relationship to music to the Renaissance, when the rediscovery of Aristotelian aesthetics prompted a reappraisal of the mimetic functions of art: denying the platonic notion of harmony, music increasingly came to be interpreted as mimetic of emotions and, ultimately, of

⁷⁶ Qtd. in Rob Young, ‘The Ultimate Magical Synaesthesia Machine’, *London Review of Books* xxxiii (2011), 25-27, p. 25.

⁷⁷ Eric Prieto, *Listening In: Music, Mind and the Modernist Narrative* (Lincoln and London: University of Nebraska Press, 2002), p. 25.

⁷⁸ Prieto, *Listening In*, p. 12.

the mind itself.⁷⁹ The rise of Opera, and the relationship between Wagnerianism and Symbolism, Prieto argues, were symptomatic of the identification of music with the mental. As he concludes ‘by the end of the nineteenth century voice was no longer a necessary element of the relationship between music and literature: a new link between the two had been found, and that link was thought.’⁸⁰ It’s little wonder, therefore, that the ‘crisis of sensation’ that critics like Sara Danius identify as being typical of various strands of modernism should manifest itself particularly strongly in the domain of the ear.⁸¹ The phonograph and telephone, as well as more sophisticated recording and broadcasting technologies, had enormous impacts on the way in which hearing was conceived of in the cultural imagination in the period.

As I have suggested, Joyce’s method in *Ulysses* can be seen to have pre-emptively challenged this aural reductive thesis. In the Linati scheme, the ‘technique’ of ‘Sirens’ is identified as ‘music’, and the frequent descriptions of sounds and music in the episode, as well as the interpolated scraps of notation, are all testament to Joyce’s taking ‘quite seriously’ suggests Jeri Johnson, ‘the problem of how to represent music in language’.⁸² With its ‘proliferation of onomatopoeic noises’, Johnson continues, Joyce asks ‘how words might perform like the tonal sounds of music’.⁸³ But the episode ultimately illustrates that such endeavours are impossible. In his second Futurist Manifesto, F. T. Marinetti argued, in terms similar to Johnson’s, that:

⁷⁹ See Prieto, *Listening In*, pp. 5-10.

⁸⁰ Prieto, *Listening In*, p. 10.

⁸¹ See Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002), p. 3.

⁸² Jeri Johnson, notes to James Joyce, *Ulysses*, ed. Jeri Johnson (Oxford, Oxford University Press, 1993), p. 875.

⁸³ Johnson, notes to *Ulysses*, p. 875.

Our growing love for matter, our will to penetrate it and know its vibrations, the physical sympathy that links us to motors, push us to the *use of onomatopoeia*. Noise, after all, is the result of solids, liquids, or gases that are in rapid motion and are either in friction with one another or crashing against each other. Onomatopoeia, which reproduces noise, is necessarily one of the most dynamic elements of poetry.⁸⁴

Does onomatopoeia really ‘reproduce’ noise however? I would suggest that, especially if read in silence, it is a literary technique that points primarily towards the ghostly *absence* of noise. Despite its best efforts to represent the non-standard pronunciation of words or the naturalistic aurality of the world of abstract noise, the technique surely functions as a signpost to silence rather than as a means of mechanically encoding sonorous experiences itself. Indeed, *Ulysses* challenges us with its very muteness, presenting mere words on the page and forcing us to ask why it is that, despite the almost encyclopaedic amount of information we are being offered to decode them, they remain silent. The difference between noise and its representation is similar in form to the difference between noise and spoken language; noise and information. If, as information theory holds, ‘noise’ as experiential reality is the antithesis of ‘information’, (that is, sensation is meaningless whereas muteness, the words on the page, are *only* meaning), then where does that leave prose, like Joyce’s, which flaunts its musicality whilst also constantly suggesting that it does not aspire to many of the conditions of music? Similarly, what happens when literary sense – meaning making – is united with noise through the mnemonic technologies of the gramophone and the wireless?

As I have suggested, music provides a compelling paradigm for the potential of language to encode sonorous reality precisely because the practice of notation provides a model of a kind of reductive reproduction denied to the other sense

⁸⁴ F. T. Marinetti, ‘The Technical Manifesto of Futurist Literature’ in *Let’s Murder the Moonshine: Selected Writings*, tr. R. W. Flint (Los Angeles: Sun and Moon Press, 1991), p. 208.

modalities. The relationship between visual language, encoded and standardised by the printing press, and spoken or heard language was a huge source of both conflict and innovation within modernism.⁸⁵ As Hugh Kenner has argued, the printing press forced authors to consider the relationship between readers and words on the page, leading to what Joyce called in *Finnegans Wake* the ‘earsighted view’ of modernism.⁸⁶ Much of the sense of *Ulysses* depends on this interplay between sound, sight and meaning – the reader, like ‘Bald deaf Pat’ in *Ulysses*, ‘seehears lipspeech’.⁸⁷ But imagining the sounding out of words isn’t the same as sounding them out. Things that can be read often can’t be heard. Visual puns litter *Ulysses*, and the tension between the orthographic and sonic properties of language was something that, in Joyce’s wake, many Irish authors became preoccupied with. Samuel Beckett and Flann O’Brien, in particular, were obsessed with the relationship between author and editor; between sound and sense, and with the difficulties presented by the pluralities of interpretation offered by the visual pun. Joyce’s art suggested ways in which dialogue could register something of the characteristics of the speaker, and *Ulysses* was profoundly concerned with these subtle and compressed suggestions of character, carried over into the very fabric of language. As Hugh Kenner suggests, these preoccupations are manifested on the textual level in *Ulysses*:

Misspelled words once served like details of musical notation, to cue a storyteller’s change of voice. And James Joyce’s most radical, for that matter his most un-Irish act, was dispensing with the story-teller. He forces us to confront printed pages, and make what we can of them.⁸⁸

⁸⁵ See Walter J. Ong, *Orality and Literacy: the Technologizing of the Word* (London: Methuen, 1982).

⁸⁶ James Joyce, *Finnegans Wake* (London: Faber & Faber, 1939), 143.9-10.

⁸⁷ Joyce, *Ulysses*, 11.1003.

⁸⁸ Hugh Kenner, *The Mechanic Muse* (New York, Oxford: Oxford University Press 1987), p. 69.

In this reading, *Ulysses* operates in that limbo between voice and idea, facilitated by the possibilities of the modern printing press. As a novel it is dense with metadata, containing an interpretative scaffolding which constantly works to thicken the novel's meaning. As Kenner summarises:

Joyce alone seems to have understood from the first what it can mean to be writing for print. Each stroke of his pen encoded instructions for a print-shop technician, a fact of which he was at all times fully aware.⁸⁹

Despite these caveats, the desire for a super-sensory literature which would allow readers to have an automatic and instinctive relationship with language, one which would bypass the intellect and engage with the senses directly, is to some degree a motivating impossibility for all post-romantic literature; perhaps for all literature. Literary critics, like Danius, who argue that *Ulysses* can be 'heard' commit what we might term the 'sensual fallacy', a variation of what Peter Barry has termed the 'enactment fallacy'. Indeed, I would suggest that such a fallacy is a general condition of much post-enlightenment literary criticism, which often seeks to argue for the possibility of a kind of pre-Lapsarian relationship between reader and word. Barry summarises the fallacy as:

the belief that in a good poem most elements of the sound patterning (especially alliteration and assonance, rhyme and rhythm) are directly related to meaning, to which, ideally, they offer implicit support by 'enacting' or 'miming' or 'embodying' the sense.⁹⁰

According to this view, 'meaning' is a product of our affective relationship with a piece of writing: affect doesn't follow interpretation, but somehow causes its own

⁸⁹ Kenner, *The Mechanic Muse*, p. 72.

⁹⁰ Peter Barry, 'The Enactment Fallacy', *Essays in Criticism*, xxx (1980), 95-104, p. 95.

interpretation. The implication of such a view is that meaning is not an emergent property born of reading and interpretation, but anticipates the reading process itself. Barry gives many examples of this impulse, and continues, in terms very similar to Daniel Albright's, that the enactment fallacy makes 'it obligatory to see formal details as intimately connected with content, since they had to enact meaning if they were not to be puritanically condemned as merely decorative.'⁹¹ While Barry tells an exclusively poetic story, tracing the impulse to consider the poem in isolation, stripped of any cultural context and thus treated as a self-sufficient expression, from I. A. Richards's pseudo-scientific practical criticism through the school of new criticism and onwards, I would contend that a similar case can be made for narrative criticism and its tendency, during the same period, to identify novels as 'enacting' human subjective consciousness. Thus what I identified in the first chapter as the 'qualial fallacy' can be seen as emerging directly from the narratives of reduction themselves, especially in relation to the apparently 'aural' properties of the literary.

V. Beckett's Radical Reductions

Nowhere was the enactment fallacy, manifested as the critical tendency to try to listen to language rather than read it, more consistently questioned than in the work of Samuel Beckett, an author who was uniquely interested in the reconfigurations of the literary brought about by technical innovations of reduction and information theory.

In *The Ideal Real* Paul Davies argues that:

Experiments in reducing language to its barest elements have been the topic of countless studies of Samuel Beckett, which are all in their own ways right in pointing out his dearth or resources at this period and a kind of despair in the

⁹¹ Barry, 'The Enactment Fallacy', p. 95.

face of a language so tired that traditional metaphor, rhetoric, and even normal grammar cannot be effective any more [...] In Beckett criticism there is a tendency to admire experimentation and reduction for their own sake; but I think it is difficult to assent to the idea that *Ping*, for example, adequately rewards the labour needed to wrinkle out its withered kernels. [...] Modernist orthodoxy notwithstanding, it is by no means a gain for a work of art that it should trace the difficulty involved in making it [...] It is, in short, justifiable to the reader to react to the short texts in much the same way Beckett reacted as maker.⁹²

And while it is true that Beckett's experimental reductions have been well-studied, the relationship between these experiments and the material conditions which gave rise to them remains obscure. In the final part of this chapter, I wish to react to Beckett's narratives of reduction by connecting them to the larger critical concerns outlined above, especially to the idea of encoding sound in language, and the consequent dualism between 'information' and 'noise' such a dialogue engenders.

Beckett's representation of the ear and of listening more generally was intimately bound up with his conception of mind and of the functions of consciousness. In *The Unnameable* he defined the subject itself as a sort of monstrous, all encompassing ear:

I am, the thing that divides the world in two, on the one side the outside, on the other the inside, that can be as thin as foil, I'm neither one side nor the other, I'm in the middle, I'm the partition, I've two surfaces and no thickness, perhaps that's what I feel, myself vibrating, I'm the tympanum, on the one hand the mind, on the other the world.⁹³

As we have seen, listening is emphasised in much modernist literature, and is often associated with the workings of consciousness. The internal monologue was itself conceived of in distinctly aural terms – as Wyndham Lewis asserted, Leopold

⁹² Paul Davies, *The Ideal Real: Beckett's Fiction and Imagination* (London: Associated University Presses, 1994), p. 131.

⁹³ Samuel Beckett, *Three Novels: Molloy, Malone Dies, The Unnameable* (New York: Grove Press, 2009), p. 386.

Bloom's internal narrative, however disjointed, is that of a man talking to himself – and within the paradigm it provided auditory influences on the human subject were not limited to the sounds that one hears. 'To represent subjectivity', writes Angela Frattarola, modernist novelists had 'not only had to think about how we listen to the world and are shaped by the sounds we hear, but they also had to get a feel for the sound of 'inner speech.'⁹⁴ Though Beckett's Molloy states that he 'liked thinking in monologue' during which his 'lips moved visibly,' for most other subjects of the internal monologue thought was rarely manifested in behaviour in such direct ways.⁹⁵ It was an internal and unheard process.

This tension, between technological reproducibility and natural voice, between sound and silence, is one that has underpinned critical accounts of the mind in Beckett's work in a number of ways. For early critics it seemed clear that he was an author who subscribed by and large to a Cartesian conception of consciousness. John Fletcher was able confidently to assert that substance dualism 'underlies the whole of Beckett's work', as is made evident by direct references to Descartes, and by the proliferation of tools and prosthetic attachments which, especially in the novels, characters depend upon as props.⁹⁶ As Fletcher comments, Molloy, Malone, Mercier, Camier, Bellaqua and the Unnamable, among others, are all:

Cartesian men and, to replace the broken-down machine that they acquired somehow at birth, they seize on such nonfleshy aids as crutches, poles (Malone), or bicycles (Mercier and Camier, Molloy), which, as often as not, also abandon them. But these mishaps never prevent their minds from marching on as agile as ever – which clearly reveals their Cartesianism.⁹⁷

⁹⁴ Angela Frattarola, 'Developing an Ear for the Modernist Novel: Virginia Woolf, Dorothy Richardson and James Joyce' in *Journal of Modern Literature*, xxxiii (2009), 132-153, p. 138.

⁹⁵ Samuel Beckett, *Three Novels*, p. 90.

⁹⁶ See John Fletcher, 'Samuel Beckett and the Philosophers' in *Comparative Literature*, xvii (1965), 43-56.

⁹⁷ Fletcher, 'Beckett and the Philosophers', p. 51.

Hugh Kenner too has argued for an understanding of Beckett's characters based on their Cartesian inheritance, and sees the bicycle as a recurring symbol of this ability of mind to transcend the material.⁹⁸

Certainly it is true that bodies in Beckett are frequently fickle and unreliable; decaying, dissipating in space, or disobeying the instructions of the mind whilst the voice rambles on. Malone's body, for instance, is 'what is called, unadvisedly perhaps, impotent. There is virtually nothing it can do.'⁹⁹ More explicit references to Descartes pepper Beckett's novels, and his early poem *Whoroscope* was itself a strange biography of the philosopher. At other times the Cartesian tradition is suggested more subtly within Beckett's work. Critics have described many of his plays as 'skullscapes' or 'soulsapes' and such definitions suggest a dichotomy of mind and world according to the principles of the Cartesian theatre. Similarly, the curious chapter in *Murphy* where the mind is reified as a separate entity is laced with the rhetoric of dualism:

It is most unfortunate, but the point of this story has been reached where a justification of the expression 'Murphy's mind' has to be attempted. Happily we need not concern ourselves with this apparatus as it really was – that would be an extravagance and an impertinence – but solely with what it felt and pictured itself to be. Murphy's mind is after all the gravamen of these informations.¹⁰⁰

Murphy's mind is the circuitous centre of the novel, and cannot be approached directly. But the metaphors Beckett does employ to express Murphy's mind are themselves derived from the Cartesian tradition. It (not 'he') 'pictured itself as a large

⁹⁸ See Hugh Kenner, 'The Cartesian Centaur' in *Samuel Beckett: A Critical Study* (New York: Grove Press, 1961).

⁹⁹ Beckett, *Three Novels*, p. 180.

¹⁰⁰ Samuel Beckett, *Murphy* (London: Routledge, 1938), p. 107.

hollow sphere, hermetically closed to the universe without'¹⁰¹ (hints of Leibniz's monads here) and as a being Murphy:

felt himself split in two, a body and a mind. They had intercourse apparently, otherwise he could not have known that they had anything in common. But he felt his mind to be bodytight and did not understand through what channel the intercourse was effected nor how the two experiences came to overlap.¹⁰²

The Cartesian tendency also manifests itself thematically within Beckett's work. Of all writers engaged with the modernist inheritance it is Beckett who most persistently seeks to represent the closed world of the mind in his fiction and drama. Though rooms provide compelling models for epistemological enquiry in the work of, among others, Virginia Woolf, it is in Beckett's novels that the full impact of the trope of the room as an isolating space and a model for the mind is imagined. A plethora of isolated and monadic rooms is scattered throughout Beckett's fiction: in the depressing bedsits of *Murphy* or the lunatic asylums and padded cells in the trilogy, providing further isolation for the already isolated minds of his characters. Murphy's garret, for instance, is:

windowless, like a monad, except for the shuttered judas in the door, at which a sane eye appeared, or was employed to appear, at frequent and regular intervals throughout the twenty-four hours.¹⁰³

The presence of all these rooms suggests, again and again, the Cartesian theatre as a model for consciousness. Beckett's protagonists are fundamentally concerned with analysing the sense data which they are supplied with, either from their immediate environments or from the world beyond the rooms in which they're trapped. This

¹⁰¹ Beckett, *Murphy*, p. 69.

¹⁰² Beckett, *Murphy*, p. 109.

¹⁰³ Beckett, *Murphy*, p. 181.

sense data, as befits an author so interested in the artistic potential of radio broadcasting, is more often than not made up of noise.

As I have suggested, the complicated matrix of music, silence, and technology was a fertile field of exploration for both authors and musicians of the period, as it has been for contemporary critics of modernity. Jacques Derrida in particular has suggested that both the gramophone and the telephone threatened the closely woven association between voice and presence, associating the gramophone in modernity, as Leopold Bloom does in *Ulysses*, with death and absence.¹⁰⁴ As Yoshiki Tajiri has argued, Derrida's observations regarding *Ulysses* in 'Ulysses Gramophone' could equally apply to Beckett.¹⁰⁵ By allowing us to hear disembodied voices, recording technologies capture our old or nonexistent selves, letting us hear the past in a quite literal way, and in a way which Beckett was to exploit most famously in *Krapp's Last Tape*. But the absence of sound too is explored in Beckett's work, an interest which connects him with musicians in the period. For both Schoenberg and his pupil John Cage silence, the absence of *performed* sound, was to become a feature of music explored for its own sake, and the idea of messages consisting equally of sound and silence became increasingly prevalent in avant-garde composition. Radio broadcasting also suggested that the semantic content of a sound consisted in large part of the location of the gaps between agitations in the ether. Silence is integral to meaning. Eventually, after Claude Shannon published his seminal paper 'A Mathematical Theory of Communication' in 1948, information began to be conceived of as a binary stream of 1s and 0s: interpolated presence and absence.

As a feature of narrative art, however, this kind of fictional 'noise' is generally considered a highly efficient mimetic marker, a feature which has led to some

¹⁰⁴ For a good discussion of this, see Yoshiki Tajiri, *Samuel Beckett and the Prosthetic Body: the Organs and Senses in Modernism* (Basingstoke: Palgrave Macmillan, 2007), p. 141.

¹⁰⁵ See Tajiri, *Beckett and the Prosthetic*, p. 141.

confused critical commentaries on the use of noise in Beckett's radio plays. In *Samuel Beckett and the Art of Broadcasting* Martin Esslin writes:

Through the use of acoustic perspectives the radio writer and director can clearly convey to the listener with whose ears, from which subjective viewpoint, he is witnessing the action, and indeed inside whose mind he is supposed to be.¹⁰⁶

Esslin goes on to argue that, paradoxically; 'radio is an intensely visual medium [...]. Information that reaches [us] through other senses is instantly converted into visual terms. And aural experiences, which include the immense richness of language as well as musical and natural sound, are the most effective means of triggering visual images.'¹⁰⁷ I would suggest, on the contrary, that such concrete identifications of 'sound' with 'language' misrepresent the ways in which the mimetic function of all the arts was subverted in many of the movements associated with modernism's burgeoning reductions.

Despite his 'extremely sensitive ear', for instance, Beckett's Molloy has 'no ear for music.'¹⁰⁸ An ear for music requires a semantic understanding of the relationship between what is heard and what it might mean – listening to music is something of a rational act, and the mind takes delight in unpicking and decoding harmony, rhythm and the other elements that make up melody. Though Pater's claim that 'all art aspires to the condition of music' had seemed a sufficient call to arms for the previous generation, by the mid-twentieth century music sought to free itself from the representational and predictable constraints of traditional forms of melody. Developing Schoenberg's twelve tone Serialism, which sought to render inert the

¹⁰⁶ Martin Esslin, 'Samuel Beckett and the Art of Radio' in *Mediations: Essays on Brecht, Beckett and the Media* (New York: Grove Press, 1982), p. 139.

¹⁰⁷ Esslin, 'Art of Radio', p. 142.

¹⁰⁸ Beckett, *Three Novels*, p. 122.

dominance of melody through the mathematical manipulation of the chromatic scale, musicians began to conceive of music in terms which pushed it ever further from its predictable, mimetic past towards a rationalised and abstract future. For composers like John Cage, silence, or rather the celebration of ambient sound, became a notorious end in itself.

Much of Beckett's writing, like Joyce's before it, was explicitly concerned with the tensions that could be brought forth between the way words sound and the way they look on the page. In *Murphy*, for instance, we are directly addressed as readers rather than as 'hearers' with a pun that is typical of the type of orthographic textual play that both Joyce and Flann O'Brien were also fond of:

'Why did the barmaid champagne?' he said. 'Do you give up?'
 'Yes,' said Celia.
 'Because the stout porter bitter,' said Murphy.¹⁰⁹

This joke does not amuse Celia for 'far from being adapted to her, it was not addressed to her' but, presumably (like the operatic visual pun in 'Aoleus' in *Ulysses*: 'what opera resembles a railway? The rose of castille'¹¹⁰), to us, to the readers of *Murphy*.¹¹¹ After *Murphy* Beckett abandoned altogether the use of typographic markers for speech, and in these works both reader and printer are addressed again and again as potential editors. Thus in *Watt* Beckett muses meta-textually on the status of the book *as* book, telling us that '[m]uch valuable space has been saved, in this work, that would otherwise have been lost, by avoidance of the plethoric reflexive pronoun after *say*.'¹¹² Modernist reduction asserts itself again, and an inefficient, and unnecessary, orthographic marker is removed. Yet by drawing attention to the

¹⁰⁹ Beckett, *Murphy*, p. 139.

¹¹⁰ Joyce, *Ulysses*, 7.471-472.

¹¹¹ Beckett, *Murphy*, p. 139.

¹¹² Samuel Beckett, *Watt* (London: John Calder, 1976), p. 6 [footnote].

intervention Beckett gently ironises the impulse – the ‘valuable space’ is filled with a justification of the reductive practice. Occasionally Beckett addresses both editor and compositor directly:

M.M.M. stood suddenly for Music, MUSIC, MUSIC, in brilliant, brevier and canon, or some such typographical scream, if the gentle compositor would be so friendly.¹¹³

Are these interventions to be read as notes to composition that should be deleted after their instructions are followed? If so why are they still present in the novel? Self-reflexive commentaries like these occur in the radio plays also, drawing attention to the very medium in which they’re presented, as when Maddy Rooney in *All that Fall* states ‘I do not exist. The fact is well known’, and asks ‘Am I then invisible, Miss Flitt?’¹¹⁴ She doesn’t exist, we may respond; she is invisible. That is the whole point.

The passivity of hearing, as many critics have noted, is a central predilection throughout Beckett’s work, manifesting its influence in the stark featurelessness of the landscapes ‘described’ in the early novels, which are generally dominated by the speaking voice, and in his interest in recording and broadcasting technologies in the radio plays. No modernist author engaged with the theoretical questions relating to sound and sense as provocatively as did Beckett. In both the radio plays, which, as Marjorie Perloff has noted, are fundamentally concerned with exploring the role of abstract sound as a bearer of meaning, and in his novels, mnemonic and broadcasting technologies are used as metaphors for memory, or to challenge our association of sensation with meaning.¹¹⁵

¹¹³ Beckett, *Murphy*, p. 236.

¹¹⁴ Samuel Beckett, *Collected Shorter Plays* (London: Faber & Faber, 1984), pp. 19, 22.

¹¹⁵ Marjorie Perloff, ‘The Silence that is not Silence: Acoustic Art in Samuel Beckett’s *Embers*’ in Lois Oppenheim, ed. *Samuel Beckett and the Visual Arts: Music, Visual Arts, and Non-Print Media* (New York: Garland Publishing, 1998, pp. 247-68).

As Perloff has observed, Beckett's interest in the emerging field of recorded sound may well have had an autobiographical precedent. Whilst Beckett was hiding out from occupying forces from 1942-45 'the radio transmitter' became for him '*the* crucial information conduit for Resistance groups, and the BBC, which was to commission *All That Fall* (1956) and *Embers* (1959), its main source.'¹¹⁶ Katherine Hayles has argued that war was central to the conceptual revolution of information that occurred in the mid twentieth century – with Alan Turing cracking the enigma code, and radio operators becoming as important as foot soldiers to the war effort. Information, particularly of the kind that could be conveyed over the radio, became more *real* in the period, altering the outcome of battles saving or condemning lives. From his work with the Resistance, Beckett perhaps felt somewhat similar to Alan Turing, who, in Hayles' words, 'provided dramatic evidence that information could be as important to the war effort as weapons or troops.'¹¹⁷

The radio play, itself a medium heavily implicated in the development of modernist aesthetics and ethics, became one of Beckett's most fruitful outlets.¹¹⁸ The form of the radio play was incredibly stimulating for an author who had already demonstrated a fascination often more with the ways in which meaning is transferred than with interpreting meaning itself. These plays force us to acknowledge sound's status as a bearer of meaning, and complicate the relationship between utterance and imagined 'visualisation' – between sound and sense; information and noise – which as we have seen was such a potent theoretical question for modernism more generally.

As Perloff asks:

¹¹⁶ Perloff, 'Silence', p. 247.

¹¹⁷ Hayles, 'Information', p. 122.

¹¹⁸ For an excellent account of the close links between the emergence of national broadcasting and modernism see Todd Avery's *Radio Modernism* (Hampshire: Ashgate, 2006).

what happens when, as Klaus Schoening points out in a discussion of the new acoustic art, words are combined with ‘nontextual language, nonverbal articulations, quotation, original sound [i.e., ambient sound], environmental noises, acoustic objets trouvés, musical tones, [and] electronic technology’? What do we visualize then?¹¹⁹

Perloff herself proposes an interpretive model for noise in the radio plays which stresses its status as bearer of information, as always and inevitably ‘meaning’ *something*. She concentrates on the radio itself as a means of transferring information or knowledge from one place to another, and from one consciousness to another. Her discussion focuses on *Embers*, suggesting various ways in which we may read the silences, sounds, and rhythms of that piece as both interpreted and as experiential meaning. For her the play is a subtly encoded ‘authography’, dealing with the inexpressibility of filial guilt that Beckett felt over the death of his father. Thus:

I would like to suggest that the ‘radio-activity’ of *Embers*, as of *Words and Music*, *Cascando*, and *Rough for Radio I and II* which followed in its wake, is that its sounding of disembodied voices makes it the perfect vehicle for the dance of death that is its subject.¹²⁰

But we may ask other questions of the radio plays, questions that Beckett addresses more directly in his novels and prose works. What does it mean to treat the sounds of the radio plays, once enacted, recorded, and listened to, as markers of *meaning*? What does it mean when ‘noise’ becomes ‘information’ in this way: gaining significance through the symbolic task it is asked to perform? Though the soundscapes of Beckett’s radio plays are often written about in terms of their ability to conjure up imaginary yet specific topographies, they are also frequently interpreted in terms of the mimetic function of these symbolic correspondences. Attempts to ‘read’

¹¹⁹ Perloff, ‘Silence’, p. 248.

¹²⁰ Perloff, ‘Silence’, p. 264.

the radio plays in this way often ignore some of the unique properties of aural representation, properties that were increasingly being explored by both mathematicians and musicians who were contemporaries of Beckett.

An alternative way of interpreting Beckett's soundscapes, therefore, is to conceive of them as engaged in a theoretical intervention, as commentaries on the burgeoning fields of information theory itself, and as representations of an oppositional dualism between the very categories of 'information' and 'noise'. Throughout Beckett's fiction, intelligible language is described as breaking down into meaningless sound, or as receding into silence. In *The Calmative* for instance we are told that:

I marshalled the words and opened my mouth, thinking I would hear them.
But all I heard was a kind of rattle, unintelligible even to me who knew what
was intended.¹²¹

Here the human subject is imagined as a sort of Turing machine, oblivious to his own utterances, or to their intended meaning; the black box at the centre of a closed feedback loop of the kind which, as we shall see in the final chapter, become a recurring metaphor for the mind within modernism. As Christopher Ricks has suggested, words die in Beckett's work, or come to represent death, devoid of meaning and present only as sense data to the characters who hear them.¹²² Devices or animals capable of mimicking and recording sound are therefore of particular interest to him. Whereas Beckett would eventually employ technologically mediated sound to represent and explore memory functions, in the early works parrots are a recurring image for the mechanical reproducibility of sound stripped of sense; for the idiotic

¹²¹ Samuel Beckett, *The Expelled; The Calmative; The End; With First Love* (London: Faber 2009), p. 24.

¹²² See Christopher Ricks, *Beckett's Dying Words* (Oxford: Clarendon Press, 1993).

babble of technologically reproducible sound. In *Murphy*, for instance, Celia is described as having ‘Not the slightest idea [...] of what her words mean. No more insight into their implications than a parrot into its profanities.’¹²³ She is engaged in a conversation which is doomed to failure, as well as being unable to understand her own words, she is described as having been:

spattered with words that went dead as soon as they sounded; each word obliterated, before it had time to make sense, by the word that came next; so that in the end she did not know what had been said. It was like difficult music heard for the first time.¹²⁴

Watt too, ‘spoke as one speaking to dictation, or reciting, parrot-like, a text, by long repetition become familiar. Of this impetuous murmur much fell in vain on my imperfect hearing and understanding, and much by the rushing wind was carried away, and lost forever.’¹²⁵ Elsewhere we are introduced to another parrot of which the eponymous Molloy notes: ‘I understood him better than his mistress. I don’t mean I understood him better than she understood him, I mean I understood him better than I understood her.’¹²⁶ *The Unnamable* describes the semantic challenge presented by his captors in similar terms: ‘A parrot, that’s what they’re up against, a parrot.’¹²⁷ But it is in *Malone Dies* that the most significant act of parroting takes place, as Jackson tries to teach his bird to say ‘Nihil in intellectu, etc.’ We are told that ‘[t]hese first three words the bird managed well enough, but the celebrated restriction was too much for it, all you heard was a series of squawks.’¹²⁸ Here the quotation enacts its own impossibility. The phrase Jackson is attempting to teach the parrot to regurgitate is

¹²³ Beckett, *Murphy*, p. 39.

¹²⁴ Beckett, *Murphy*, p. 40.

¹²⁵ Beckett, *Watt*, p. 154.

¹²⁶ Beckett, *Three Novels*, p. 33.

¹²⁷ Beckett, *Three Novels*, p. 329.

¹²⁸ Beckett, *Three Novels*, p. 212.

undoubtedly ‘nihil intellectu nisi prius in sensu’ (‘nothing in the intellect unless first in sense’): the guiding principle of empiricism. The squawks, meaningless in semantic terms, but sensorially present, are a significant coda to the expression. So is the ‘etc’ (itself a contraction; a reduction), for in reducing the length of the quotation it denies us knowledge of whether Jackson (and Beckett) intended to include the Leibnizian appendage ‘nisi intellectus ipse’ (‘except the intellect itself’) to the ‘celebrated restriction’, establishing an epistemological precedent which enacts its own recurrence throughout his work.

In many of Beckett’s novels, therefore, meaningful and abstract sounds, noises and information, are brought into conflict with one another. Sounds are either to be enjoyed for their own sake or to be parsed for their significance. The type of knowledge that is carried by noise or ambient sound is one fundamentally opposed to that which is contained in linguistic utterances or radio broadcasts. Watt is perhaps Beckett’s most experimental linguist, and comes to his own conclusions over the semantic content of utterances:

This further modification Watt carried through with all his usual discretion and sense of what was acceptable to the ear, and aesthetic judgement. Nevertheless to one, such as me, desirous above all of information, the change was not a little disconcerting.¹²⁹

We of course are identified with ‘me’; a reader, desirous above all of information, deriving little from the experience of the text, set painfully to puzzle out the content of sentences. Watt’s often tortuous experiments in the encoding of concepts in language, where he runs through all the possible manipulations of the parts of speech again suggest the dichotomy between sound and sense in this way:

¹²⁹ Beckett, *Watt*, p. 163.

The following is an example of Watt's manner, at this period:

Ot bro, lap rulb, krad klub. Ot murd, wol fup, wol fup. Ot niks, sorg sam, sorg sam. Ot lems, lats lems, lats lems. Ot gnut, trat stews, trat stews.
 These were sounds that at first, though we walked breast to breast, made little or no sense to me.

Nor did Watt follow me. Geb nodrap, he said, geb nodrap, nodrap. Thus I missed I suppose much I presume of great interest touching I suspect the second stage of the second or closing period of Watt's stay in Mr. Knott's house.¹³⁰

As Richard Coe and others have suggested, the extreme fragmentation of language which occurs in part three of *Watt* suggests a concern with linguistic theory, notably the disconnect between 'langue' and 'parole' that is a feature of Saussurean linguistics. Coe argues that in the sections of linguistic experimentation in *Watt* Beckett exhausted his interest in writing in English and became more and more interested in the notion of translation:

Beckett's search for a non-style reaches its climax and its logical conclusion. The 'interstices' between languages have become gigantic chasms between language-as-such and the thoughts or concepts that language traditionally is expected to convey. Thought, words, style: the three have become absolutely and irremediably separated from each other; and, because of this separation, we are left with a style *in vacuo*.¹³¹

The dying of words that occurs here certainly has much in common with the preceding shuffling of statements and parts of speech, exhaustive in its completeness, which was becoming an important cultural metaphor through the development of the logic of the computer. But it also highlights the primary meaning of the 'sense' of words. However meaningless Watt's 'utters' or 'effs' are, we can still attempt to sound them out for ourselves: they possess syntactic content even as they lack

¹³⁰ Beckett, *Watt*, p. 163.

¹³¹ R. N. Coe, 'Beckett's English' in *Samuel Beckett: Humanistic Perspectives*, ed. Morris Beja, J. E. Gontarski and Pierre Astier (Columbus, Ohio: Ohio State University Press, 1983), p. 53.

semantic meaning. Watt's demand, expressed later on, for 'semantic succour' derives from precisely this in-built human desire to name: 'he would set to trying names on things, and on himself, almost as a woman hats.'¹³²

As listeners, if not as readers, therefore, we exist in relation to the imagined topographies of Beckett's landscapes as does the Unnameable, or does Malone as he lies in bed naming the sounds he hears, like an Adam of aurality. It's a moment of Proustian mnemonic association, but is also one that suggests the difficulties of naming and categorizing sounds with language more generally:

When I stop, as just now, the noises begin again, strangely loud, those whose turn it is. So that I seem to have again the hearing of my boyhood. Then in my bed, in the dark, on stormy nights, I could tell from one another, in the outcry without, the leaves, the boughs, the groaning trunks, even the grasses and the house that sheltered me. Each tree had its own cry, just as no two whispered alike, when the air was still. I heard afar the iron gates clashing and dragging at their posts and the wind rushing between their bars. There was nothing, even the sand on the paths, that did not utter its cry.¹³³

In Malone's world everything emits a sound, and everything can be identified from the sound that it makes. But though Malone could as a child easily discriminate between the sounds he heard, as he ages the clarity of his hearing, and his ability to isolate and name the sounds he experiences, diminishes:

What I mean to say is possibly this, that the noises of the world, so various in themselves and which I used to be so clever at distinguishing from one another, had been dinning at me for so long, always the same old noises, as gradually to have merged into a single noise, so that all I heard was one vast continuous buzzing. The volume of sound perceived remained no doubt the same, I have simply lost the faculty of decomposing it.¹³⁴

¹³² Beckett, *Watt*, p. 79-80.

¹³³ Beckett, *Three Novels*, p. 200.

¹³⁴ Beckett, *Three Novels*, p. 201.

Malone has lost the ‘faculty of decomposing it’, and his inability to discriminate between the various sonic events that he *can* hear means that the world around him retreats into noise. It ceases to carry any information. This is not straight-forward deafness, but a linguistic failure, a growing inability to dress sounds in descriptive language. It’s a failure that recurs in much of Beckett’s work, which has often been read as an articulation of a sort of will-to-silence. In *Malone Dies*, as in much of the experimental music which was contemporaneous with it, sounds that could formerly be associated quite clearly with external objects (one thinks of *All That Fall* and *Embers*, aural landscapes that were evoked by the bleating of sheep or the crashing of the sea) become instead abstract noises, themselves unnameable, the white noise of what Beckett earlier calls ‘the so-called silence.’¹³⁵

In his book *Silence*, Cage had argued that:

Wherever we are, what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating. The sound of a truck at fifty miles per hour. Static between the stations. Rain. We want to capture and control these sounds, to use them not as sound effects but as musical instruments.¹³⁶

And what Cage’s notorious 4’33’’ celebrated was the sheer impossibility of absolute silence, the impossibility of *negative* sound. In asking us to attend to the ambient sound of our environment Cage created a new way of listening very much in tune with Molloy’s exhortation that:

Not one person in a hundred knows how to be silent and listen, no, nor even to conceive what such a thing means. Yet only then can you detect, beyond the fatuous clamour, the silence of which the universe is made. I desired this advantage for my son.¹³⁷

¹³⁵ Beckett, *Three Novels*, p. 200.

¹³⁶ John Cage, *Silence: Lectures and Writings* (Wesleyan University Press, 1961), p. 146.

¹³⁷ Beckett, *Three Novels*, p. 116.

In the absence of designed sound, noise performed as music or orchestrated as sonic illustration to a radio play, the sounds and rhythms of the body of the environment may manifest themselves on their own terms. Meaning is absent; qualia are all that remain. And Beckett's protagonists, so frequently isolated from the external world in rooms or garrets, are beset on all sides by the sensory stimuli of the external world. As Jacques Moran recounts in *Molloy*:

I get up, go out, and everything is changed. The blood drains from my head, the noise of things bursting, merging avoiding one another, assails me on all sides, my eyes search in vain for two things alike, each pinpoint of skin screams a different message, I drown in the spray of phenomena. It is at the mercy of these sensations, which happily I know to be illusory, that I have to live and work. It is thanks to them I find a meaning.¹³⁸

VI. Information vs. Noise

As Katherine Hayles writes in 'Information or Noise? Economy of Explanation in Barthes's *S/Z* and Shannon's Information Theory', during the mid twentieth century 'information' became 'a more fundamental entity in the world than either matter or energy'. As I have suggested, the distinction between noise – the actual or represented presence of meaningless sense-content – and information – matter that can be sensibly interpreted – goes to the heart of much of Beckett's (and modernism's) arts of reduction. In 1948 Shannon published his seminal paper 'A Mathematical Theory of Communication' in which he argued that noise is, properly considered, equivalent

¹³⁸ Beckett, *Three Novels*, p. 106.

with entropy. In Shannon's paper the notion of 'communication' is treated explicitly as an engineering problem. 'The fundamental problem of communication' he argues:

is that of reproducing at one point either exactly or approximately a message selected at another point. Frequently the messages have *meaning*; that is they refer to or are correlated according to some system with certain physical or conceptual entities. These semantic aspects of communication are irrelevant to the engineering problem.¹³⁹

Shannon's communication theory (like John Searle's 'Chinese Room' thought experiment considered in the following chapter) is concerned with *syntax* rather than with *semantics*, and 'Shannon's first move in defining information' writes Hayles, 'was to separate message from meaning':¹⁴⁰

For Shannon there is no ambiguity about what it means for a message to be 'correct'; it means that if the message before it is *encoded* is compared with the message after it is *decoded*, the two will be identical.¹⁴¹

Instead of focussing on 'meaning', Shannon treated the problem of communication as one of conveying information in as perfect a form as possible from one place to another. Considering utterances merely as strings of symbols, and with a knowledge of the relative frequency of letter-strings in the source language, Shannon proposed that such utterances could be reduced in ways that were measurable and predictable and, further, that a certain redundancy could be built into the structure of a message in order to allow for the amount of 'noise' present in the communicative system itself. In 'telegraphy, for example', Shannon wrote:

¹³⁹ Shannon, 'Mathematical Theory of Communication', Reprinted with Hayles's corrections from *The Bell System Technical Journal*, xxvii (1948), 379–423, p. 379.

¹⁴⁰ Hayles, 'Information', p. 126.

¹⁴¹ Hayles, 'Information', p. 126.

the messages to be transmitted consist of sequences of letters. These sequences, however, are not completely random. In general, they form sentences and have the statistical structure of, say, English. The letter E occurs more frequently than Q, the sequence TH more frequently than XP, etc. The existence of this structure allows one to make a saving in time (or channel capacity) by properly encoding the message sequences into signal sequences.¹⁴²

In markedly Beckettian language, Shannon went on to outline six distinct ways in which sequences approximating English could be formed stochastically, according to the predisposed properties of word or letter frequency within the English language:

To give a visual idea of how this series of processes approaches a language, typical sequences in the approximations to English have been constructed and are given below. In all cases we have assumed a 27-symbol 'alphabet,' the 26 letters and a space.

1. Zero-order approximation (symbols independent and equiprobable).

XFOML RXKHRJFFJUJ ZLPWCFWKCYJ FFJEYVKCQSGHYD
QPAAMKBZAACIBZLHJQD.

2. First-order approximation (symbols independent but with frequencies of English text).

OCRO HLI RGWR NMIELWIS EU LL NBNESEBYA TH EEI
ALHENHTTPA OOBTTVANAH BRL.

3. Second-order approximation (diagram structure as in English).

ON IE ANTSOUTINYS ARE T INCTORE ST BE S DEAMY ACHIN D
ILONASIVE TUCOOWE AT TEASONARE FUSO TIZIN ANDY TOBE
SEACE CTISBE.

4. Third-order approximation (trigram structure as in English).

IN NO IST LAT WHEY CRATICT FROURE BIRS GROCID
PONDENOME OF DEMONSTURES OF THE REPTAGIN IS
REGOACTIONA OF CRE.

¹⁴² Shannon, 'Communication', p. 384.

5. First-order word approximation. Rather than continue with tetragram, n -gram structure it is easier and better to jump at this point to word units. Here words are chosen independently but with their appropriate frequencies.

REPRESENTING AND SPEEDILY IS AN GOOD APT OR COME CAN
DIFFERENT NATURAL HERE HE THE A IN CAME THE TOOF TO
EXPERT GRAY COME TO FURNISHES THE LINE MESSAGE HAD BE
THESE.

6. Second-order word approximation. The word transition probabilities are correct but no further structure is included.

THE HEAD AND IN FRONTAL ATTACK ON AN ENGLISH WRITER
THAT THE CHARACTER OF THIS POINT IS THEREFORE ANOTHER
METHOD FOR THE LETTERS THAT THE TIME OF WHO EVER TOLD
THE PROBLEM FOR AN UNEXPECTED.¹⁴³

As Hayles summarises, Shannon's great breakthrough was to consider the signifier as divorced from its signified, and to treat language as a system of mathematical probabilities. The more novel or 'improbable' an utterance, the more information it contained:

Shannon considers the informational content of a message to be defined by the probability distribution of its elements. If we calculate the information contained in the message, 'Hello,' for example, it is a sum dependent on how probable it is that each of the constituent letters will appear. The more probable the letter, the less information it carries.¹⁴⁴

As Hayles argues, Shannon's theory provides a tempting explanation for a deconstructionist reading of what it was that literature does. In *S/Z* Roland Barthes argued that the generation of 'noise' should be the very aim of literature. So deconstruction and science were deeply opposed over their valuation of information versus noise: science, devoted to reduction and efficiency, sought to minimise noise, whereas literature, and literary criticism, sought to generate it. Or, as Barthes put it:

¹⁴³ Shannon, 'Communication', p. 386.

¹⁴⁴ Hayles, 'Information', p. 131.

In relation to an ideally pure message (as in mathematics), the division of reception constitutes a 'noise,' it makes communication obscure, fallacious, hazardous: uncertain. Yet this noise, this uncertainty are [sic] emitted by the discourse with a view toward communication: they are given to the reader so that he may feed on them...¹⁴⁵

Barthes concludes that 'literatures are in fact arts of noise,' declaring that this 'defect in communication' is 'what the reader consumes.'¹⁴⁶ Hayles goes on to provide an economic reading of the differences between deconstructive and scientific approaches to the economic value of noise:

The different economic systems within which Shannon and Barthes work are reinforced by different *conceptual* economies. Warren Weaver remarks that Shannon's theory of information is powerful because of its economy of explanation. Implicit in the comment is the assumption that the best theory is that which can explain the most diverse phenomena with the fewest principles. The tendency in science is to simplify, to reduce the many to the few – millions of chemicals to some hundred elements, for example, then a hundred elements to three atomic particles. When this basic atomic triad proliferates into hundreds of subatomic particles with the advent of high-energy physics, the scientific community of disturbed; economy has been violated.¹⁴⁷

Once a message has been decided on and written, then, says Shannon, it should be transmitted as faithfully as possible. Both literary and scientific analyses of 'communication' would surely agree on this. Barthes was applying the metaphor of noise to authorship in a way Shannon wouldn't particularly have cared about. Accuracy of reproduction was a great boon, but Barthes' noise-doctrine can be read as a product of the reproducible efficiency of modernism itself – he feared the homogenising qualities of the modern, and so called for an art based on corruption and miscommunication.

¹⁴⁵ Hayles, 'Information', p. 127.

¹⁴⁶ Qtd. Hayles, 'Information', p. 128.

¹⁴⁷ Hayles, 'Information', p. 128.

A similar conception of redundancy is, as we have seen, built into Beckett's prose. The endless lists, the painstaking detailing of the move-by-move placement of stones in pockets, or the atomistic, obsessive detailing of bodies moving through space, are all challenges to our conceptions of efficiency: to our conception of what it is *worth* describing to a reader, and, thus, to the very notion of 'reduction' itself. In some respects Beckett is a provocatively inefficient writer, wasting words with his monotonous descriptions of simple and familiar actions. As Gillian Beer writes 'Beckett gains many of his most disturbing effects by detailed recounting of reflex actions of the body usually left undescribed'.¹⁴⁸ Beckett's disturbing effects are not the same as the naïve narratives examined in chapter two, however, for the technique is not used as a way of defamiliarising the world so as to see it anew, but as a provocation.

Thus the tendency to celebrate modernist compression for its own sake leads to a distinct lack of interest in the semantic aspects of communication. Information is clearly in the eye of the beholder and 'reading' in a large, generous sense, is what gives it meaning. The information churned out by the computer, or by Beckett's protagonists, isn't really fit for human consumption, for it is not necessarily designed for human minds. 'In the discourse network of 1900', writes Friedrich Kittler:

psychophysical experiments were incorporated as so many random generators that produce discourses without sense or thought. The ordinary, purposeful use of language – so-called communication with others – is excluded. Syllabic hodgepodge and automatic writing, the language of children and the insane – none of it is meant for understanding ears or eyes; all of it takes the quickest path from experimental conditions to data storage.¹⁴⁹

¹⁴⁸ Beer, 'Description', p. 47.

¹⁴⁹ Kittler, *Discourse Networks*, p. 229.

It is perhaps better not to see the contradictions within modernism's approach to the notion of reduction as conflicted, therefore. Clearly, models of reduction provided an inspiration and caused anxiety for modernist literary aesthetics in almost equal measure. And yet the novel's ability to contain within it this cognitively dissonant set of assumptions points to its great triumph as a modernist form. On the final reading such fiction doesn't diminish or reduce that which it seeks to represent: it gestures ever outward, pointing us back toward the world as in itself it really is.

Thus Beckett's early novels, and many of his radio plays, can be read as engaging in a fruitful if open-ended dialogue with contemporary theories of meaning and sensation. His work consummates many of the tentative modernist impulses to separate the world between its primary and secondary qualities that we have explored previously. In the final chapter of this thesis I will read the novels of Percy Wyndham-Lewis alongside what David Trotter has termed modernism's 'will-to-automatism' as reacting to similar expressionist concerns, asking what happens when a literature designed not for people but for machines meets a theory of consciousness which suggests that people are nothing *more* than machines.

Chapter 6

Hollow Men and Chinese Rooms: Percy Wyndham Lewis, Externality, and the Will-to-automatism

Creatures of Fronts we are – designed to bustle
Down paths lit by our eyes, on stilts of clockwork muscle –

Percy Wyndham Lewis, ‘One-Way Song’

We are the hollow men
We are the stuffed men
Leaning together
Headpiece filled with straw. Alas!

T. S. Eliot, ‘The Hollow Men’

I. Turing Tests and Chinese Rooms

In the first half of this thesis I argued that philosophical approaches to consciousness founded on the notion of qualia create enormous problems for critical interpretations of modernist fiction orientated toward a cognitive realist paradigm. Those critics who maintain that qualia *do* exist whilst arguing that certain forms of literary discourse are able to convey those qualia to other minds commit the qualial fallacy; those who *deny* that they exist are committed to a materialist view of consciousness which makes it difficult to make any special representational claims for narrative literary fiction (or, indeed, any other form of literature). In the previous two chapters I located these arguments in their scientific and cultural contexts, arguing that the narratives of reduction that so dominated modernist aesthetics in the early twentieth century had their origins in the material conditions of modernity itself; especially in the medical and technical contexts associated with the new neurology, the material unconscious, and the aesthetics of the reflex arc. The material conditions of neuromodernism, as we

saw in the last chapter, led directly to a conception of sensation which stressed its status as ephemeral and information-bearing, rather than as grossly material, and which became in turn a fertile source of inspiration for Samuel Beckett.

In the final chapter of this thesis I will consider a more radical solution to the qualial impasse than those explored previously, one that is associated with a school of psychology that emerged alongside the 'introspectionist' disciplines of phenomenology, Jamesian pragmatism, and associative Freudianism. The various doctrines of behaviourism, which as we shall see rose to prominence alongside the artefacts of high modernism, deny qualia by providing an altogether more mechanistic view of the human subject than was espoused by the introspectionists. As we shall see, behaviourism's radical proposal to solve the problem of consciousness by denying qualia make the claims of the cognitive realists credible, yet in doing so they tend to deny those very properties of consciousness which these critics seek to locate within literature.

Though a confused and multifaceted methodology, in its most extreme form behaviourism denies the existence of qualia altogether. Proponents of logical behaviourism (of the kind associated with Carnap and the logical positivists examined in the previous chapter), argue that any mental state can be re-written as an indeterminate – but not infinite – series of logical 'if-then' statements. Methodological behaviourism, as described in the work of J. B. Watson and B. F. Skinner, suggests that the proper study of the psychologist is the behaviour of human beings as bodies in space. Introspection is considered by the methodological behaviourist to be an illegitimate psychological (as well as literary) technique. Rather, the mind should be treated as a 'black box' – an unknowable and therefore analysable

cipher. Whereof one cannot speak, the methodological behaviourist believes, thereof one must remain silent.

Yet as I have suggested, by denying that there are such things as mental states at all – denying qualia – both forms of behaviourism provide a compelling paradigm precisely *for* the kinds of literary effects that I have associated with cognitive realism. If any mental state can be re-written, without any loss, as a series of if-then statements, then the mind itself is redefined as itself constituting a *literary* object: it is reified, copied and reproduced as a spool of machine-code. Under the auspices of logical behaviourism the novel becomes an instruction manual. If all that can ever be known about a person is their outward behaviour, then the novel represents as good a record of that behaviour as any record can be. Further, on this reading style becomes irrelevant: according to the workings of the narratives of reduction, the information contained within a novel can be re-written in any number of ways without loss. The implications of behaviourism – that we are affectless beings stuck in a mechanical world of pre-determined causality; that our minds can be contained *in their entirety* within novels, artefacts composed entirely of symbolic language – are stark, yet they also pull against the psychologised claims of affective veracity made on behalf of modernism by the cognitive realists. If behaviourism is true, then the most efficient and accurate way of conveying mental states to readers would not be to write novels about them at all: it would be to transcribe them into the machine-code of logical behaviourism. Indeed, as we saw in the last chapter, this is precisely what much modernist literature often conceived of itself as doing, reducing literary character to a series of painstakingly recorded behavioural tics.

In this chapter I will show how these ideas manifest themselves in the work of Percy Wyndham Lewis, an author violently opposed to what Jessica Burstein terms

the psychologised ‘hot modernisms’ associated with the work of Virginia Woolf, Dorothy Richardson, James Joyce and Gertrude Stein, and yet an author committed, despite his protestations to the contrary, to a deeply behaviourist aesthetic which ultimately denies the very existence of qualia.¹ As we shall see, under this reading the modernist novel, like the subjects it hoped to describe, becomes reconfigured as a Turing machine, and the job of the reader becomes that of a participant in Turing’s imitation game. Lewis’s interest in the dynamic kinaesthetic of silent film in the 1920s provided one model for the exteriorising, expressionist narrative that so dominates his early novels. Yet his interest in behaviour was technical and philosophical also.

As a novelist who engaged provocatively and in a sustained fashion with contemporary philosophical debates over the nature of consciousness, Lewis was well placed to recognise the profoundly anti-humanist paradox which lies at the heart of the idea of ‘behaviourist narrative’. As I shall argue in the final section of this chapter, literary criticism that continues to invoke the notion of ‘behaviourist narrative’ often seems to misunderstand the full philosophical implications of the relationship between behaviourist psychological theories and fiction; implications that Lewis himself was all too aware of.

‘That *Behaviourism* has its effects upon popular thought’, wrote Lewis in the second issue of the *Enemy*, ‘or at least upon the fictionist, who is the middleman conveying philosophic notions to the minds of people not accessible to ideas in anything but a sensuous and immediate form, of that there is plenty of evidence.’² If Woolf had ‘consumed’ the philosophical arguments of the Cambridge analytical

¹ Jessica Burstein, *Cold Modernism: Literature, Fashion, Art* (Pennsylvania: Pennsylvania University Press, 2012), p. 22.

² Percy Wyndham Lewis, *The Enemy: A Review of Arts and Literature*, ii (1927), rpt. (Santa Rosa: Black Sparrow Press, 1994), p. 42.

tradition within her novels, and Joyce and Stein had applied what Lewis viewed as a misplaced Bergsonianism to the writing of fiction, for him the dominant mode of most post-war narrative prose was and should be, loosely defined, behaviourist. Yet, as many critics have noted, Lewis's portrayal of his characters as little more than moving lumps of matter stood at odds to his often virulent attacks on the burgeoning psychological theories of behaviourism in his non-fictional writing from the 1920s. Hugh Kenner notes that in *Time and Western Man* Lewis 'argued that the behaviourist, in reducing the person to a set of predictable gestures, was insulting the human race. In the same year [he] was producing a body of fiction on the premise that people were nothing else.'³ Paul Scott Stanfield has extended Kenner's argument, writing, of Lewis's novel *Snooty Baronet*, that 'behaviorism is for Lewis no ordinary antagonist. Like a tar-baby, it is one from which he cannot extricate himself.'⁴

For Stanfield, the contradiction in Lewis's relationship with behaviourism can be explained by accepting that Lewis believed that, whilst the tenets of behaviourism did accurately describe the minds of most people, certain individuals – artists, geniuses and dictators – were possessed of interiority that undermined the blanket application of behaviourist doctrine. In his political reading of Lewis's aesthetic Stanfield argues that it is only a few visionaries, those who avoided the 'aping' mimicry of the herd, who Lewis felt were possessed of actual interior lives: of qualia. *Hoi poloi* could be comfortably dismissed as automata, as mechanistic reactants without any consciousness to speak of, and it is these people (if, indeed, we can call them that) who are generally described in Lewis's novels in a behaviourist mode. As Stanfield notes:

³ Hugh Kenner, *Wyndham Lewis* (London: Methuen & Co., Ltd, 1954), p. 102.

⁴ Paul Scott Stanfield, "'This Implacable Doctrine': Behaviorism in Wyndham Lewis's 'Snooty Baronet'" in *Twentieth Century Literature* xlvii (2001), 241-267, p. 244.

That Lewis attacked behaviorism in his polemical works while presenting characters in his fiction as automata is [...] not really a contradiction, for he believed that almost all people were exactly as behaviorism described them. Behaviorism, however, allowed for no exceptions, and for Lewis it was precisely on the exceptions that all depended.⁵

Certainly it is true that the principal characters of his novels; the ‘idiot-mute’ Dan Boleyn of *The Apes of God*; the one-dimensional agents of *Tarr*, are largely devoid of interiority, of any explicitly written consciousness. Similarly, those ‘aping’ the views of Pierpoint (a sort of Lewis manqué) in *The Apes of God*, who ‘broadcast’ his ideas second hand, as actors might, are allowed to do so only because their source is always kept off-stage, paring his fingernails. But I would suggest that such characterisations say more about Lewis’s views of literature – an art form that can always only portray the outsides of persons – than they do about his aggressive fascistic politics.

There is undoubtedly a political element to Lewis’s views on consciousness, of course: denying interiority to people in general makes it easy to justify their inhuman treatment. But in taking this contradiction at face value Stanfield seems to me to have downplayed the philosophical complexity of Lewis’s position, reducing his sophisticated epistemological theses to play second fiddle to an ideologically informed, tyrannical and fascistic model of human consciousness. Lewis’s politics were deeply unpleasant, embarrassing, and, ultimately, damning, and this is perhaps one of the reasons his work has been so neglected by literary critics: few dare declare themselves ‘Lewisian’ these days. But I think another reason he is so often neglected is that his work challenges the neo-humanist assumptions that underpin so much contemporary narrative theory. Aesthetically, as well as politically, his work is still, as Frederic Jameson notes, shocking in its modernity: his novels are fossilised pieces of

⁵ Stanfield, ‘This Implacable Doctrine’, p. 244.

avant-garde experimentalism that have largely resisted incorporation into the modernist canon.⁶

In this chapter I will suggest, in line with the broader themes of this thesis, that the apparent contradictions in Lewis's thinking can be best understood with reference to the limits of literary fiction as a record of consciousness. Throughout his career Lewis drew attention to the fact that fictional 'character' is always and inevitably composed of nothing more than behavioural report inscribed on the page. Properly speaking, a novel can only *ever* present us with a composite of gestural and behavioural, and therefore ontologically objective, potentialities. Yet at the same time, Lewis recognised more thoroughly than perhaps any of his contemporaries that the problem of other minds manifests itself only in relation to *real* people. The narrated mind – even if that narration makes overtures to some kind of interiority – consists of nothing more than a compendium of described behaviours. A reductively materialist doctrine like behaviourism, as we saw in the previous chapter, paradoxically provides the only philosophical foundation for the claims made on behalf of the novel by many of the literary critics who endorse 'neuroaesthetic' or 'cognitive realist' critical approaches. Logical behaviourism is anathema to the humanist literary theorist, therefore, as it seems distressingly reductive, providing a singularly impoverished view of the 'human machine'. And yet it offers a theoretical justification precisely *for* the kinds of extravagant claims of phenomenological veridicality made by many of these critics on behalf of the literary monuments of high modernism.

The founding father of behaviourism, and Wyndham Lewis's great enemy, was the American psychologist J. B. Watson. Watson defined behaviourism as the thesis that:

⁶ See Frederic Jameson, *Fables of Aggression: Wyndham Lewis, the Modernist as Fascist* (Berkeley: University of California Press, 1979), p. 2.

the most fruitful starting point for psychology is the study not of our own self but of our neighbour's behavior – in other words it assumes that the student should take the view that the most interesting and helpful method is the study of what other human beings do and why they do it.⁷

The proper study of mankind, according to Watson, was Man's actions, and thus the very notion of 'consciousness' was chimerical and misleading; a shadowy proxy for the soul that should have been chased out of analyses of personhood by the advances of science. 'Behaviorism claims that consciousness is neither a definite nor a useable concept' wrote Watson; '[t]he behaviorist, who has been trained always as an experimentalist, holds [...] that belief in the existence of consciousness goes back to the ancient days of superstition and magic.'⁸ According to Watson, the only legitimate area of study for the psychologist was that of the individual as corporate behavioural organism. The student of behaviourism, 'is not confronted with definitions of "consciousness," "sensation," or of "image," "perception" and the like but with definite concrete problems which he can solve by observing the behavior of others.'⁹

Following Watson, Lewis too defined 'consciousness' as a necessary but ultimately unsatisfactory (and philosophically dubious) property, one that we seem compelled to attribute to any entities displaying complex behaviours. As he noted in *Time and Western Man*:

'Consciousness' is perhaps the best hated 'substance' of all: but there is a technical specialist reason for that. Consciousness is the most troublesome common-sense *fact* of any scientific analysis. The hardiest investigators

⁷ J. B. Watson, *Psychology from the Standpoint of a Behaviorist* (Philadelphia: Lippincott, 1919), p. xii.

⁸ J. B. Watson, *Behaviorism* (Chicago: University of Chicago Press, 1930), p. 2.

⁹ Watson, *Behaviorism*, p. 2.

approach it with trepidation, and apologize beforehand for the poor show they are likely to put up in grappling with it.¹⁰

Get rid of consciousness, however, and you are forced to radically revise what you consider the human person to consist of. '[I]n order to fit in with the only explanation of it that science is able to provide', Lewis continued, 'the mechanist, behaviourist explanation – the actual standard of human consciousness and human ambition will have to be indefinitely lowered and debased.'¹¹

As we have seen, Watson's behaviourism, which treated human beings as discrete behavioural units, understood consciousness to consist (if it existed at all) merely of a set of interlocking stimulus-responses or dispositions to behave that could be expressed in straightforward 'if-then' statements. As John Searle describes the position:

According to typical behaviorist analysis, to say that Jones believes it is going to rain just means the same as saying an indefinite number of statements such as the following: if the windows of Jones's house are open, he will close them; if the garden tools are left outside, he will put them indoors; if he goes for a walk he will carry an umbrella or wear a raincoat or both and so forth. The idea was that having a mental state was just being disposed to certain sorts of behavior and the notion of a disposition was to be analyzed in terms of hypothetical statements, statements of the form 'If p then q.'¹²

According to Searle, behaviourism thus denies what has been termed 'intentionality'; the idea that mental states consist of more than mere syntax; that the mind does more than shuffle symbols around. Intentionality, as defined by Franz Brentano in particular, suggests that an idea must be *about* something for it to be considered an idea and thus creates a problem for theories of consciousness analogous to that posed

¹⁰ Percy Wyndham Lewis, *Time and Western Man*, ed. Paul Edwards (Santa Rosa: Black Sparrow Press, 1993), p. 301.

¹¹ Lewis, *Time*, p. 302.

¹² John Searle, *Mind: A Brief Introduction* (Oxford: Oxford University Press, 2004), p. 52.

by the problem of qualia. ‘The problem of intentionality’, writes Simon Blackburn, ‘is that of understanding the relation obtaining between a mental state, or its expression, and the things it is about.’¹³ A machine can potentially be semantically and behaviourally perfect and yet be totally ignorant of the ‘aboutness’ of the symbols it shuffles. Yet under behaviourism’s watchful eye, beliefs, desires, feelings and emotions could all be reduced without loss to symbolic equations, and could therefore be studied and conveyed to other minds in their entirety. With no underlying ineffable mental states to account for – no qualia – the behaviourist was freed from the apparent conundrums of dualist metaphysics to engage directly with the mind stripped of the trappings of superstition.

Lewis’s fiction is full of representations of the metaphysical peculiarities of the behaviourist thesis. During a key scene in *Snooty Baronet* the protagonist Sir Michael Kell-Imrie, a committed behaviourist (and himself a man-machine: a war-wound means that, Freud-like, he wears a silver plate in his head, and he has a wooden leg and a generally treacherous body) looks into the window of a hatter’s shop and sees an automated advertising dummy. A crowd has gathered outside the window, leading Kell-Imrie to speculate of the automaton that:

[i]t is absurd to say these things (if you insist upon calling them *things*) have no character. Those that are made to-day are, like characters in books, often much more real than live people.¹⁴

Kell-Imrie works himself into a salvo of philosophical speculation. ‘The puppet looked like a man’ he recalls ‘[a]nd that word *looked*, that was for me

¹³ Simon Blackburn, *The Oxford Dictionary of Philosophy*, 2nd ed. (Oxford: Oxford University Press, 2005), p. 188.

¹⁴ Percy Wyndham Lewis, *Snooty Baronet* (Santa Barbara: Black Sparrow Press, 1984), p. 133.

everything.’¹⁵ Here his speculations anticipate those of Alan Turing and John Searle, for Kell-Imrie suggests that if an entity behaves well enough as though it is conscious, its interiority cannot be denied, or, perhaps, that the denial of that interiority becomes irrelevant. ‘It was impossible as one watched him not to feel that he was in some real sense *alive*’ he reports, ‘At certain moments of course the imperfections of the apparatus would betray him. But is this not the case, for the matter of that, with the best of us?’¹⁶ A similar moment occurs in *The Apes of God*, when Dan Boleyn, embarrassed by offers from car-owners to give him a lift during the general strike, looks into a shop window and is struck by the uncanny realism of the shop dummy.¹⁷

The ability to tell the difference between a being possessed *of* consciousness and a machine that behaves as though it *is* conscious is something that has come to dominate philosophical discussions over the possibilities of creating what John Searle terms ‘strong AI’: artificial intelligence that encompasses all the properties of the human mind. As such Kell-Imrie’s speculations have a bearing on the problem of qualia as manifested in behaviourist analyses and contemporary solutions to David Chalmers’ ‘hard problem’ of consciousness. As we saw in the last chapter, during the early to mid twentieth century, the mind was placed under intense scrutiny and came to have a symbiotic metaphorical relationship with technologies which threatened to better, and thus replace, its mnemonic capabilities. During the late nineteenth and early twentieth centuries people began to be conceived of as machines, and sensations as information. ‘Thought’ argues Friedrich Kittler, was ‘replaced by Boolean algebra, and consciousness by the unconscious. [...] that the symbolic is called the world of the machine undermines Man’s delusion of possessing a “quality” called

¹⁵ Lewis, *Snooty Baronet*, p. 106.

¹⁶ Lewis, *Snooty Baronet*, p. 133.

¹⁷ Lewis, *Apes of God* (Santa Barbara: Black Sparrow Press, 1981), p. 634.

“consciousness”, which identifies him is something other and better than a calculating machine.’¹⁸ By 1950 the philosopher A. J. Ayer was able confidently to claim:

The only ground I can have for asserting that an object which appears to be conscious is not really a conscious being, but only a dummy or a machine, is that it fails to satisfy one of the empirical tests by which the presence or absence of consciousness is determined.¹⁹

As I have suggested the camera (as the room) provided one compelling model for the kind of automatism that emerged directly from the internalisation of technological modes of seeing during the modernist moment. The black-box nature of the camera, doomed to wield its powers in the dark – indeed, failing to function at all if one tried to see precisely what is going on inside it – was the perfect metaphor for consciousnessless cognition. Jacob in his room; Mary in hers; Watt, Molloy and Murphy in their skullscapes: modernist fiction is full of representations of these technologically mediated Cartesian theatres. Before the mid twentieth century, however, the technologies invoked to describe these theatres were mechanical. Thus in *The Monadology* Leibniz proposed his famous ‘perceptual mill’ thought experiment, asking us to imagine walking around inside a perceptual machine constructed according to mechanical principles. What we would experience were we to do so, he suggested, would not allow us in any way to discern how the phenomenon of perception *itself* worked:

[I]t must be confessed that perception and that which depends upon it are inexplicable on mechanical grounds, that is to say, by means of figures and motions. And supposing there were a machine, so constructed as to think, feel, and have perception [...] that one might go into it as into a mill. That being so,

¹⁸ Kittler, *Discourse Networks*, tr. Michael Metteer and Chris Cullens (Stanford, Calif.: Stanford University Press, 1990), p. 17.

¹⁹ A. J. Ayer in *Language, Truth and Logic* (Harmondsworth: Penguin, 1971), p. 130.

we should, on examining its interior, find only parts which work one upon another, and never anything by which to explain a perception.²⁰

Knowledge of the interiority of such a perceptual system would, argued Leibniz, get you no closer to understanding how perception came to be: all you would be able to discern were you to enter the mill would be isolated mechanical movements. As we saw in chapters four and five, gaining knowledge of a real and functioning perceptual system – the human brain – by reducing it to a composite of atomised neurons didn't seem to advance our knowledge of how perception actually occurs at all.

Another realm of architectural interiority was provided, as we shall see, by the burgeoning field of computer science. But as John Searle has argued, updating Leibniz's argument, to identify the outward behaviour of a system as identical with the underlying principles which govern that system is to ignore the very thing that qualiaphile philosophers, and many proponents of the novel as cognitive realist form, assert. In Searle's famous thought experiment of the Chinese Room, outlined in his 1980 paper 'Minds, Brains and Programs', we are asked to imagine a human agent who speaks only English ensconced in a room and forced to perform a symbol-shuffling routine.²¹ Chinese characters are passed into the room, and the human agent must read through a list of instructions (written in English) before responding with appropriate replies. The whole system functions as a computer, but one with a conscious homunculus at its centre. Can we legitimately say, asks Searle, that in this instance either the person in the room or the system of which he is a part can 'understand' Chinese, no matter how coherent his responses seem to be? '[I]f the man in the room does not understand Chinese on the basis of implementing the appropriate

²⁰ Gottfried Wilhelm Leibniz, *The Monadology and Other Philosophical Writings*, tr. Robert Latta (London: Oxford University Press, 1898), p. 227.

²¹ John. R. Searle, 'Minds, Brains, and Programs' in *Behavioral and Brain Sciences*, iii (1980), 417-457.

program for understanding Chinese’, argues Searle, ‘then neither does any other digital computer solely on that basis because no computer, qua computer, has anything the man does not have.’²²

Searle’s thought experiment was a response to Alan M. Turing’s famous question, asked in his 1950 paper ‘Computing Machinery and Intelligence’, ‘can machines think?’ Since ‘thinking’ proved so difficult to define, Turing had reframed the question of whether machines can ‘think’, replacing it with another definition of consciousness ‘which is closely related to it and is expressed in relatively unambiguous words [...] Are there imaginable digital computers which would do well in the *imitation game*?’²³ The ‘imitation game’ was designed to test a computer’s ability to fool a human interlocutor into thinking they were conversing with another human. Three players – two human and one machine – would be asked to communicate via a keyboard. If the human judge couldn’t tell apart her human and machine interlocutors then, argued Turing, the machine should be considered conscious. With the imitation game Turing asserted that all that can ever be tested of consciousness is its behavioural properties, and in doing so consolidated the radical model of human condition that had been proposed by Watson. ‘The relationship between persons and the automata that counterfeit them has never been more suggestively explored than by Turing’, argues Hugh Kenner in *The Counterfeiters*.²⁴

Yet according to Searle, those who suggest that machines can think, as Turing did, and who hold that such thought could be tested in the way Turing suggested, commit a serious error. ‘As far as the Chinese room is concerned’ he writes, ‘I simply behave like a computer: I perform computational operations on formally specified

²² Searle, ‘Minds, Brains, and Programs’, p. 421.

²³ Alan Turing, ‘Computing Machinery and Intelligence’, *Mind*, lix (1950), 433–460.

²⁴ Hugh Kenner, *The Counterfeiters: An Historical Comedy* (Bloomington: Indiana University Press, 1968), p. 119.

elements.²⁵ Because of this, despite a proficiency in Chinese, it would make no sense to speak of such a room as ‘knowing’ Chinese, just as it would make no sense to ascribe mental states to an interlocutor during the Turing test. Even if a machine *could* fool you into thinking you were having a (literary, typed – the written status of the communication is significant) conversation with another person, such a system offers no guarantee, felt Searle, that what was being displayed amounted to what we generally term consciousness. Such a system can be conceived as functioning in a way identical to a human agent but lacking in qualia, leading to the logical possibility of the ‘philosophical zombie’: an imagined creature behaviourally identical in every way to its human equivalent (including in its neurological processes), yet devoid of any interiority whatsoever. (That such beings are conceivable is taken by some philosophers itself as sufficient evidence of the existence of qualia).²⁶

As we shall see, many of these anxieties were prefigured in Lewis’s fiction, and in his theoretical engagements with the work of Joyce and Woolf. His non-fictional writing was engaged explicitly in an epistemological project which sought to draw out the ethical implications of the qualial emptiness of modernism’s hollow men: affectless beings isolated from one another, and from the mob. His fiction dramatised these debates, exploring what a world structured around rooms, closed systems, and philosophical zombies would mean for those few in possession of consciousness who inhabited and witnessed it. In *The Childermass*, for instance, Lewis explicitly asks Turing’s question. When the two protagonists Satters and Pullman encounter one of the ‘peons’ who populate the desolate limbo of the novel they exist within directly, they can’t decide whether they’ve encountered a living mind, that of their old friend Marcus, or the mere simulacra of a person:

²⁵ Searle, ‘Minds, Brains and Programs’, p. 434.

²⁶ See especially David Chalmers, *The Character of Consciousness* (Oxford: Oxford University Press, 2010).

‘No really you must be wrong. It was Marcus right enough.’
 ‘To all appearance!’
 ‘But I know Marcus as well as I know you! If that wasn’t Marcus—
 Pullman is sneering under his hat.
 ‘That may be. Better, perhaps. But what is Marcus?’²⁷

Knowing someone’s behaviour doesn’t seem to provide a guarantee that they are consciously present when you observe that behaviour, or, indeed, that they are that ‘person’ at all. Action and gesture – all that art can capture – is not, suggests Satters, identical with personhood. Such views clearly align many of Lewis’s protagonists with a behaviourist conception of consciousness. As Kell-Imrie declares in *Snooty Baronet*: ‘I behave as a *Behaviorist* and as such I claim I should be accepted, and if there is nothing else that I can do to prove it, I will at least continue to behave as you have seen me behaving throughout these pages, and as all true behaviorists *must* behave.’²⁸ Yet behaviourism is a broad church with an often confused critical inheritance. The central question any theory of consciousness must answer, ‘is there any difference between a person and something that behaves *exactly* like a person?’ is as Lewis realised rather more complicated than it has often been interpreted as. ‘Are we very different?’ Satters goes on to ask of Marcus in *The Childermass*, ‘I believe we only think we’re so different.’²⁹

Behaviourism’s stark analysis of the human organism had severe limitations, as Watson himself acknowledged. As well as intentionality, another of the properties of human consciousness it was difficult to reconcile with his model of the mind was language. For Watson man was ‘[a]n animal, in every respect on the same footing as a rat or an antelope [...] except for what the Behaviourist terms his word-habit [...] man

²⁷ Lewis, *The Childermass: Section 1* (London: Chatto and Windus, 1928), p. 29.

²⁸ Lewis, *Snooty Baronet*, p. 309.

²⁹ Lewis, *The Childermass*, p. 31.

is *that* and no more.’³⁰ For Watson the ‘word-habit’ was what made humans unique, allowing for the very existence of behaviourism as a doctrine: the science of behaviour became recast as an almost Adamic act of naming the body. As Watson argued, with his behaviourist doctrine:

being ‘conscious’ is merely a popular or literary phrase descriptive of the act of naming our universe of objects both inside and outside, and that ‘introspecting’ is a much narrower popular phrase descriptive of the more awkward act of naming tissue changes that are taking places like movements of muscles, tendons etc.³¹

In this account the act of Jamesian introspection is redefined as a linguistic act; an act of discovering and giving voice to bodily actions, and by doing so allowing those actions to take their place in the pantheon of consciousness as conveyed through public language.

Yet the ‘word-habit’ that Watson slips into his definition of man as essentially the same as any other animal itself caused significant problems for behaviourist analyses of consciousness. For Watson, language took the form of ‘implicit’ behaviour. It was unobservable, but it nevertheless functioned to modify the dispositions to behave which were, according to the logical behaviourists, all that consciousness consisted of. ‘Word-habits make up the bulk of the *implicit* forms of behavior’, argued Watson:

Now it is admitted by all of us that words spoken or faintly articulated belong really in the realm of behavior, as do movements of the arms and legs. If implicit behavior can be shown to consist of nothing but word movements (or

³⁰ Qtd in John Holloway, ‘Machine and Puppet: A Comparative View’ in *Wyndham Lewis: A Reevaluation: New Essays*, ed. Jeffrey Meyers (London: Athlone Press, 1980), p.3.

³¹ Watson, *Behaviorism*, p. 212.

expressive movements of the word-type) the behavior of the human being as a whole is as open to objective control as the behavior of the lowest organism.³²

As Lewis argued, this account of language and thought seemed deeply unsatisfactory:

Of all the enemies of behaviour (and the behaviourist is not slow to see it), Words and Speech (next to consciousness) are the greatest. It is in the forest or undergrowth of words that the behaviourist tiger of clear-cut stimulus-response, or his 'futurist' maker, can become entangled.³³

Watson of course anticipated such criticism. '[H]ow can you explain 'thought' in behaviorist terms?' he asked rhetorically in a debate over the status of behaviorism with William McDougal '[t]o do so requires considerable time.'³⁴ And not just time. To conceive of thought in behaviourist terms forced Watson into all sorts of conceptual contortions as he tried to square the state of contemporary neuroscientific knowledge with his rather holistic thesis of cognitive physiology. For instead of defining the firing of nerve fibres as instances of 'behaviour' (the solution proposed by many contemporary type-identity theorists), and thus allowing a 'thought' to be interpreted in relation to localised brain function, Watson suggested that 'thinking is merely talking but talking with concealed musculature [...] We thus think and plan with the whole body.'³⁵ On this account 'thinking' is nothing more than the act of sub-vocalisation, and so thoughts are potentially as publically accessible as hand gestures; it's just that we are not yet very good at observing these subtle movements of throat and palate. Watson's doctrine of thought as subvocalised speech was widely mocked. '[A]ny doctrine identifying Thought with *muscular* movement', wrote I. A.

³² Qtd in Lewis, *The Art of Being Ruled*, ed. Reed Way Dasenbrock (Santa Rosa: Black Sparrow Press, 1989), p. 340.

³³ Lewis, *Time*, p. 329.

³⁴ Watson, *The Battle of Behaviorism: an Exposition and an Exposure* (London: K. Paul, Trench, Trubner & co., ltd, 1928), p. 23.

³⁵ Watson, *Battle of Behaviorism*, p. 34.

Richards in *The Philosophy of Rhetoric*, 'is a self-refutation of the observationalism that prompts it – heroic and fatal.'³⁶

Whatever the particular difficulties faced by behaviourist accounts of language, or of definitions of consciousness as merely the movements of the larynx and associated musculature, behaviourism quickly gained a foothold as a dominant methodology within the psychological sciences. And yet the deeply misanthropic tendencies of Watson's doctrine continued to trouble psychology and culture more generally. For to play the Turing game on so large a scale as this, as Hugh Kenner observed in *The Counterfeiters*, is not only to make of society at large a mass of unconscious automata; it is to mechanise the perceiving subject itself. 'Turing's question had been asked, at least in principle, long before 1950', writes Kenner:

[b]ut consider what actually happens when you elect to examine the nature of man while situating yourself outside of that nature: you yourself elect not to be human. You decide that what you know about yourself is best neglected. You are going to be an observer of man, and a recorder of facts about man, but you are not going to be a man, for fear of corrupting your observations with what you know already.³⁷

Under the auspices of behaviourism, inside the Chinese room, both observer and observed are transformed into machines engaged in a never-ending imitation game.

II. The Aesthetics of Automatism

One needn't look far to witness the effects of these doctrines on literature of the period. Near the beginning of John Rodker's *Adolphe 1920*, the narrator, Dick, walks through the crowd at a fair. A vague composite of Leopold Bloom and Septimus

³⁶ I. A. Richards, *The Philosophy of Rhetoric* (New York; London: Oxford University Press, 1936), p. 13.

³⁷ Kenner, *The Counterfeiters*, p. 124.

Smith, Dick's is a disturbed consciousness intent solely on registering the world of sensation in which he finds himself. He drifts through the crowd, passively cataloguing the smells and sights that modernity scores upon his consciousness. It's a wonderfully dense, and in some ways archetypal, evocation of the modern city as sensory *Gesamtkunstwerk*:

The street was filling on all sides in a shuffling of feet, and from the booths like a twittering of birds rose the first timid cries of morning. And a sickly sweet smell of vanilla rose, cloying all the wet air, till some more violent blast from a passing woman washed it again. The road now lay between two rows of booths, where at intervals, stoves were frying potatoes in a sweet acrid smell of oil. All that like a crystal had grown about him since he awoke, and now part of it, drifting, he moved to and fro, half seeing but aware; his mind tall standards holding milky globes, a reverberation of deliberate feet on boards, faces drifting and featureless, pale in light, a sighing of sea, black close but unseen.³⁸

Dick is both of the world and set apart from it; a component of a social whole who is able to reflect on the smells and sights he experiences only through the prism of a mineral barrier that grows 'like a crystal' around him. The world remains outside, 'close but unseen.' After some more solipsistic wondering Dick approaches one of the objects standing mutely around him at the fair, a 'man-eating one-leg' standing 'sombre, with dark square eyes staring from its breast'.³⁹ He walks up to what turns out to be a mutoscope machine and inserts a penny. It comes alive:

A warm light moistened its eyes, lit up its chest. He put his eyes on its eyes, his heart on its heart, listening deeply, anxiously; forgetting his fair, his fellows reading other hearts around him. [...] Where its heart was, a woman rose from a chair, smiled, patted her elaborate hair, unhooked a shoulder-of-mutton blouse, a petticoat or two, stood self-consciously for a minute in lace-edged draws, laced boots and black stockings, smiling a timid 1890 smile. She too in that darkness, from which for a moment he had called her. A coin

³⁸ John Rodker, *Adolphe 1920* (London: The Aquila Press, 1929), p. 135.

³⁹ Rodker, *Adolphe 1920*, p. 136.

brought her back: as though gratefully she shyly reappeared, went through all her senseless gestures, smiled and smiled. And darkness again, heavy, inevitable. That room, that sofa, filled his brain with warm shapes and comforting light, and the woman moved amicably through it.⁴⁰

Dick's desperate need to connect leads him to further neglect the world of 'fellows reading other hearts' around him, all of who are engaged in their own onanistic attempts to commune with the world of machines. His brain, itself presented as an enclosed space – a Chinese room – is filled with the image of another room, through which the ghost of a woman moves.

In this scene, written in the late 1920s, Rodker describes a visual technology which was by then already outdated. The mutoscope was a popular device at the late nineteenth-century fairground, generally used to show titillating strip-shows. As Leopold Bloom muses in the 'Nausicaa' episode of *Ulysses*: '[m]utoscope pictures in Capel Street: for men only. Peeping Tom. Willy's hat and what the girls did with it. Do they snapshot those girls or is it all fake? *Lingerie* does it.'⁴¹ Dick's encounter in *Adolphe 1920* is therefore self-consciously historically mediated: the performer smiles 'a timid 1890 smile', and takes off her numberless layers of clothing against a backdrop of stuffy Victorian domesticity. Compared to Dick's consciousness, which registers every sensory bombardment the city can throw at it, her movements are literally 'senseless', both within the fictional world, as a scene within a novel, and in their rehearsal of a set of empty, ghost-like and strictly performative gestures.

As David Trotter has argued, mutoscopes were an important transitional technology in the development of literature's relationship with visual culture in the early twentieth century. Defiantly mechanical, they operated on the principles of the flip-book, and yet gave the first glimpses of the potential for the moving image to

⁴⁰ Rodker, *Adolphe 1920*, p. 136.

⁴¹ James Joyce, *Ulysses*, 13.794.

transcend the linear flicker of Zoetropism. ‘Prufrock’s visual technology of choice had been the magic lantern, a staple of Victorian home entertainment’ writes Trotter in *Cinema and Modernism*; ‘Tiresias’s [in ‘The Waste Land’] is the mutoscope.’⁴²

(fig 10.)

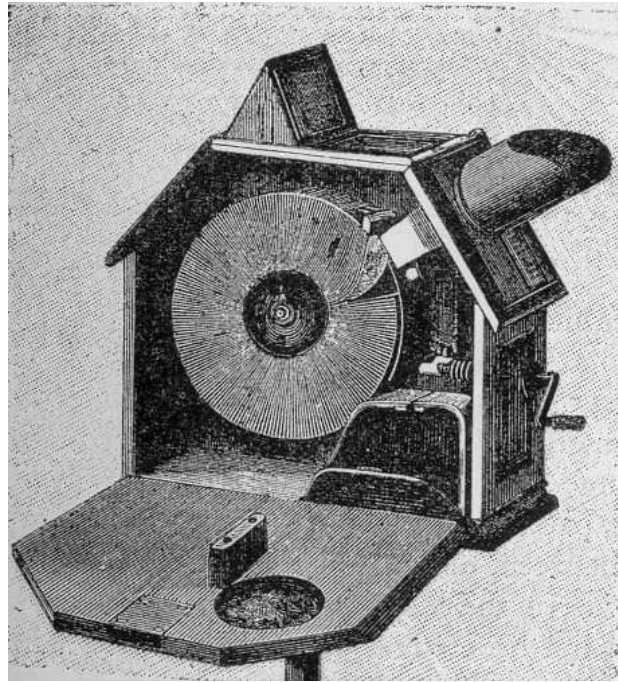


Figure 10: Inside a mutoscope

It is not difficult to see why Rodker invoked the mutoscope – colloquially known as the ‘What the Butler Saw’ machine – as a symbol of Dick’s profound social and epistemological alienation. Mutoscopes explicitly position a solitary viewer in relation to an imagined scene. Unlike the cinema, they are viewed in private and therefore lend themselves to presentation of the illicit. And, as this extract suggests, they place great stress on focalisation; on implied and internalised (narrated) perspectives. For your penny you are allowed to *become* a voyeur, able to inhabit an imaginary point of view, to see precisely what it was that the butler himself saw. The question of ‘who is

⁴² David Trotter, *Cinema and Modernism* (Oxford: Blackwell, 2007), p. 12.

watching?’ which is raised as soon as the cinema begins to develop its own more sophisticated narrative strategies is fudged in the case of the mutoscope, as the viewer is offered a narratological get-out-clause by being able to imagine herself watching the scene through a window or keyhole. It’s a striking metaphor for fiction, especially for fiction which, like Rodker’s, engages provocatively with the notion of narrative perspective. Just as with reading, viewing a mutoscope forces you to construct an imagined relationship to that which is seen, producing (admittedly often flimsy) narratives about this positioning that justify the equally flimsy narrative set-up.⁴³

In his Trieste notebook James Joyce noted that the cinema was particularly suited to pornographic representation as it was able to stimulate the body directly through the sense organs.⁴⁴ The non-verbal languages which are constantly suggested and interrogated in *Ulysses* – the rituals of the Catholic Church; the symbolic richness of odours; the frequent references to Masonic lore – similarly suggest what Lynch identifies as Stephen Dedalus’s ‘Pornosophical philotheology’ according to which:

gesture, not music not odours, would be a universal language, the gift of tongues rendering visible not the lay sense but the first entelechy, the structural rhythm.⁴⁵

In *Adolphe* 1920 Dick’s experience of the mutoscope offers him a private glimpse into another world, one that is mirrored in the act of reading itself, but one that is also phenomenologically opposed to that very act, becoming instead a nightmarish,

⁴³ These crude positioning narratives are in some sense a hallmark of pornography, and have become clichés in their own right: the plumber comes round to fix the washing machine; the teacher punishes an unruly student; the pizza-delivery boy delivers his pizza. Pornography’s tropes echo the mode’s essential woodenness.

⁴⁴ See Joyce, ‘Trieste Notebook’ in *The Workshop of Daedalus: James Joyce and the Raw Materials for ‘A Portrait of the Artist as a Young Man’*, ed. Robert Scholes and Richard Kain (Evanston, Illinois: Northwestern University Press, 1965, pp. 92-105). Despite this, Joyce concluded that ‘Pornography fails because whores are bad conductors of emotion’, (p. 97).

⁴⁵ Joyce, *Ulysses*, 15.105-7.

ghostly invocation of the *behaviour* of sex. The mutoscope retains the meaning of sex but fails, like all art, to contain its experience:

Immutably the anthropophagi stood among them, a woman for a heart, tight round their secret lure for which no pain disease damnation were too much to pay. A woman walks into a room, she is alone and smiles, she seems a little mad; wears drawers and black boots, in 1890, and to the watcher all is miraculous. But his starting eyes touch glass. And behind, near, inferior, the talkers, singers; pensive, whispering if questioned. And on all sides large man-high voices blaring a full orchestra. Through the wild gaiety of the severe machines, men moved distracted, their fun dark chambers, chutes, distorted visions, the agonies of nightmare.⁴⁶

Thus, despite the archaism of the mutoscope, in *Adolphe 1920* Rodker described a relationship with technology that was strikingly modern. Alienation is the dominant note: men are ‘distracted’ by the ‘fun dark chambers’ of the mutoscope, unable or unwilling to engage with each other as persons, instead preferring to spend their time with the ‘severe machines’. The notion that people were themselves machines, and that they should be treated as such for experimental purposes, was as I have argued a dominant one in the period, but it must be noted that this was a conceit not unique to modernism. Man-like machines, mechanical automata, have for a long time exercised the philosophical imagination.⁴⁷ Nevertheless, technological progress provided modernism with a model of cognition that seemed to transcend the merely mechanical, or imitative. As Jessica Riskin has argued, early automata generally made no attempt to simulate perception, or the higher physiological faculties, instead operating by a process of analogy with the human.⁴⁸ The famous mechanised automata of the eighteenth and nineteenth centuries therefore – Jacques de Vaucanson’s ‘Canard Digérateur [Digesting Duck]’ and Wolfgang von Kempelen’s

⁴⁶ Rodker, *Adolphe 1920*, p. 138.

⁴⁷ For a good account of the history of literature’s relationship with automata, see *Minds, Bodies, Machines 1770-1930*, ed. Deirdre Coleman and Hilary Fraser (Hampshire: Palgrave Macmillan 2011).

⁴⁸ See Coleman, *Minds, Bodies, Machines*, pp. 203-207.

‘Mechanical Turk’ – were strictly conceived of as *performers*, expressionist rather than impressionist in mode (and ultimately were proved to be hoaxes). Conversely, the mnemonic technologies associated with modernity, like that of the cinematograph, gramophone or telephone, made no attempt to replicate the outward *look* of the human organs they were models of (apart, arguably, from the telephone, imitative as it was of the principles of the tympanum, and that only internally), instead providing functional analogies of various sensory aspects of cognition: the camera saw; the telephone heard.

As such, and by virtue of their mysterious complexity, modernist machines re-vivified the debate over the possibilities of creating a mechanical mind in Turing’s or Searle’s terms. As Thomas Edison surmised:

This brain of ours...is a queer and wonderful machine. What is known as the fold of Brocca [sic], at its base, is where lie stored our impressions in the order in which they are received. There, for instance, is where our knowledge of our mother tongue is stored [...] just as if that part of the brain were the particular phonographic cylinder on which it had been recorded.⁴⁹

As machines reached a certain level of complexity they seemed to have the potential to contain within their dark and mysterious folds other properties, properties more generally associated with human consciousness. ‘The air is filled with strangely human birds’ wrote Guillaume Apollinaire in 1910 ‘[m]achines, the daughters of man and having no mother, live a life from which passion and feeling are absent.’⁵⁰ The seeming feelinglessness of mechanised modernity provided an alternative and profoundly anti-sentimental model for cognition, a model seized upon by (among others) Futurists, Vorticists and, in psychology, behaviourists.

⁴⁹ Qtd. in Coleman, *Minds, Bodies, Machines*, p. 183.

⁵⁰ Guillaume Apollinaire, *Selected Writings* (New York: New Directions, 1971), p. 233.

What technologies like the mutoscope, the telephone and gramophone provided, as David Trotter argues in *Cinema and Modernism*, was a model of passive mechanical sensation that was quickly subsumed within literature. The literally ‘senseless’ way in which the camera records a scene, or the mutoscope performer behaves, began to be reflected in fiction that endorsed notions of what Trotter terms modernism’s ‘will-to-automatism.’⁵¹ Emerging visual technologies, and the ‘reproducible neutrality’ of film as a medium, led some writers to indulge in the ‘disembodiment of perception by technique’.⁵² Thus much modernist literary fiction constituted a ‘wilful inquiry into the age’s wilful absorption in the kinds of automatic behaviour exemplified by machinery in general, and by the new technologies of perception in particular.’⁵³ The cinematic gaze thus brought about a tendency to conceive of visual processes as separate and independent of a central processing consciousness. Like Trotter, Sara Danius sees in the cinematograph the genesis of self-sufficient vision. ‘Early cinema’ notes Danius, ‘was a medium of cultural production whose capacity for analogically reproducing the real as it moved through time stood in sharp contrast to its other tendency: the compartmentalization of the ways in which the five senses experience and process the real.’⁵⁴

Yet, as I argued in chapter one, the notion of ‘realism’ is particularly treacherous in relation to descriptions of mental processes. As Raymond Tallis notes in *In Defence of Realism*, the notion that cinema posed a threat to the realist paradigm in the way Danius describes, which as I have suggested has become something of a critical commonplace, is largely incoherent. In *The Fabulators*, for instance, Robert Scholes influentially argued that:

⁵¹ Trotter, *Cinema*, p. 10.

⁵² Trotter, *Cinema*, p. 10.

⁵³ Trotter, *Cinema*, p. 10.

⁵⁴ Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002), p. 147-8.

The cinema gives the *coup de grace* to a dying realism in written fiction. Realism purports – has always purported – to subordinate words themselves to their referents: to the things words point to. Realism exalts life and diminishes art, exalts things and diminishes words. But when it comes to representing things, one picture is worth a thousand words, and one motion picture is worth a million. In face of competition from the cinema, fiction must abandon its attempt to ‘represent reality’ and rely more on the power of words to stimulate the imagination.⁵⁵

As Tallis argues, to identify the ‘reality’ of a thing with a visual image of a thing is to vastly underestimate the project that ‘realist’ authors often felt themselves to be engaged in:

if the role of words in a novel were the same as that of the camera in film – namely to replicate the visible surfaces of parts of the world – then there could be no doubt that cine-photography, which copies visible surfaces with effortless precision and the instantaneous inclusiveness of the eye, would be indisputably superior to the pen as an instrument for achieving the aims of realist fiction. The cameraman is better at reduplicating surfaces than the writer.⁵⁶

The point is, Tallis concludes (and as I have argued previously), that ‘even realistic fiction does not attempt to *represent* reality. Words are not representational signs: they are expressive, not mimetic.’⁵⁷

Many early commentators were similarly struck by film’s limitations in replicating the ‘real’, noting that cinema was a spectre haunting the contemporary sensorium rather than an immersive and effortless stimulant *of* it. Maxim Gorky identified what, to borrow Jacques Derrida’s term, we might call the ‘hauntology’ of the cinema: ‘It is not life but its shadow’, he wrote, ‘it is not motion but its soundless

⁵⁵ Robert Scholes, *The Fabulators* (New York; Oxford: Oxford University Press, 1967), p. 11.

⁵⁶ Raymond Tallis, *In Defence of Realism* (London: Edward Arnold, 1988), p. 33.

⁵⁷ Tallis, *In Defence of Realism*, p. 33.

spectre'.⁵⁸ Despite Virginia Woolf's suggestion that 'the pictures' present things as 'more real, or real with a different reality from that which we perceive in daily life', for her that reality was fundamentally misleading for: 'the horse will not knock us down. The King will not grasp our hands. The wave will not wet our feet.'⁵⁹ Many of the philosophical misunderstandings I have uncovered within modernist literary criticism are founded on the mistaken identification of the mind with a camera in this way. For ultimately '[t]he artist doesn't see and record', as Hugh Kenner writes of Lewis, 'he registers phenomena and reconstitutes them with images'.⁶⁰

III. Lewis and the Cinema

Of all the authors examined in this thesis, it is Lewis who most radically applied the lessons of the cinema to test categories of the real. In his novels, the metaphors provided by the new mnemonic technologies, especially by the cinema, are used to present a radical vision of what fiction *might* be capable of were behaviourism true, and if qualia didn't exist. It is astounding just how quickly Lewis uncovered the terrifying potential afforded by easily reproducible and mass-consumed technologies, and his fiction was perhaps the first to be informed by the burgeoning cinematic aesthetic that influenced the work of so many modernist authors subsequently. As Alan Munton notes: 'Lewis was alert to the cultural significance of cinema and the

⁵⁸ Qtd. in Colin Harding and Simon Popple, *In the Kingdom of Shadows: A Companion to Early Cinema* (London: Cygnus Arts, 1996), p. 5-6.

⁵⁹ Virginia Woolf, *The Essays of Virginia Woolf: 1925-1928*, 6 vols., ed. Andrew McNeillie and Stuart Clarke (London: The Hogarth Press, 1994), vol. iv, p. 349.

⁶⁰ Kenner, *Wyndham Lewis*, p. 20.

new media as soon as they became established commercially during the first decade of the twentieth century.’⁶¹

Lewis frequently described his characters using the tropes of the cinema, which were, especially in the era of silent film, themselves clichés and exaggerations of gesture, movement and behaviour. Thus in his first novel, *Mrs. Dukes' Million*, Lewis described a chase by comparing it with a cinematic scene in an instance which Munton claims is the earliest explicit literary reference to cinematic action:

This mad pursuit was like one of the cinematograph pictures that are seen in sixpenny ‘Electric Palaces.’ And it occurred to him at the same time that if he were stopped or caught he might pretend that this was what was really happening, that he was taking part in a cinematograph ‘picture.’⁶²

Here a chase scene (itself a cliché of the cinema) becomes its own justification or cover: the art of the cinema is both consumed and commented on from within the confines of the novel. As Jessica Burstein has argued, like much of Lewis’s other work *Mrs. Dukes' Million* is obsessed with counterfeiting and impersonation: Mrs Dukes is a wealthy heiress, and the main strand of the plot concerns a criminal gang who try to impersonate her in order to steal her money.⁶³ Despite the fact that Lewis wrote the novel quickly, as piece of hack work for money, the metafictional playfulness of its plot is striking.

Like the cinema, Lewis quickly grasped that the train and the car were primarily, as Sara Danius characterises them, ‘technologies of perception’, and had much in common with the cinematograph in terms of their visual function.⁶⁴ In his

⁶¹ Alan Munton, ‘From Charlie Chaplin to Bill Haley: Popular Culture and Ideology in Wyndham Lewis’ in *Wyndham Lewis the Radical: Essays on Literature and Modernity*, ed. Carmelo Cunchillos Jaime (Bern; New York; Oxford: P. Lang, 2007), p. 160.

⁶² Lewis, *Mrs. Dukes' Million*, (London: G. Prior, 1980), p. 349.

⁶³ See Burstein, *Cold Modernism*, p. 56.

⁶⁴ See, especially, Danius, *Senses*, pp. 130-133.

short story ‘The Crowd Master’, for instance, Lewis described a train journey from Dover to London in which the window of the train is reinterpreted as a cinema screen; the window-as-frame, with the world cast as a magic lantern throwing up scenes and vistas onto it:

Blenner, still smiling, looked out of the window. There the landscapes were sliding, like a White City by-show worked by a strong dynamo. Sometimes things licked out of view with stoical violence near the windows.⁶⁵

In *The Revenge for Love*, a similar thing happens as a pair of young revolutionaries attempt to escape the Spanish police by car:

trees, rocks, and telegraph-poles stood up dizzily before her and crashed down behind. They were held up singly in front of her astonished eyes, then snatched savagely out of the picture. Like a card-world clocked cinematographically through its static permutations by the ill-bred fingers of a powerful conjurer, everything stood upon end and then fell flat.⁶⁶

Here the world becomes mutoscopically presented to the senses in a zoetropic flicker of static landscape taking life. ‘The motorists experience a visual event whose delightful nature is a function of speed’ writes Sara Danius of Proust’s essay ‘Impressions de route en Automobile’; ‘[t]he windshields delimit the view of the landscape, transforming it into an object of visual pleasure – a mobile panorama.’⁶⁷ As Danius notes, the visual effect of driving depends on the animation of inanimate matter, on the fact that things that should not move (the outside world, trees and telegraph poles) seem to be moving in relation to the car, rather than vice versa. With such descriptions: ‘the narrator insists on what his eyes perceive and not on what he

⁶⁵ Lewis, *Blast*, ii (1915), rpt. (Santa Rosa: Black Sparrow Press, 1981), p. 101. Alan Munton speculates that ‘licked’ is a misprint for ‘flicked’, which would further emphasise the cinematic qualities of the extract. (Alan Munton, in conversation).

⁶⁶ Lewis, *The Revenge for Love* (Santa Rosa: Black Sparrow Press, 1991), p. 314.

⁶⁷ Danius, *Senses*, p. 131.

knows, all in an effort to render the lived experience of speed and the delicious perception of the landscape through which the car races.’⁶⁸ Proust’s essay therefore ‘addresses a representational problem’, argues Danius: ‘how to render the lived experience of speed and movement.’⁶⁹ But what Danius doesn’t focus on is the profoundly and artificially cinematic quality of these scenes themselves: how indebted they are to both the tropes and to the visual architecture of film. Rather than making the novel equivalent to the cinema screen, here Lewis seems to be seeing the world through the flickering imperfect eye of the cinematograph.

The cinematic gaze, modifying the landscape on which it was cast, was only one way in which film manifested its influence in Lewis’ work, however. Just as the cinema screen made landscape and movement legible in a way previously occluded, so too did the silent film of the twenties enshrine behaviour at the heart of its representative system. ‘Kinesis was the rhetoric of [the 1920s]’, argues Hugh Kenner in *The Counterfeiters*:

when Americans did with pure motion what the English did about 1600 with language, and the French about 1880 with color. For those few years, before American eyes, the Newtonian universe flowered like a languid rose, disclosing, before its petals dropped away, all its intricate repertory of action, reaction, equilibrium. Man and machine, in that enchanted truce, meet nearly as equals. [...] The collaboration between audience and kinetic mime was nearly ideal. No one had trouble understating how the snagged log with Buster clinging to its end could pivot up like a mast and then out over the waterfall’s lip like a bowsprit; nor why, swinging down from its end on a rope to rescue the girl, he launched himself not toward her but away from her; nor by what conversion of potential energy he is carried up, having snatched her from her ledge, exactly to that handy shelf of rock.⁷⁰

In Lewis’s novels the kinaesthetic and the behaviourist impulses fuse to create a vision of the person as no more, but also no less, than a compendium of behaviours.

⁶⁸ Danius, *Senses*, p. 132.

⁶⁹ Danius, *Senses*, p. 130.

⁷⁰ Kenner, *The Counterfeiters*, p. 47.

Alongside his interest in behaviourism, Lewis's other great interests, topics he returned to frequently in his non-fiction essays throughout the 1920s, were Charlie Chaplin and German Expressionist cinema. 'Chaplin is probably the greatest figure on the stage today' he wrote in 1924.⁷¹ The tramp was for Lewis a figure of both admiration and disdain. He frequently used 'Chaplinesque' as a term of abuse. Of Proust he wrote 'the "I" of his books is that small, naïf, Charlie Chaplin-like, luxuriously indulged, sharp-witted, passionately snobbish, figure'.⁷² As David Trotter has argued, Lewis was mainly interested in Chaplin's mimicry; his skilful behavioural impersonation which, taken to its extreme, seemed to celebrate the notion of imitation for imitation's sake in an act that Trotter calls 'hyper-mimesis.'⁷³ This fertile counterfeiting, which Lewis diagnosed everywhere he looked, was seen by him as pernicious, threatening to eradicate difference, leading to a behavioural tyranny of the majority.

One implication of behaviourism therefore, and of the behaviourist imperative of silent film, is that it allows for the existence of a literally mindless class of person. Under the auspices of behaviourism the mass can be conceived of as sub- or unconscious, and then dismissed as belonging to a realm outside of ethical consideration. It is not so much of a step from Eliot's famous declaration in 'Tradition and the Individual Talent' that 'only those who have personality and emotions know what it means to want to escape from these things' to argue that there is a class of people who lack not just 'emotions and personality', but any conscious mental states whatever.⁷⁴ Modernism's will-to-automatism has therefore been seen by many commentators as a political threat, a way of denying the very thing that makes us

⁷¹ Lewis, 'The Strange Actor' in *The New Statesman*, xxii (1924), 474-6.

⁷² Percy Wyndham-Lewis, 'The Revolutionary Simpleton' in *The Enemy: A Review of Art and Literature*, i (1927), 25-192, rpt. Santa Rosa: Black Sparrow Press, 1994, p. 76.

⁷³ Trotter, *Cinema*, p. 11.

⁷⁴ Qtd. in Trotter, *Cinema*, p. 10.

human. The distillation of consciousness to a single property, and the notion that the human person was nothing more than the sum of her behaviours, allowed for a starkly binary debate over the status of personhood to emerge. These anxieties manifested themselves across all fields of literary production, from Karel Čapek's critique of mechanised man in *R.U.R.*, to the aesthetic of elitist exclusion that Andreas Huyssen and John Carey have argued were so symptomatic of high modernism, to Charlie Chaplin's mockery of the mechanisation of production in such films as *Modern Times*.

Thus Lewis's behaviourist aesthetic was intimately bound up with the political. In 'A Room Without a Telephone', for instance, a short story that appeared in the collection *Rotting Hill*, Lewis outlined a vision of national healthcare which treats bodies as opposed to people, the doctor becoming a mere mechanic of the flesh:

A National Health Service doctor with his four thousand patients, dealing perfunctorily with each, ultimately would be supplied with a rigidly standardized set of labelled bottles, printed instructions for the patient on each bottle.⁷⁵

In this view the NHS is an example of the general 'Bolshevik tendency' which treats man 'as if he were a machine. When a machine wears out you push it on to the scrap-heap. When a man's body wears out there is still a man inside it.'⁷⁶ Lewis was fearful too of the loss of privacy that such hyper-mimesis brought about: under the auspices of behaviourism the inside of our heads, that last bastion of the un-broadcasted action, was itself under attack. This was a typical move, according to Trotter, one that reaches back as far as John Stuart Mill's fear of the vanishing of difference in

⁷⁵ Lewis, *Rotting Hill*, p. 125.

⁷⁶ Lewis, *Rotting Hill*, P. 127.

contemporary society.⁷⁷ But it manifested itself in particularly intriguing ways within modernist discourse. ‘The politics and the sociology of Anglo-American modernism’s anti-mimesis’, Trotter argues, ‘amounted to an anxiety about the wholesale suppression of differences.’⁷⁸

Lewis’s dismissal of the mob as mere automata was certainly reactionary, establishing a hierarchy of the mental which placed the majority of people on the bottom rung, blindly and mechanically acting and using language in plodding, clichéd and repetitive ways. But his dismissal of the mind of the mob was also heavily informed by and contained within the philosophical tradition, most notably by the Cartesian tradition of equating man with machine. As Lewis himself noted:

Descartes called animals *machines*: they had not the rational spark. But men use their rational spark so unequally, and are so much machines too, that, on the face of it, that generalisation is a very superficial one [...]. Many animals, indeed most, are more dignified, much freer, and more reasonable than men, in the conduct of their lives: and the ‘language habit,’ as the behaviourist calls it, is a servitude for those who are unable to use it, but have to be content to be used by it. It is not a thing to boast about that you *talk*, and the elephant does not. It depends on what you say.⁷⁹

Similarly, Lewis’s faith in the redemptive power of individual genius certainly had a political edge, and he frequently reduced movements to individuals, describing himself as a ‘personal appearance artist,’ and arguing that ‘Hitlerism is Hitler’ and that Nazism ‘is rather a person than a doctrine.’⁸⁰ In the catalogue to the 1956 retrospective of the Vorticist movement in the Tate he claimed that: ‘Vorticism, in fact, was what I, personally, did, and said, at a certain period,’ much to his

⁷⁷ See Trotter, *Cinema*, p. 182.

⁷⁸ Trotter, *Cinema*, p. 183.

⁷⁹ Lewis, *Time*, p. 303.

⁸⁰ Qtd in Stanfield, ‘This Implacable Doctrine’, p. 265.

collaborators' consternation.⁸¹ And he frequently stressed that to be an artist, or a dictator, was to be a *doer*, someone opposed to the unthinking rump, to the 'spectators' who made up the bulk of contemporary society:

Art is not here defended for its own sake: *art-for-art's-sake*, of Walter Pater, is nothing to do with art – it is a spectator's doctrine, not an artist's: it teaches how to enjoy, not how to perform. I am a performer. It is as a performer that I shall speak.⁸²

Thus for Lewis actions often spoke far louder than words, and his faith in the power of dictators (in 1931 he wrote a largely sympathetic biography of Adolf Hitler), was based on the fact that the:

society of today, no doubt inevitably, is essentially an actor's world. The successful personality of the moment is generally an actor-mind (Mussolini): with all the instincts bred behind the footlights, the apotheosis of the life-of-the-moment, of exteriority, display and make-up [...].⁸³

More than most arts, cinema embodied these ideals of individualism, performance and the celebration of action rather than of thought. As a form, silent film is utterly dependant on gesture and movement, on the outward appearance of the body modified with heavy make up and exotic costume – on what Kenner calls the 'rhetoric of kinesis'. And, although there are certainly other precedents for modernism's interest in bodily action as an end in itself (one thinks, in particular, of W. B. Yeats' representation of the dance, and of Ezra Pound's fascination with Japanese Noh plays), in its means of reproduction and dissemination the cinema was

⁸¹ Percy Wyndham Lewis, 'Introduction' to *Wyndham Lewis and Vorticism*, exhibition catalogue (London: Tate Gallery, 1956), p. 3.

⁸² Percy Wyndham Lewis, *Wyndham Lewis: Anthology of Prose*, ed. E. W. F. Tomlin (London: Methuen, 1969), p. 271.

⁸³ Lewis, *Time*, p. 342.

undoubtedly unique. ‘Chaplin [...] performs as an active physical body’, notes

Trotter:

disruptive and obstreperously comic. His performances foreground the body as a material entity within commodity culture, and Lewis is the first to develop a mode of critical discourse to describe and account for this.⁸⁴

Lewis’s theory of laughter (derived from the work of Henri Bergson), as outlined in

‘The Wild Body’, was likewise based on the distinction between animate and

inanimate matter as dramatised by the cinema and conditioned by the

commodification of action. As Trotter summarises:

Bergson regretted the cinema, and its compelling performance of the viewer’s externality to the scene viewed; an externality lethal to intuition. But it is worth noting that he also regarded the denaturing artifice produced by any form of analysis as the foundation of comedy. Comedy is a view from outside: a view which does not attempt recognition, or acknowledgment; a view in which intellectual sympathy has been disabled.⁸⁵

Satire is an art of the outside art; the Turing test, Hugh Kenner argues, is essentially satirical in a Swiftian mode. And it is not difficult to see, as Trotter does, how the physical comedy of Charlie Chaplin is based primarily on a notion of hypermimesis; on the body as impersonator and mirror of other bodies, on behaviour as a shared cultural, and potentially phenomenological, experience. Silent film for a brief period reduced the art of acting to that of gesture, and reduced the actor to an insensible lump of matter engaged in amusing actions and devoid of any suggestion of interiority. As

Lewis summarised:

⁸⁴ Trotter, *Cinema*, p. 167.

⁸⁵ Trotter, *Cinema*, p. 137.

The root of the Comic is to be sought in the sensations resulting from the observations of a *thing* behaving like a person. But from that point of view all men are necessarily comic: for they are all *things*, or physical bodies, behaving like *persons*. It is only when you come to deny that they are ‘persons,’ or that there is any ‘mind’ or ‘person’ there at all, that the world of appearance is accepted as quite natural, and not at all ridiculous.⁸⁶

In many of his novels, as I have suggested, Lewis dramatises this tension between man and matter, describing his characters as dummies, machines, puppets, or automata. In *Revenge for Love*, a novel which obsesses over counterfeiting and falsity (the original title was to be *False Bottoms*, but Lewis was forced to change it after a reader from Boots circulating library objected) nearly all of the central characters are, at one point or another, presented as nothing more than vacuous shells. And frequently Lewis invokes images from the world of cinema as metaphors for this cognitive emptiness. At a gathering of artists and hangers-on in *Revenge for Love* a young confused groupie observes the crowd around her:

They were not so much ‘Human persons,’ as she described it to herself, as big portentous wax-dolls, mysteriously doped with some impenetrable nonsense, out of a Caligari’s drug-cabinet, and wound up with wicked fingers to jerk about in a threatening way – their mouths backfiring every other second, to spit out a manufactured hatred, as their eyeballs moved.⁸⁷

The reference to Robert Wiene’s 1922 film *The Cabinet of Dr Caligari* is intriguing, contained as it is within a novel imbued with the expressionist aesthetic of that film. In Wiene’s film a travelling showman sets up his somnambulist-sideshow at a country fair, after which a series of gruesome murders occur in the village. Suspicion falls on the showman-doctor, and so a villager takes it upon himself to keep watch over Caligari and his cabinet one night. When, sure enough, another murder is committed,

⁸⁶ Qtd in Trotter, *Cinema*, p. 158.

⁸⁷ Lewis, *Revenge for Love*, p. 153.

the villager swears that the somnambulist has remained in his cabinet. Eventually it transpires that Dr Caligari keeps a dummy in his cabinet, sending his somnambulist-slave to commit nocturnal murders for him. A doubled dummifying has occurred: a doll acts as stand-in for an already unconscious human agent. At the end of the film it is revealed that Caligari is the head of a local lunatic asylum, and, in a final narrative twist, that the narrator is himself an inmate of that asylum.

Weine's film is rightly celebrated for its narrative innovations and wonderful design. But it encompasses a broader preoccupation within German Expressionism, one that intersects with the essential philosophical underpinnings of Lewis's fiction. 'The doctor-magician figures in German Expressionist cinema', argues David Trotter:

not only reduce human beings to automata, but bring objects to life. In either case, the result is a combination of the scientific-technological and the spiritual-magical figured as a living machine. The spectres inhabiting German Expressionism are cause for concern to be sure, but not necessarily for panic.⁸⁸

It's not hard to see why this appealed to Lewis so much. In *Time and Western Man* he referred to Sigmund Freud as 'like a sort of Mephistophelian Dr. Caligari',⁸⁹ and visually, Hermann Warm's angular set (with shadows and perspective painted directly onto the scenery) looks very much like some of Lewis' own paintings. Everything (apart from, significantly, the cabinet in which Dr Caligari keeps his somnambulist) is askew, a landscape at odd angles (Figs. 11 & 12). Weine's film undoubtedly influenced Lewis's description of the limbo-landscape of his novel *The Childermass* also, a landscape described by Satters, the Joyce manqué trapped with his fag Pullman

⁸⁸ Trotter, *Cinema*, p. 9.

⁸⁹ Lewis, *Time and Western Man*, p. 301.

in the strange Beckettian skullscape of that novel as ‘a flat daguerreotype or [...] a pre-war film.’⁹⁰



Figure 11: Still from *The Cabinet of Dr. Caligari*



Figure 12: Dr. Caligari's cabinet.

Marshall McLuhan declared that with *The Childermass* ‘Lewis used the medium of the talking picture before it had been invented’, calling it ‘a talkie in full

⁹⁰ Lewis, *The Childermass*, p. 15.

colour.’⁹¹ The sheer artificiality of the world described within it is almost relentless. The world described in *The Childermass* is that of a mechanical hell inhabited by crowds of empty mechanical and sub-human ‘peons’. Near the beginning of the novel Satters encounters one of these ‘man sparrows’ who ‘multiplies precise movements, an organism which in place of speech has evolved a peripatetic system of response to a dead environment. It has wondered beside this Styx, a lost automaton rather than a lost soul.’⁹² Throughout the novel Lewis reduces movement to its component parts in this way, in an anguished attempt to atomise gestures that again owes much to the exaggerated movement of Chaplin and the screen, as well as to the jagged, painstaking narratives of reduction we explored in the previous chapter. *The Childermass* describes a world populated by creatures of senseless responses, reacting rather than acting; dwelling in a world of Potemkin villages and one-dimensional, sprite-like cut-outs. It was a type of world which, Lewis feared, was quickly eroding our conception of the real.

The cinematograph thus provided Lewis with an endlessly attractive model for a kind of qualia-free cognition, of the kind that was formally instantiated as a scientific test for consciousness with Turing’s test, and challenged by Searle’s Chinese Room. Trotter’s important reassessment of the forms and influences of the cinema on literary modernism does not, however, make one of the most obvious connections between modernism’s will-to-automatism and the cultural and material preoccupations which brought it about. In the next part of this chapter I will read the novels of Lewis’s novels as engaged in a productive yet protean argument with the central tenets of behaviourism, a psychological system and philosophical position which, as we have seen, placed the machine-mind, the automaton, at the centre of its

⁹¹ Marshall McLuhan, ‘Lewis’s Prose Style’ in *Wyndham Lewis*, ed. Meyers, p. 66.

⁹² Lewis, *The Childermass*, p. 3.

analysis, and in doing so denied qualia. Lewis's 'puppets', like T.S. Eliot's hollow men, are examples of a more pronounced and general interest in the potential emptiness of bodies in the period. Mnemonic technologies such as the cinema provided the behaviourists with a compelling model for the mind, raising the spectre of automata as near-total simulacra of human bodies, lacking only one essential quality: conscious mental states.

IV. The Great Without

As I have suggested, Lewis's overriding concern, as both artist and philosopher, was with exteriors. In both his fiction and in his painting he was preoccupied with surfaces; with the body as agent, an active component of the physical world; but also as barrier, with the skin as the interface between internal mental states and their public interpretation. James Joyce had once declared that 'modern man has an *epidermis* rather than a soul', invoking the skin as both a locus of sensation and as a publicly 'readable' organ, but unlike Joyce, whom he criticised for being overly concerned with the inner lives of his characters, Lewis's aesthetic was fundamentally of the epidermis.⁹³ 'Skin and Intestines', the title of one of the chapters of *The Art of Being Ruled*, described the counter-intuitive dichotomy he saw as the essential difference between art and science: 'I have defined art as the science of the *outside* of things', he wrote in that chapter, 'and natural science as the science of the *inside* of things.'⁹⁴ His paintings are celebrations of what he elsewhere called an 'orgy of the externals of this life of ours': stylised portraits of bodies in motion, or abstract scenes implying

⁹³ Qtd in Louis Berroné, *James Joyce in Padua* (New York: Random House, 1977), p. 21.

⁹⁴ Lewis, *The Art of Being Ruled*, p. 403.

mechanistic movement.⁹⁵ Similarly, the typographic virtuosity of *Blast* celebrated the concrete dynamism of the written, drawing attention to the way words looked on the page as much as to the sense they contained within.

But the surface of the body is more than the formal frontier of human consciousness: it is also the source of a generalised but specific sense-modality, that of tactility. In his ongoing battles with Bloomsbury, Lewis frequently attempted to re-evaluate the primacy of the visual sense in contemporary philosophy and art. As we saw in chapter two, for Woolf *et al* sight was the most privileged of the senses, synonymous with sensation in general, and Bloomsbury's tendency to favour sight over touch, sound, or smell had scientific as well as aesthetic precedents. Whilst Clive Bell and Roger Fry built a system of aesthetics around painting and the plastic arts, Bertrand Russell's neo-realism stressed that 'as physics has advanced, it has appeared more and more that sight is less misleading than touch as a source of fundamental notions about matter.'⁹⁶ For Russell, sight allowed us to keep our distance, to objectify and share a seen object, and to establish what its properties might be in the public sphere. But for Lewis, concerned as he was with challenging the claims made on behalf of philosophers of what he called the 'time-school', touch was an ally, the 'enemy of the time-school' because 'the eye is [...] the *private* organ; the hand the *public* one.'⁹⁷ This was a claim which, though it remained implicit in much of Lewis's fiction, can be seen as informing his approach to the paradoxes of the relationship between mind and language throughout his work.

In his 1921 manifesto of tactilism, F. T. Marinetti had called for the development of a new art based on the sense of touch. Identifying the moment of his

⁹⁵ Lewis, *An Anthology of His Prose*, p. 282.

⁹⁶ Bertrand Russell, *ABC of Relativity* (London: George Allen & Unwin, 1925), p. 7.

⁹⁷ Lewis, *Time*, p. 398.

aesthetic awakening with an experience in the trenches during the First World War, he claimed that in the modern world:

A Visual sense is born in the fingertips. X-ray vision develops, and some people can already see inside their bodies. Others dimly explore the inside of their neighbours' bodies. They all realize that sight, smell, hearing touch and taste are modifications of a single keen sense: touch, divided in different ways and localized in different points.⁹⁸

For Marinetti, touch was not only the basis of all sensation but potentially the source of novel and exciting new modes for art. He felt that the 'return' to tactility was intimately bound up with our consumption of visual and televisual images, and it is striking that contemporary critics have established similar parameters by which to judge the cinematic arts. In *The Tactile Eye: Touch and the Cinematic Experience*, for instance, Jennifer Barker argues that film presents us with an experience which is fundamentally tactile:

Touch need not be linked explicitly to a single organ such as the skin but is enacted and felt throughout the body. As a material mode of perception and expression, then, cinematic tactility occurs not only at the skin or the screen, but traverses all the organs of the spectator's body and the film's body.⁹⁹

Like Marinetti, Marshall McLuhan suggested that the autonomy of the eye, as a direct effect of technological developments such as photography, threatened the unity of the sensorium in the late nineteenth century: 'Photography gave separate and, as it were, abstract intensity to the visual, a development which called for and received swift compensating strategy in the arts', he suggest.¹⁰⁰ For McLuhan (using words and

⁹⁸ F. T. Marinetti, 'Tactilism' in *The Book of Touch*, ed. Constance Classen (Oxford, New York: Berg 2005), p. 331.

⁹⁹ Jennifer Barker, *The Tactile Eye* (California: University of California Press, 2009), p. 2.

¹⁰⁰ Marshall McLuhan, 'Inside the Five Sense Sensorium' in *Empire of the Senses*, ed. David Howes (New York, Oxford: 2005), p. 44.

concepts conspicuously similar to those employed by Lewis – here we find the ‘child-cult’ of primitive cultures interpreted in an anthropological context), tactility was the basic linking sense, the foundation of all synaesthetic experience. It was a sense that had been divorced from visual experience by the advent of photography, and was one that could be reunited with vision through the rise of television. As he argues:

In practice, tactility is less a separate sense than it is the interplay among the senses. When, therefore, I speak of the tactility of the television image, I mean this stepped-up interplay of the senses which the nineteenth century artists and polemicists struggled to foster in an aesthetically starved milieu.¹⁰¹

That tactility could be considered the fundamental basis of all sense-modalities is something that is reflected at the level of language, of course. Things that we ‘feel’ are generally opposed to those more abstract mental states such as imagining or hallucinating, whether or not the ‘felt’ is haptic in origin. As Mark Patterson and others have argued, the basic state of embodied consciousness is one which is intimately and continually bound up with tactility – which refers not only to the exteroceptive sensations, to the ways in which our skin processes the main characteristics of external bodies (through cataloguing heat, roughness, pressure and so on) but to the interoceptive characteristics of our bodies: the somatic states that are described by the inner ear as balance, for instance, or our awareness of moving our limbs through space, and so on.¹⁰²

Lewis worked these ideas into his theories of behaviourist fiction. In *Men Without Art* he had argued that what he called the ‘external’ approach to narrative

¹⁰¹ McLuhan, ‘Sensorium’, p. 46.

¹⁰² For a good account of the various ways in which types of touch have been classified, see Mark Patterson, *The Senses of Touch* (Oxford, New York: Berg, 2007), pp. 1-14.

fiction was a method which ‘more and more, will be adopted in the art of writing.’¹⁰³ The external approach, Lewis suggested, is ‘classical’, the internal, as wielded by Joyce and Woolf, ‘romantic’; the external approach is of the eye, the internal is suffused with ‘hellenic naturalism’; the external method possesses a ‘masculine formalism’, whereas the internal monologue is ‘a phenomenon of decadence’.¹⁰⁴ The stream of consciousness method, telling things from the inside, was for Lewis nothing more than ‘[a] tumultuous stream of evocative, spell-bearing, vocables, launched at your head – or poured into your Unconscious’, and ‘is, finally, a dope only.’¹⁰⁵ ‘Dogmatically, then’, he concludes, ‘I am for the Great Without, for the method of *external* approach – for the wisdom of the eye, rather than that of the ear.’¹⁰⁶

In his fiction, this interest was registered in the care with which he obsessed over physiognomy, appearances, performance, clothing, and, above all, behaviour. Of *The Apes of God* he wrote ‘no book has ever been written that has paid more attention to the *outside* of people. In it their shells, or pelts, or the language of their bodily movements, come first, not last.’¹⁰⁷ The following description of Hobson from *Tarr* is typical of the kind of atomised, deconstructed description that Lewis perfected in his novels in the late 1920s:

He was very athletic, and his dark and cavernous features had been constructed by Nature as a lurking place for villainies and passions. But he slouched and ambled along, neglecting his muscles: and his dastardly face attempted to portray delicacies of commonsense, and gossamerlike backslidings into the Inane, that would have puzzled a bile-specialist.¹⁰⁸

¹⁰³ Percy Wyndham Lewis, *Men Without Art*, ed. Seamus Cooney (Santa Rosa: Black Sparrow Press, 1987), p. 103.

¹⁰⁴ Lewis, *Satire and Fiction* (London: The Arthur Press, 1930), p. 35.

¹⁰⁵ Lewis, *Satire and Fiction*, p. 36.

¹⁰⁶ Lewis, *Men Without Art*, p. 105.

¹⁰⁷ Lewis, *Satire and Fiction*, p. 46.

¹⁰⁸ Percy Wyndham Lewis, *Tarr* (Santa Rosa: Black Sparrow Press, 1990), p. 22.

Hobson is described almost phrenologically, his outer form clearly and unambiguously announcing the dispositions of his character in a sort of behavioural pathetic fallacy. He ‘ambles’ along, his face an independent agent ‘attempting’ (and, we must assume, failing) to ‘portray the delicacies of commonsense’.

Consciousnesses are split here; fragmented into various entities placed in competition with one another yet contained within a single body. Hobson, wherever or whoever *he* might be, neglects his muscles, becoming a Cartesian outrider trapped within the machine of his own body. Later in the novel this same body ‘stop[s] in front of Tarr of its own accord’ and ‘[slinks] up, ashamed of its plight, its gait, its clothes’.¹⁰⁹

Transformed into a Vorticist composite ‘of sinister piston rods, organ-like shapes, heavy drills’, Hobson’s body acts on its own inscrutable impulses, largely devoid of agency, an automaton to which a feeble mind has become momentarily and monadically attached.¹¹⁰

The protagonist of Lewis’s early novel *Snooty Baronet*, Kell-Imrie, is introduced to us in similarly alienating fashion: ‘[T]he left eye somewhat closed up – this was a sullen eye’ we are told, and ‘[t]he nose upon the face indicated strength of character if anything [...] the mouth, which did not slit it or crumple it, but burst out of it (like an escaped plush lining of rich pink), that spelled sensitiveness’.¹¹¹ Yet as the paragraph continues, it becomes clear that this is a self-portrait, and the objective distancing achieved by the apparently omniscient narrator is undermined by the presence of an arranging self-consciousness. As Kell-Imrie continues: ‘[t]he face was mine. I must apologize for arriving as it were incognito upon the scene.’¹¹² In much of Lewis’s work, particularly in what Hugh Kenner calls the ‘puppet fictions’ written in

¹⁰⁹ Lewis, *Tarr*, p. 22.

¹¹⁰ Lewis, *Tarr*, p. 23.

¹¹¹ Lewis, *Snooty*, p. 15.

¹¹² Lewis, *Snooty*, p. 130.

the 20s and 30s, characters are again and again described in this way, presented explicitly as little more than mechanical, unconscious agents.¹¹³ As, indeed, they are.

In framing his narratives in such ways Lewis drew attention to the artificiality of the third-person/first person narrative divide, a divide seen by many critics, as I argued in chapter one, as central to modernism's modus operandi and to potential solutions to the problem of qualia. In these novels Lewis's characters amount to little more than atomised lumps of insensible matter. As he defined such beings in *The Wild Body*, they are:

not creations but puppets. You can be as exterior to them, and live their life as little, as the showman grasping from beneath and working about a Polichinelle. They are only shadows of energy, and not living beings. Their mechanism is a logical structure and they say nothing about that.¹¹⁴

These are creatures we are as readers doomed forever to be external to; doomed to look upon rather than to inhabit. Their reported behaviours, conveyed to us through the Turing imitation game of the novel, come to replace any notion of 'character' or conscious life within. And this is as it should be, suggests Lewis, for this is all the novel-form can *ever* consist of: this is all we can ever know of the other.

As Michael Levenson has noted, Lewis's idiosyncratic aesthetic was therefore profoundly anti-impressionist, and as such confronted a suite of philosophical arguments from the period concerned with the relationship between sensation, qualia and literature. Throughout his fiction Lewis made no attempt to present readers with reified 'minds' or with fictional attempts to synthesise consciousnesses, instead choosing to concentrate on:

¹¹³ Kenner, *Wyndham Lewis*, p. 32.

¹¹⁴ Lewis, *The Complete Wild Body* (Santa Barbara: Black Sparrow Press 1982), p. 56.

[a world] of absurdly purposive lumps of matter that behave autonomously and *intelligently*, without any signs of direction from the mind, indeed often in leering opposition to its biddings. The body acts as an independent agent with, as it were, a mind of its own.¹¹⁵

Yet here Levenson's definition of Lewis's art is a curiously dualist one, and draws attention to the fact that we are used to being presented (or to believing that we are being presented) with *minds* in fiction. When they are *not* 'presented', when the motivating desires and thoughts associated with a character's behaviour are ignored by the novelist, then we tend to read the processes governing that behaviour as 'automatic'. However, our bodies do of course have minds of their own, and in highlighting the distinction between the various terms we use to describe these minds, be they character, or consciousness, or thought, Lewis was aligning himself with a quite specific vision of literary consciousness. In the debate between the Bailiff and Hyperides in *The Childermass* Hyperides declares that '[i]t is not people that interest me so much as the principles that determine their actions', and it is by replacing an interest in the notion of 'consciousness' with an interest in the principles governing his character's actions that Lewis most thoroughly challenged the prevailing aesthetic assumptions of modernism, in the process proposing a radical solution to the qualial impasse.¹¹⁶

In doing so Lewis endorsed a model of cognition which, as I have suggested, was heavily influenced by the material conditions of modernity. In these works 'thought' is presented less as a question of experience than as one of processing ability. Many of Lewis's characters merely register the world rather than see it. In *Revenge for Love* Don Alvaro is described as a proto-computer or Turing machine:

¹¹⁵ Michael Levenson, 'Form's Body Wyndham Lewis's Tarr' in *Modern Language Quarterly*, xlv (1984) 241-262, p. 245.

¹¹⁶ Lewis, *The Childermass*, p. 289.

his eye fastened upon this lazily moving object, Don Alvaro studied the profiled countenance, as you watch an advertisement flashed upon a safety-curtain before the beginning of a play. Since it is presented to you, you lend it your attention – all is grist to the mill of the senses, there is nothing that is refused in a vacant mind.¹¹⁷

Later in the novel Don Alvaro recognises a face as ‘an important puzzle, that taxed his recording machinery, like a question of mislaid fingerprints’; and a woman walking down the stairs is described as a ‘slowly tramping contraption’.¹¹⁸ Similarly, in *Snooty Baronet* Kell-Imrie is described as though we are being given a schematic of a computing machine: ‘The left eye kept a sullen watch: it was counting. Numbers clicked-up in its counting box, back of the retina, in a vigesimal check-off.’¹¹⁹

When Lewis’s characters are aged or mentally infirm, this tendency toward objectification is even more pronounced. Lady Fredigonde, the aging ‘ape’ whose narrative opens *The Apes of God*, is described in terms resolutely committed to treating her merely as dead (or at any rate dying) matter:

Her fixed eye was bloodless and without any animation, a stuffed eagle’s sham optic in fact, or a glass eye in the head of a corpse – though the bellows plainly worked still, the shoulders slowly grinding on, blown up and let down with the labour of the breath. Gradually however her personality made its appearance. Fragment by fragment she got it back, in rough hand-over-hand, a bitter salvage.¹²⁰

Lady Fredigonde’s body is here described as one inhabited only occasionally by a complete and healthy consciousness, and the waxing and waning of her mind is conveyed in this ‘prelude’ to the novel with some sensitivity, as an italicised interior monologue. But pretty soon the method is contextualised, and self-consciously explained away within the terms of established literary convention. Fredigonde,

¹¹⁷ Lewis, *Revenge for Love*, p. 19.

¹¹⁸ Lewis, *Revenge for Love*, p. 20, p. 21.

¹¹⁹ Lewis, *Snooty*, p. 42.

¹²⁰ Percy Wyndham Lewis, *The Apes of God* (London: Penguin 1965), p. 29.

whose ailing mind drifts in and out of contact with her body, is '[c]ut off from the optic or tactile connections' and passes:

most of her time in her mental closet, a hermit in her own head. Sometimes she would Stein away night and morning to herself, making patterns of conversations, with odds and ends from dead disputes, and cat's-cradles of this thing and that – a veritable peasant industry, of personal chatterboxing and shortsighted nonsense.¹²¹

It is not consciousness which is being evoked here, but style, the 'Stein-stutter' of the repetitious interior monologue which Lewis was so scathing of elsewhere. This is a satirical intervention, with Lewis skilfully employing a technique (with some mastery) only to undermine its claims to faithfully reify consciousness in a cognitive realist mode. As he suggested elsewhere, satire can *only* tell its stories behaviourally; from the outside:

To let the reader 'into the minds of the characters', to 'see the play of their thoughts' – that is precisely the method least suited to satire. That it must deal with the *outside*, that is one of the capital advantages of this form of literary art – for those who like a resistant and finely-sculptured surface, or sheer words.¹²²

A reader's report endorsed by Lewis compared his method, favourably, to that of Henry James, noting that in his work 'everything is told from the outside. To this extent it is the opposite of, say, James, who sought to narrate from the *inside* the character's mind. James, in short, was a Bergsonian, where you are a Berkeleyan'.¹²³

Lewis defended his occasional use of the interior monologue in similar terms, claiming that:

¹²¹ Lewis, *Apes*, p. 18.

¹²² Lewis, *Men Without Art*, p. 95.

¹²³ Qtd. in Lewis, *Men Without Art*, p. 97.

its use (for the purposes of projecting this brain-in-isolation, served only by the senses paralysed with age) is an exposure of the literary dogma of the ‘internal monologue,’ regarded as a *universal* method.¹²⁴

According to Lewis, the narration of interiority could only legitimately be applied to certain minds, to describing the thoughts of ‘(1) the extremely aged; (2) young children; (3) half-wits; and (4) animals’ – individuals cut off from their sensory inputs, or unable to process them rationally.¹²⁵ Of Gertrude Stein he observed (with a darkly anti-Semitic undertone) that:

Her art is composed, first, of repetition, which lyricizes her utterances on the same principle as that of the Hebrew poetry. But the repetition is also in the nature of a photograph of the unorganized word-dreaming of the mind when not concentrated for some logical functional purpose.¹²⁶

Similarly, argued Lewis, ‘Mr. Joyce employed this radical method with success (not so radically and rather differently) in *Ulysses*. The thought-stream or word-stream of his hero’s mind was supposed to be photographed. The effect was not unlike the conversation of Mr. Jingle in *Pickwick*.’¹²⁷ As we saw in the previous chapter, Lewis criticised Joyce’s ‘interior’ method in *The Art of Being Ruled* for not seeming all that different to Dickens’s method of characterisation in *The Pickwick Papers*. ‘[S]o by the devious route of a fashionable naturalist device’, he concluded, ‘that usually described as “presenting the character from the *inside*” [...] Mr. Joyce reaches the half-demented *crank* figure of traditional english humour’.¹²⁸ The

¹²⁴ Lewis, *Men Without Art*, p. 98.

¹²⁵ Lewis, *Men Without Art*, p. 98.

¹²⁶ Lewis, *Being Ruled*, p. 400.

¹²⁷ Lewis, *Being Ruled*, p. 400.

¹²⁸ Lewis, *Being Ruled*, p. 401.

‘unpunctuated portions of *Ulysses*’, he concluded, are ‘merely a device . . . for presenting the disordered spurting of the imbecile low-average mind’.¹²⁹

Thus in his novels Lewis established a compromised epistemology, rejecting the ‘infantilisation’ of raw sensation as a legitimate field for literature. In Lewis’s conception, qualia could never be conveyed, so there was little point in attempting to write them, if that meant indulging in the reductive, impressionistic impulses of Woolf and Joyce, at all. As Hugh Kenner summarises, Lewis argued that to mistake a written sensuality for that sensuality as lived is to make a grave mistake:

it is [...] a mistake to imagine that one is getting closer to them, or tapping any meaningful reality, in participating in their sensuous *Gemütlichkeit*. One must retain one’s aloofness from the hot time-world of the senses.¹³⁰

Lewis’s aversion to the ‘hot time-world of the senses’ was, as Frederic Jameson notes, a truly revolutionary aesthetic, but it never became as popular as he hoped, perhaps because its ultimate implications were so challenging. ‘Anglo-American modernism’, writes Jameson, ‘has indeed traditionally been dominated by an impressionistic aesthetic, rather than that – externalizing and mechanical – of Lewis’ expressionism. The most influential formal impulses of canonical modernism have been strategies of inwardness.’¹³¹ If such inwardness is shown to be inherently impossible to convey, then the last few hundred years of western literary development have been wasted.

In place of this naïve impressionism, with its faith in the veridical possibilities of language, Lewis exploited the performative artificiality of prose fiction, insisting on the interpretive temporality of the reading process. The syntactical difficulty of his writing, like its partial and atomistic descriptive strategies, forces the reader to slow

¹²⁹ Lewis, *Being Ruled*, p. 401.

¹³⁰ Kenner, *Wyndham Lewis*, p. 87.

¹³¹ Jameson, *Fables of Aggression*, p. 2.

down and *assemble* meaning in a painstaking, active and inevitably incomplete way. In a brief article on 'Lewis's Prose Style' Marshall McLuhan endorsed his methods in terms very similar to those associated by many critics with the impressionist literary projects that were examined in the first half of this thesis, arguing that:

For readers who are accustomed to action in prose narrative Lewis is baffling. Especially his early novels provide passage after passage which are like nothing so much as a package of materials with directions for making a painting [...] A good deal is left for the reader. But the result enables the reader to *see*.¹³²

According to McLuhan, in Lewis's work logical behaviourism's definition of consciousness as a series of if-then statements is turned into a style. But McLuhan's conclusion – that the result enables the reader to see – is, as I hope I have made clear over the course of this thesis, impossible to sustain. 'Lewis the painter' McLuhan claims, 'turned to literature in an age of passive mechanical photography. As a writer he set out to educate the eye by means of deft organisation of gestures. He translates what he sees into terms of painting, and translates this in turn into words which embody, in embryo, as it were, the same gestures.'¹³³ As I have argued, this satirical atomisation of perception, this commitment to a radical form of delayed decoding, can only ever be sustained if behaviourism is true, and qualia don't exist.

Lewis's novels challenge and interrogate the premises of realism in many ways, therefore, all of which tend to mark the limits of fiction and its relation to consciousness. His insistence on materiality at the level of the sentence is perhaps the most striking example of this resistance, as Frederic Jameson notes:

¹³² McLuhan, 'Lewis's Prose Style', p. 64.

¹³³ McLuhan, 'Lewis's Prose Style', p. 65.

we have, for example, the painstaking anatomy of the external world and of gesture; a kind of tireless visual inventory which reminds us of some of the more famous bravura or anti-bravura pieces in *Tristram Shandy*, and with which, given some initial object, page upon page might conveniently be filled.¹³⁴

Offering a political reading of this style, of the excessive anatomical deconstruction of the human body into constituent parts, and constituent actions, Jameson goes on to argue that:

The layering of metonymy, the step-by-step dismantling of the body's gestural machine implies that reality itself is infinitely divisible, that its smallest atomic units can themselves be further and further subdivided by an infinitely expandable accretion of sentences, towards some unimaginable infinitesimality.¹³⁵

Lewis's streams of description stand as a monument, according to Jameson, to the sheer open-ended industriousness of the human mind in the age of the machine: '*The Apes of God* is indeed a kind of ambiguous monument to this illimitable sentence-producing capacity, which is itself a figure for human productive power in the industrial age.'¹³⁶

'Realism pressed to an extreme capsizes into its opposite' writes Terry Eagleton, '[t]he more scrupulously you detail human action in this relentlessly externalising way, the more you estrange it.'¹³⁷ Lewis's wary relationship with language was borne largely of his innate fear of cliché; his fear of uttering something that had been uttered before, and by doing so contributing to language's status as a set of tokenistic stand-ins for action on the behaviourist model. Sometimes, for instance, his inverted commas function to distance his narrators from the clichés of speech, as

¹³⁴ Jameson, *Fables*, p. 298.

¹³⁵ Jameson, *Fables*, p. 31.

¹³⁶ Jameson, *Fables*, p. 32.

¹³⁷ Terry Eagleton, 'An Octopus at the Window' in *London Review of Books*, xxxiii (2011), pp. 23-24.

in *The Childermass*, where Satters's face is described as "'grave as a judge'".¹³⁸ Elsewhere, they add a hidden layer to our glossing of Lewis's performative sentences. *Revenge for Love* is full of this authorial distancing; 'O'Hara looked "rueful," as it is called in the vocabulary of the bookstall' we are told; 'as his British respectability was his long suit now, a certain obscure touchiness as to "appearances".'¹³⁹ When the revolutionary Serafin is shot in *Revenge for Love* his own uncertainty over what has occurred is shared by the reader. All he can say for sure is that 'something had "occurred".'¹⁴⁰ Lewis thus used inverted commas as a way of masking, of slipping in cliché (itself a form of mask, to hide the lack of thought behind an expression) and therefore reclaiming the mask, the expression, the tired phrase and worn gesture; making it new. Placed in inverted commas, a unit of meaning is flagged as nothing more than a token, and so is allowed to reclaim its place in the stream of Lewis's fictional world-making.

Elsewhere Lewis's insistent materialism is encoded in a syntax which treats dialogue merely as the inevitable outcome of the mechanical deployment of preconceived utterances; phrases and solecisms which occur ready-made in the mind to be unleashed on other minds. The Germanic inflections which pepper *Tarr* call attention to this, and force us, sentence-by-sentence, to construct meanings for ourselves. It is laborious work, certainly, but ultimately it is no more faithful to lived experience than the easy solecisms of other writers, or the often anguished laments for the little languages of interiority and sensory reification of the impressionists. French and German sayings, confined by the controlling presence of inverted commas, as well as the idiomatic undercurrents encoded in the 'rôles' people play, all make up a

¹³⁸ Lewis, *Childermass*, p. 6.

¹³⁹ Lewis, *Revenge for Love*, p. 31.

¹⁴⁰ Lewis, *Revenge for Love*, p. 49.

Lewisian style which, as Jameson continues, enacts at the level of the sentence the very irreducibility of felt sensation to language:

since it cannot tell us what to see, it will rather tell us what we would have seen had it been able to do so. Since there exists no adequate language for ‘rendering’ the object, all that is left to the writer is to tell us how he would have rendered it had he had such a language in the first place.¹⁴¹

Clearly, all that we can be offered within any work of fiction is the description of dispositions to behave. Just as behaviourism reduced the human subject to an ever more atomised description of behavioural processes, so Lewis’s fiction sought to show how the introspectionist, impressionist paradigms endorsed by Woolf and Stein were doomed to failure. Hugh Kenner identifies in this style Lewis’s ‘war with Time – especially with the time past that his heroes emphatically disown – a war which underlies every manifestation of his genius, from the galvanic absolutism of his prose syntax (which, at its most characteristic, works by systematic denial of the existence of sequence), to his obsession with the empty machine-minds of modernity.’¹⁴² But what Lewis ultimately records with his tortuous syntax, his obfuscatory metaphor making, and his inverted allegories is the very impossibility of language to ever reflect that which it wants to report. ‘There thus comes into being’ writes Jameson:

a language beyond language, shot through with the jerry-built shoddiness of modern industrial civilization, brittle and impermanent, yet full of a mechanic’s enthusiasm. Lewis’ style is thus a violent and exemplary figure for the birth of all living speech and turns to its own advantage the discovery that all language is second-best, the merest substitute for the impossible plenitude of a primary language that has never existed.¹⁴³

It is thus wrong to speak of narratives – such as Lewis’s –

¹⁴¹ Jameson, *Fables*, p. 86.

¹⁴² Kenner, *Lewis*, p. 6.

¹⁴³ Jameson, *Fables*, p. 86.

that are primarily concerned to 'stage' the behaviour of their protagonists rather than using an 'inner method' to tell us what they are thinking as 'behaviourist'. The distinction between the 'exterior' and 'interior' methods, as Lewis characterised them, is one of style or epistemology (the satirical as opposed to the sentimental, perhaps) rather than of ontology. All language is methodologically behaviourist, in that it necessarily presents us with descriptions of things rather than those things themselves. But if behaviourism as a *philosophical doctrine* were true, then the feeling of 'outsiderness' that characterises certain types of narrative fiction would cease to feel like anything of the sort.

Similarly, though externalities were for Lewis all that could legitimately be portrayed in fiction, this does not necessarily mean that he conceived of real individuals as devoid of interior mental lives; devoid of qualia. Indeed he could be read as arguing quite the opposite. By skitting over surfaces, and penetrating into the mental lives of his characters only when such a practice served to demonstrate their limited mental faculties, Lewis can be read as an author who worked expressly within, indeed who took as his subject, the limits of language itself. It is my contention that Lewis resisted what he termed the 'inner method' in his fiction because he realised that 'writing the mind', in any mimetic sense, was a hopeless and impossible task.

One of the reasons Lewis's work is so often ignored by critics, therefore, is that it flirts with a rather frightening possibility. If logical behaviourism is true then qualia cannot exist, and the kinds of problems presented by 'qualial' readings of fictional representations of mind I have previously examined can be solved in quite straightforward terms. But at the same time such explanations threaten to remove from the critical task the very quality which the humanist critical project is said to be seeking in narrative fiction: the presence of feeling.

**Conclusion: Qualia and the Limits of
Behaviourist Narrative**

One could also put it this way: How would a human body have to act so that one would not be inclined to speak of inner and outer human states? Again and again I think: ‘like a machine.’

Ludwig Wittgenstein, *Last Writings on the Philosophy of Psychology II*

As we have seen, much literary criticism has sought to read sensations – interpreted both as a source of knowledge and as isolated phenomenological experiences – back into modernist fiction. This is an impulse, I have argued, which emerged directly from the material, scientific and cultural conditions of modernity, and which tended to divide the sensorium along Aristotelian lines (distinguishing between the five classical senses) by invoking models provided by mnemonic technologies. Informed by what Sara Danius calls the ‘technological matrices of perception’, many accounts of modernism’s minds appropriated the perceptual metaphors associated with scientific reductionism (and with the mnemonic technologies that were increasingly able to accurately recreate sense data) and applied them to the literary realm.¹

In the first half of this thesis I showed how this tendency was fertilised by the close links between philosophy and fiction in the period (manifested particularly in the work of Virginia Woolf), and how the novel-form has subsequently often been interpreted as uniquely able to reunite a fragmented sensorium. In doing so it has come to be defined as a literary form primarily concerned to portray consciousness, and to provide an answer to the question of ‘what it is like to be’ another mind. James Joyce’s *Ulysses* complicates this account, and my reading of that novel finds it to be

¹ Sara Danius, *The Senses of Modernism: Technology, Perception, and Aesthetics* (Ithaca; London: Cornell University Press, 2002), p. 2.

an explicit challenge to the cognitive realist thesis. My interpretation of literary impressionism similarly found that critical narratives of modernism's 'inward turn' that take qualia into account must necessarily challenge the impressionist picture of fiction such readings are often orientated toward.

The second half of this thesis showed how the material contexts of 'neuromodernism' reinvigorated models of cognitive realism, and yet at the same time how these contexts made the limitations of materialist approaches to consciousness ever more apparent. Chapter five considers how the neuromodernist turn led to a conception of sensation as consisting solely of 'information' or 'data', and thus reinforced characterisations of the sensorium as an entity that was reducible to poetically compressed statements or, ultimately, to mathematical formulas.

My larger point has been to ask what influence a conception of consciousness informed by an acceptance of qualia has on our readings of fictional narratives of consciousness. Rather than having a mimetic relationship with the mind, I have argued that modernist fiction was an important constituent part of a nexus of cultural forces which allowed the myth of a reified mind to take hold within literary criticism. Modernism, therefore, can be seen to have set (or at least contributed to setting) the terms of many of the debates still current within philosophy of mind. As I have noted previously, Daniel Dennett describes his anti-qualia model of consciousness (rather oxymoronically) as the 'Joycean machine'; in *The Blank Slate* Stephen Pinker misquotes Virginia Woolf to claim that modernism turned its back on human 'nature' 'in or about December 1910.'²

Yet the incoherence of many of these positions has, I hope, been made evident. Despite Jonah Lehrer's protestations to the contrary, Proust simply *wasn't* a

² See Stephen Pinker, *The Blank Slate* (London: Allen Lane, 2002), pp. 409-10. A good rebuttal of Pinker's position can be found in Lisa Zunshine, *Why We Read Fiction: Theory of Mind and the Novel* (Columbus, Ohio: Ohio State University Press, 2006), pp. 40-44.

neuroscientist.³ I have argued that modernism's attempts to 'write consciousness' should not be interpreted as instances of visionary discovery, in which artists anticipated scientific truths about the functions of the brain, but as creative acts, the influences of which are still being felt. Modernist narrative fiction didn't create *objects* of mind, therefore, but it did equip us with the metaphors by which those objects became thinkable, and the discourses with which we continue to describe them. The 'cognitive turn' in criticism, like the critical narrative of an 'inward turn' which held sway before it, often obfuscates precisely what an ontologically 'realistic' account of consciousness, either scientific, philosophical or literary, would or could consist of. We only think that we are being presented with particularly veridical portraits of consciousness within modernist fiction, I contend, because modernist fiction has taught us what such portraits *should* look like.

My central argument in this thesis is that writing qualia is impossible: to suggest otherwise is to commit a category mistake. Therefore, if we endorse qualia does it make any sense to argue, as does Alan Palmer, that in 'behaviorist narratives' (like those of Percy Wyndham Lewis that we examined in the previous chapter) 'very little direct access to minds is given, the behaviour of the characters only makes sense when it is read as the manifestation of an underlying mental reality'? It remains unclear, under the auspices of qualia, precisely how 'direct access to minds' could *ever* be given, in *any* narrative: either scientific, psychological, or literary.⁴ Their very unknowableness, as we saw in chapter two, is what makes them minds.

To conclude my discussion of modernism's narratives of sensation I want to draw attention to a distinction that can be made between methodological behaviourism and 'behaviourist narrative' as the term is employed in contemporary

³ See Jonah Lehrer, *Proust was a Neuroscientist* (Boston: Houghton Mifflin, 2007).

⁴ Alan Palmer, *Fictional Minds* (Lincoln: University of Nebraska Press, 2004), p. 140.

narrative theory, and which seems to have further complicated the ontological assumptions of many cognitive narratologists in relation to the question of qualia.

With the so called ‘cognitive turn’ in literary criticism, in line with what Patricia Waugh has described as a general ‘biologisation’ of culture, the relationship between consciousness and its representation in fiction has come full circle.⁵ As I noted in chapter one, cognitive narratologists have begun to invoke something like Lewis’s notion of ‘behaviourist narrative’ to describe a form of narrative that purports to be less interested in writing the ‘insides’ of a character’s mind than in reporting their actions. According to Gerald Prince, for instance, such ‘behaviourist narrative’ can be defined as:

objective narrative; a narrative characterized by external focalization and thus limited to the conveyance of the character’s behaviour (words and actions but not thoughts and feelings), their appearance, and the setting against which they come to the fore.⁶

In the preceding chapter we saw how, as a psychological doctrine, behaviourism was (like Lewis’s own novels), borne of a dissatisfaction with the perceived subjective bias of introspectionist psychology and what Hugh Kenner calls the ‘hot time-world of the senses.’⁷ As a narrative strategy, it supposed that the only proper way of evoking character in fiction was to report behavioural interactions and reactions. In this the doctrine directly addresses critical anxieties which, I have argued, are central to modernism’s own conception of narrative. It is undoubtedly the case that, as Palmer goes on to suggest, a ‘good deal of twentieth-century narration is characterized by a reluctance to make the decoding of action too explicit and a

⁵ See Patricia Waugh, ‘Writing the body: Modernism and Postmodernism’ in *The Body and the Arts*, ed. Corinne J. Saunders, Ulrika Maude and Jane Macnaughton (Basingstoke: Palgrave Macmillan 2009).

⁶ Gerald Prince, *Dictionary of Narratology* (Aldershot: Scholar, 1988), p. 10.

⁷ Hugh Kenner, *Wyndham Lewis* (London: Methuen & Co., ltd, 1954), p. 87.

disinclination to use too much indicative description or contextual thought report.’⁸ But what I have shown throughout this thesis is that the question of whether this resistance really leads to the creation of ‘behaviourist narrative’, in anything other than a loose metaphorical sense, is deeply suspect.

In many ‘cognitive’ approaches to modernist fiction, therefore, the ‘inward turn’ is refigured as only one side of a representational divide, part of a division that allegedly became more pronounced within modernist fiction. Thus ‘[w]hen Woolf shows Clarissa observing Peter’s body language’, writes Lisa Zunshine of Virginia Woolf’s *Mrs Dalloway*, ‘she has an option of providing us with a representation of either Clarissa’s mind that would make sense of Peter’s physical action [...] or of Peter’s own mind.’⁹ In choosing to describe behavioural actions rather than inner mental states, argues Zunshine, Woolf is drawing attention to the fact that, as readers and human beings, we are able to posit those thoughts, desires and beliefs that motivate Peter’s actions, ‘reading’ the minds of characters through the behaviour they display, and giving our ‘Theory of Mind’ a ‘rigorous workout’.¹⁰ ‘Woolf is able to imply’, writes Zunshine, ‘that her representations of Hugh’s, Lady Bruton’s, and Richard’s minds are exhaustive and correct because, creatures with a Theory of Mind that we are, we just know that there must be mental states behind the emotionally opaque body language of the protagonists.’¹¹ But here the tension between ‘reading’ a mind and ‘inhabiting’ or ‘having’ one is never truly resolved. Zunshine both has her cake and eats it, suggesting not only that we are condemned always to be mere ‘readers’ of the conscious states of other people whilst maintaining that sometimes, somehow, we can transcend the ontological limits of subjectivity by reading *better*.

⁸ Palmer, *Fictional Minds*, p. 139.

⁹ Zunshine, *Why We Read Fiction*, p. 22.

¹⁰ Zunshine, *Why We Read Fiction*, p. 23.

¹¹ Zunshine, *Why We Read Fiction*, p. 34.

Similarly, in *The Basics of Narrative*, David Herman defines behaviourist narrative by offering a reading of Ernst Hemingway's short Story 'Hills like White Elephants', arguing that:

Hemingway's chosen strategy is to prompt readers to draw inferences about what it's like for the characters to experience events unfolding in the storyworld rather than providing direct characterizations of the qualia, or as they are also called, the 'raw feels' of these fictional minds.¹²

According to Herman, Hemingway's characters, 'reflectors' or 'focalisers' supply what he calls the 'consciousness factor'; the property of narrative literature which *makes* it narrative rather than poetic or merely descriptive. Thus 'in Hemingway's text', Herman continues, 'the question of qualia enters directly into the plot: the conflict at the heart of the story concerns what an experience (more specifically, the experience of having an abortion) will or would be like for the person who has that procedure.'¹³

Yet whilst I have agreed with Herman that narrative fiction is inherently orientated towards asking what it is like to be another mind, in this thesis I have suggested that narrative fiction's concern with qualia must always be fundamentally problematic. Though many of modernist fiction's richest effects stem from its *asking* Nagel's question, no novel can ever fully answer it. Of Herman's statement, for instance, we may legitimately ask what, in this case, the 'the question of qualia' might actually be? Is it whether such mental properties exist? If so then Hemingway's story seems relatively uninterested in asking it. The dramatisation of epistemological uncertainty is not the same thing as asking whether unrepresentable qualities of mental perception exist.

¹² David Herman, *Basic Elements of Narrative* (Chichester: Wiley-Blackwell, 2009), p. 148.

¹³ Herman, *Basic*, p. 151.

Such critical approaches therefore have much in common with the behaviourist method itself, as applied to the novel rather than to the study of other people. According to literary theorists of behaviourist narrative, the job of the reader is to decode a set of fictional instructions in the same way that we decode the behaviours of others in every day life in order to access a mind in a way that is impossible through other forms of discourse.

However, by suggesting that all mental states can be reduced to descriptions of behaviour or dispositions to behave, behaviourism, and its application to literary criticism, does not imply that we are doomed forever to have an external, an ontologically objective, relationship with the lives of others. Far from it. Logical behaviourism implies that accounts of consciousness offered by external behaviour (or by descriptions of that behaviour in a novel), are all that mental states consist of, and subsequently that we *can* enter another mind, literally inhabit it, by witnessing, either first hand or through narrative, the behaviour of the being of which it is a part. Logical behaviourism may seem unattractive from a humanist perspective, therefore, because it threatens to deny interiority. But it is also an account of consciousness that offers the best hope for cognitive realist arguments for the affective power of the novel, for it suggests that in reading we *can* experience the minds of others directly, because all their minds consist of is behaviours. This is the double-bind the cognitive realists must negotiate. Too often, as I have shown, they fail to do so.

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