

CHAPTER 4

Thinking in literature: modernism and contemporary neuroscience

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REPRESENTING MIND: THE ANTI-CARTESIANISM OF THE NOVEL

In *The Blank Slate: The Modern Denial of Human Nature* (2002), Stephen Pinker argues that only a recognition of the truths of the new molecular biological sciences, and specifically evolutionary psychology, might provide any hope of future social progress. Forty years on from the original Rede lecture, 'The two cultures and the scientific revolution' of 1959, Pinker's argument essentially reiterates that of his predecessor, the spectroscopist and novelist C. P. Snow, and even extends Snow's fanatical earnestness in scapegoating literary modernism (and its heir, the postmodern), in a broad indictment of modern literary culture for its backward-looking indifference to science and its pernicious cultural pessimism. Pinker's vitriol against the modernist indifference to scientific truth is, however, focused, unlike Snow's, on the alleged ignorance of its practitioners about how the mind really works. His favoured target is Virginia Woolf. The attack on her begins with a misquotation – of her famous 'on or around December 1910, human character changed'. Assuming that an author so insistent on truth would have checked his facts, the slippage from 'human character' to 'human nature' can only be viewed as a convenient means to recapitulate his subtitle and to treat with special opprobrium a writer who dares so ostentatiously to assert that 'human nature' changes. Woolf is arraigned, along with the 'elite arts' in general, as a major perpetrator of a myth of the social construction of self that is still wilfully being promulgated in defiance or denial of the scientifically objectivist understanding of human behaviour gleaned through knowledge of the now fixed and purely biological elements in hominid evolution. Woolf's psychology is deemed to rest on an outmoded and erroneous science that has produced the myth of the mind as a 'blank slate', responsible for the disastrous utopian social engineering that underpins the history of modernity: 'a theory of perception that was rejected long ago: that the sense

organs present the brain with a tableau of raw colours and sounds and that everything else in perceptual experience is a learned social construct'. This 'militant denial of human nature' reaches its apogee in the postmodern. Pinker ends more upbeat about the future, looking to a new era of biological truth in which 'the application of the cognitive sciences and evolutionary psychology to the arts will become a growth area in criticism and scholarship'.¹

Since the publication of Pinker's prognostications, however, crude models of evolutionary psychology have been largely (though not wholly) displaced by developments in the cognitive neurosciences that offer not only a more complex, nuanced and persuasive account of mind and cognition, but one which, surprisingly enough, seems uncannily to bear out the literary performance of thinking – and thinking about thinking – that happens in much modernist fiction. In this chapter, I will suggest that setting modernist writing alongside contemporary cognitive neurosciences may reap the reciprocally beneficial effect of displacing both Pinker's model of mind and his (and others') favoured model of modernism. Engagement with the more enactive model of mind current among cognitive neuroscientists helps to dislodge the disabling myth of modernism as the performance of a solipsistic mind, an 'inward turn' expressive of a purely private self. In this orthodox account, an introspective understanding of minds other than one's own is limited at best to a kind of extended solipsism, either 'putting oneself in the shoes of', in a simulated experience of *what it feels like* to be inside another mind, looking out at and accessing a world through sensations, impressions and thoughts, or, holding a theory of mind extrapolated from one's own introspective activity that may then direct one's inferences to frame the observation of others' behaviours. (Both constitute what philosophers refer to as Folk Psychology.) In both, mind is a shadow that falls across and processes a world of immediacy from which it is ever locked out. Henry James's idea of the figural narrator as a watcher at a window, or Lukács's negative view of modernism as solipsistic and withdrawn, or Woolf's announcement in 'Modern Fiction' that 'for the moderns' – as opposed to the materialists, Bennett, Galsworthy and Wells – 'the point of interest' in fiction's future 'lies very likely in the dark places of psychology': all have been invoked to point to the essentially *introspective* mode of modernism.² Freudian psychoanalysis is used to provide further confirmation. In his revisionist *Beyond the Pleasure Principle* (1920), Freud elaborated the essentially defensive and inhibitory nature of mind, emphasising its solipsistic tendencies, its withdrawal from, rather than engagement with, the world.

Like a delicate sea anemone, consciousness is ‘this little fragment of living substance ... suspended in the middle of the external world ... and it would be killed by the stimulation ... if it were not provided with a protective shield against stimuli’.³

However, just as Freud, on numerous occasions, acknowledged generously his debt to literature, so might the newest cognitive neurosciences enhance their own understanding of mind through engagement with literary modernism – and vice versa: the sciences and humanities may have reached a moment where, in a world that requires complex thinking for almost all of its problems, scientific, philosophical and literary sources may mutually benefit from each others’ perspectives on what it is to think and ‘to “have” a mind’. This is not, of course, either to view psychology or the cognitive neurosciences as legatees of modernism, in a kind of reverse two cultures triumphalism. Woolf, Proust and Joyce hardly regarded themselves as forerunners of any cognitive revolution but, unusually gifted in their capacity to reflect on and understand the workings of their own minds, they experimented tirelessly with ways to represent mind that map closely onto the more scientific, evidence-based accounts emerging in the contemporary neurosciences in the work of Antonio Damasio, Eric Kandel and V. S. Ramachandran, in the neo-phenomenological account of the role of existential feelings in the building of selves and worlds, and in the work of cognitive philosophers such as Andy Clark with the idea of the extended or distributed mind.⁴

All, in their various ways, engage a model of thinking where the tacit, processual and embodied underpins the propositional and the conceptually inferential, as well as the more evidently ‘Cartesian’ and meta-reflective. *Mind* here emerges as a distributed entity across body, consciousness and world, rather than residing – in the more familiar Cartesian picture – in a location ‘inside’, like an engine in the body of a car, or ‘outside’, standing over a world implicitly alien to it. But until the development of the latest cognitive neurosciences, versions of the Cartesian picture have been remarkably persistent, in a protean way, in science and philosophy, with many an avowed anti-Cartesian falling into unintentional dualist assumptions. Hence, productive dialogue between the arts, sciences and philosophies of mind was almost impossible as long as that picture remained secure. There are plenty of examples: Gilbert Ryle’s *The Concept of Mind* (1939) insisted that a fully developed third-person, scientifically behaviourist account of human actions would eliminate any need to posit a Cartesian *cogito* with its ‘ghost in the machine’ theory of mind. But his philosophical behaviourism simply extended a tradition seeking

to ground its model of mind in a rational account that eliminates the sensory and feeling body, or in a scientific narrative that evacuates consciousness as a space of interiority involving thoughts, feelings, sensations and impressions grounded in the activities of the body. Similarly, at the heart of first- and second-generation cognitivism, Dennett's book *Consciousness Explained* (1991) promised a fully scientific materialist account of mind that suffered neither from the limited externalism of the behaviourist version nor the uncertain aporias of subjective introspection, where the 'I' is both object and subject of its own activities. There is, Dennett tells us, no 'Cartesian theatre': feelings or sensations or 'qualia' are simply complex dispositions of the brain, and the 'self' (otherwise known as the Audience in the Cartesian theatre, the Central Meander or the Witness) turns out to be a valuable abstraction, a theorists' fiction rather than an internal observer or 'boss'. But the 'self' that emerges seems not to require a visceral body situated in a complex environment: pre-programmed parallel scripts simply run as on any optimally functioning computer.

Curiously, though, the one contemporary literary writer who has most extensively and directly engaged with cognitive neuroscience has also tended to perpetuate the myth of the modernist 'inward turn'. I'm referring, of course, to the British novelist, Ian McEwan, whose career has followed faithfully the twists and turns of the recent history of the 'psy' and 'neuro' sciences. His unusual readiness to give away the intellectual sources of *Saturday* (2005) in the new neuroscientific literature presumably expresses his ambition to take the modernist representation of mind in the direction of greater scientific truth and to use fiction itself as an informed instrument of epistemological reflection on science. For *Saturday*, almost obsessively, flaunts its intertextual relations with literary modernism, setting up a kind of Socratic dialogue on the mind that underpins both its moment-to-moment phenomenology and its thematic plot. Like Woolf's *Mrs. Dalloway* (1925), the novel opens with a protagonist at a window: a self-reflexive signal that we are looking out of a post-Jamesian 'house', where words somehow build a world by conveying the feel of the pre- and the non-verbal. In a memorable scene, Perowne peels open a human skull to expose the tissues of the brain, and indulges in a self-conscious moment of reflection on the problem of consciousness: on how 'mere wet stuff can make this bright inward cinema of thought, of sight and sound and touch bound into a vivid illusion of an instantaneous present, with a self, another brightly wrought illusion, hovering like a ghost at its

centre. Could it ever be explained, how matter becomes conscious?’⁵ Through Perowne, we detect his author’s more metafictional preoccupation. Although a literary text doesn’t engage the eye as in painting, or tactility as in sculpture, or even the auditory as music does, relying instead on the vividness of a mental world created out of words on the page, this world of words – a kind of thinking on paper – nonetheless takes on the solidity of actual perception, producing and engaging intense feelings through its concretisation in the ‘bright inward cinema of thought’. If the distinctive feature of *modernist* fiction is that it presents not the mimesis of a world, not even the self-conscious mimesis of a world, but the self-conscious mimesis of the *perception* and *constitution* of a world through minds that are also constituted in and through that world (ordinary minds on an ordinary day), then it may be that a new fiction, armed with the insights of the brain sciences, may proceed beyond a talking cure that offers only hermeneutic access to mind. Metafictionally, too, such fiction might itself constitute an inquiry into the sources of that mysterious ‘bright inward cinema’ that is also the fictional world.

A need to find his own position in the celestial panoply of high-modernist novelists seems, for McEwan, to run alongside an enthusiastic engagement with evolution and the neurosciences that insinuates their more advanced grasp of mental interiority. *Saturday* ends with the last line of Joyce’s ‘The dead’, a reminder of the mind’s capacity to move between many worlds, but where the ordinary, sensory world carries the paramount demand for assent to it as the ‘real’. Perowne, like Gabriel, looks fondly at his sleeping wife before returning to the window where it all – story and discourse – began: ‘There’s always this, is one of his remaining thoughts. And then: there’s only this. And at last, faintly falling: this day’s over.’⁶ The novel comes full circle. For Perowne had awoken at the start to gaze from his window onto the perfect Adam square in front of the house, a space which (somewhat like the belief-desire psychology of the era), encapsulates an ideal of rational transparency that is also Perowne’s own: ‘an eighteenth century dream bathed and embraced by modernity’.⁷ But more than a Jamesian watcher, this twenty-first-century observer is avatar and focaliser of a new ‘molecular gaze’ that might one day map the neural correlates of mind (indeed, later in the novel, he will correctly diagnose, through observation of his behaviour, the single gene abnormality that has destroyed the free will of his secret-sharer and violent assailant, Baxter). ‘An habitual observer of his own moods’, Perowne moves towards his window, noting a feeling of euphoria and assuming that ‘at the

molecular level there's been a chemical accident while he slept – something like a spilled tray of drinks, prompting dopamine-like receptors to initiate a kindly cascade of intracellular events'.⁸ Both *Mrs. Dalloway* (1925) and *To the Lighthouse* (1927) similarly open with displays of intense emotion: Clarissa's ecstatic sense of a lark and a plunge, and James's response of 'extraordinary joy' to his mother's promise of a visit to the lighthouse.⁹ But under the molecular gaze, the glimpse of a complex psychological interiority shaped by family life is flattened out, represented as internally wired chemical flows – neurotransmissions of a complicated machine. Emotion, thinking and responding are all controlled at the molecular level. The Cartesian self lives on in inverted shape as the mind is reduced to the brain and the brain to an extension of a body running off the molecular script. McEwan usefully demonstrates how the liberal self is challenged in all its shibboleths by the molecular revolution. But he still avoids full acknowledgement of the profound – and now scientifically authenticated – literary modernist grasp of the interior workings of the mind.

Indeed, running through much modernist writing is a version of the embodied and extended mind and a specific engagement with modes of bodily thinking – analogical, associative, inferential and narrative – that provide the foundation for expanded accounts of interiority and cognition outside the Cartesian parameter. The embodied mind was, in a largely untheorised way, central to the project of mainstream literary modernism. T. S. Eliot – its major architect in Britain and America – early drew attention to the significance of emotion and the senses in thinking, and to the role of poetry in demonstrating their centrality to human reason, judgement and knowledge. His essays on Dante, the Metaphysical poets, Hamlet, Massinger, Milton and Marvell are explicitly anti-Cartesian and provide the redemptive and restorative myth of modern poetry that, with the work of Richards, Leavis and the New Critics, contributed significantly to the building of the disciplinary ethos of modern literary studies. Literature could restore the more embodied and public reason of a pre-modern era that had evidenced a 'very high development of the senses' when thought was seen as an experience that modified sensibility. Before this 'dissociation of sensibility', the human 'intellect was immediately at the tips of the senses'; the poet could 'feel his thought as immediately as the odour of a rose' for, in this era, 'every precise emotion tends towards intellectual formulation'.¹⁰ Accordingly, the Eliot–Pound account of modernism justified itself as the programme for a revolutionary poetics that might retrieve a mode of *embodied or tacit thought* unavailable to

the thinking of an instrumentalist modernity. Eliot praises Dante, in particular, for writing that is the poetic equivalent of a state of mind and where ideas – ‘philosophy’ – appear only as the embodied perception of a world.¹¹ Instead of reading the *Summa Theologica* as preparation for understanding the medieval world-picture of *The Divine Comedy*, he recommends that the modern reader should simply cultivate the kind of humility of a person visiting a new world for the first time and allow language to do its work in *transporting* him or her into a largely processual, affective and sensory experience where thinking is less verbal or inner speech than a perceptual immersion in the world. Eliot writes of the experience of a literary world in the way that Malinowski would see the role of the ‘participant observer’ in the newly immersive, fieldwork theory of anthropology.¹²

Eliot is not the only modernist exercised by the problem of overcoming the dualist account of mind and its ramifications. Preoccupations with Cartesianism lurked in a range of contemporary accounts of mind and matter: the new bio-medicalised sciences, such as neurology and neuropsychiatry, were already beginning to think in terms of mapping the mind directly onto the brain or neural circuits, or to understand it as a kind of complex flow of energy, a thermodynamic or intelligent machine, as in Freud’s early *Project for a Scientific Psychology*. New analytical philosophies intensified a commitment to formal logical systems (after Frege’s critique of nineteenth-century empiricism as a species of psychology) and the revolutionary discoveries in mathematical physics seemed to suggest a new spiritualism in their theorisation of matter as no more than space and empty points of light. The American pragmatist philosopher, John Dewey, would later point out in *Art as Experience* (1934) that such philosophies served to perpetuate the effects of Cartesian thinking: in ‘making mind purely immaterial (isolated from the origin of doing and undergoing), the body ceases to be living and becomes a dead lump’.¹³ Dematerialised matter and materialised minds might leave the mechanisms of an – albeit uneasy – dualism largely in place. This uneasiness is recorded at the heart of Woolf’s essay, ‘On Being Ill’, where she artfully lays bare the contradictions of the Cartesian stance through the depiction of yet another watcher at a window: ‘The body is a sheet of plain glass through which the soul looks straight and clear, and, save for one or two passions such as desire and greed, is null, and negligible and non-existent’; but in the next breath she continues: ‘The very opposite is true. All day, all night the body intervenes; blunts or sharpens, colours or discolours. . . The creature within can only gaze through the pane – smudged or rosy;

it cannot separate off from the body like the sheath of a knife or the pod of a pea for a single instant.¹⁴ Playfully but presciently, Woolf is repudiating the idea of cognition as the depiction by a pre-wired brain of an external world that is also pre-given and available for manipulation, or where mind is either a pre-written narrative script or a transcendental apperception or a disembodied ghost in a machine.

If Woolf is often slippery on the mind–body relation, seeming to prevaricate over the existence of a soul, it seems likely that she was simply looking for a way to resist a ‘metaphysics’ of materialism, whilst broadly accepting the embodied and enactive nature of mind. Sometimes she uses the heart as a way round this problem. Almost the last words of *Mrs. Dalloway* are ‘What does the brain matter compared with the heart?’ (spoken by Lady Rosseter), followed by Peter Walsh’s thoughts to himself: ‘What is this terror? What is this ecstasy... What is it that fills me with extraordinary excitement?’ And finally, ‘It is Clarissa, he said. For there she was.’¹⁵ In McEwan, the brain is rather more in evidence than the heart, opened up with the technical equipment of modern science and the skill of the neuroscientist. Terror and violence lurk, but are managed through the rationally applied skills and the cool compassion of the liberal professional. When it is opened up, the brain is revealed as a thing more beautiful than sublime. The watcher remains safely behind the window looking out or, equipped with the technical expertise of the scientist, looking in.

THE ENACTIVE MIND IN MODERNISM: SOURCES AND EXAMPLES

It was undoubtedly Darwin’s *The Expression of the Emotions in Humans and Animals* that inaugurated the anti-Cartesian turn that is now so discernible in contemporary cognitive neuroscience. In this late work, Darwin began to explore the idea that, far from being sources of human error that obscure the efficacy of clear and distinct ideas, the emotions are fundamentally adaptive and basically evaluative in orienting the organism towards knowledge of its environment. The key moment of the contemporary return to, and refinement of, Darwin’s naturalist account of mind was the publication in 1999 of Antonio Damasio’s book *Descartes’ Error*, which provided clinical evidence of how the affective responses of the body are ‘integral to the processes of reasoning and decision-making’ and of how consciousness emerges from the body initially as a ‘feeling of a feeling’.¹⁶ Damasio sees affect as a response to mental as well as physical

impingements on the body – memories, thoughts, afterimages – in a process of continuous somato-sensory monitoring that keeps us anchored through feelings that prompt continuous bodily readjustment to the world, protecting the organism's equilibrium through periods of change, and providing for consciousness an ever-changing map of the organism's relation to its world. Our fundamental sense of self essentially emerges as 'the feeling of a feeling', a term first used by Damasio in his book, *The Feeling of What Happens: Body, Emotion and the Making of Consciousness* (2000), where he argues that 'consciousness emerges when the primordial story – the story of an object causally changing the state of the body – can be told using the nonverbal vocabulary of body signals. The apparent self emerges as the feeling of a feeling.'¹⁷ Recent research in phenomenological psychiatry has developed Damasio's insights into the bio-regulatory function of emotion, demonstrating how our tacit sense of being in the world is also dependent upon a continuous flow of more indeterminate but pervasive existential feelings that provide for an ontologically secure sense of world and self. When such feelings are disturbed or absent, ontological security fragments and self is indeed experienced as situated uncannily outside of the world as though being observed through a sheet of glass or an invisible wall.¹⁸ Phenomenologists have examined how feeling is not simply a component of the body but also a quality of our very perception of the world: 'feelings' may not always be registered by the body, but may materialise as the colour and 'mood', or what Martin Amis has referred to as 'the feeling tone', of a world.¹⁹

The most important intellectual bridge, however, between these contemporary insights and the work of Charles Darwin is undoubtedly William James. As his biographer Robert Richardson has recently suggested, 'from our point of view in 2010, a hundred years after his death, James looks very much the prophet ... and his work marked the real beginning of our age of neurophysiology and neurobiology'.²⁰ James first showed how rationality rests on feeling; how the mind is enactive and not statically located; how it is impossible to draw clear boundaries around mind, body and world. It is to James that we owe the insight that it is not to the *cogito* that we owe our sense of existence, but to that complex feeling of being rooted in the body and its sense of proprioceptive situatedness in a world. In an important chapter, 'The perception of reality' in Volume II of *The Principles of Psychology*, James began to explore these ideas: 'cognition in this view is but a fleeting moment, a cross-section at a certain point of what in its totality is a motor phenomenon'. Together with his radical theory of emotion, James provides an

important source for both literary modernist thinking about thinking and for our own contemporary neuroscience. Perhaps the key statement in 'The perception of reality' is the assertion that 'As bare logical thinkers, without emotional reaction, we give reality to whatever objects we think of, for they are really phenomena, or objects of our passing thought, if nothing more. But, as thinkers with emotional reaction, we give what seems to us a still higher degree of reality to whatever things we select and emphasise and turn to with a will. These are our living realities.' Without such an affective orientation towards the world, as in states of melancholia, he continues, the world itself begins to appear unreal, as if there were 'a wall between me and the world', as if I were 'sheathed in India Rubber'.²¹

It was James too who first began to understand the plasticity of the brain in such terms: he described the sensorimotor action of electrical impulses running along the nerves in a hydraulic metaphor of water flowing in runnels, cutting through tributaries and laying down pathways. The body's habits in the world are figured as neurological pathways in the brain. What might stop or divert the flow and create new pathways are sensations and stimuli from the environment that are experienced in the body as significant and arresting affects. It is *affect* that both grounds our being in the world – constituting the very foundation for thought – and replenishes that ground, allowing us to break *new* ground, for 'a purely disembodied human emotion is a nonentity ... for us, emotion dissociated from all bodily feeling is inconceivable ... whatever moods, affections and passions I have are in truth constituted by, and made up of, those bodily changes with which we ordinarily call their expression or consequence.'²² Feelings, the continuous flow of visceral, sensorimotor and affective response, anchor us in, attune and minutely adjust our relation to the world, making us aware, more than anything, of the way in which mental life and flourishing are 'knit up with the body'.²³ But it was in the modernist fiction of the period that this model of the enactive mind began to be extensively developed. Woolf herself redeploys James's word 'runnel' near the beginning of *The Waves* (1931), in Bernard's memory of Mrs Constable, the housekeeper, squeezing the wet towel over his body so that 'water pours down the runnel of my spine. Bright arrows of sensation shoot on either side. I am covered with warm flesh. . . Rich and heavy sensations form on the roof of my mind; down showers the day . . . falls copious, resplendent.'²⁴ From bodily sensation to affective response and mental cognition – the sense of being 'me', alive in the moment, is part of the fullness of things. This effort to grasp the self by

holding or suspending (a favourite word of Woolf) the feeling of a feeling, by elongating the moment between sensation and feeling, connects writers as diverse as Eliot, Woolf, Joyce, Conrad, Pater, Fry, Simmel, Proust, Shklovsky, Mauron, I. A. Richards, Huxley and Lawrence, providing that signature motif of modernism, the epiphany, or what Woolf would simply refer to as 'the moment'.²⁵

Viewed from a Jamesian perspective, the 'inward turn' of modern fiction might be understood as an attempt to understand and represent mind precisely in this enactive, embodied and extended way: where rationality is not compromised, as in the Cartesian and Freudian models, by feeling, but is inefficacious or non-existent without it. James's model of the mind does not admit an unconscious, but is conceived spatially, on the model of a field of vision, where elements not engaging attention temporarily blur into the horizon on the fringes of perception, and where the emotionally salient aspects of the world are illuminated and in the foreground until they, too, blur and disappear over the horizon. Compared to the essentially defensive model of the Freudian, it is a model of mind that emphasises its open and responsive qualities, its ever-changing relation to its environment. But both offer a dynamic, enactive, transformative model of mind that reveals the complex way in which feelings shape both our knowledge of the world and our conception of its palpable reality. The critical orthodoxy, however, is that modernist fiction is almost exclusively identified with the defensive and deceptive, the unreliable and the darkly inconceivable, the introspective plumbing of unconscious depths, the probing of self-deceptions, desires and obscure drives and the self-dramatisations that hide characters from themselves and subvert their best-laid plans. The Jamesian image of mind as open to and adapted for the negotiation of social transactions and survival in a changing world – mind as embodied, purposive as well as unconsciously driven, orienting itself to its environments through affect and feeling, sensory response and reflection and in constant dialogue with its environment, including other minds, as well as itself – has perhaps been obscured by fascination with the Freudian model. I am suggesting that we need a better account of the modernist mind: one that draws on James as well as Freud and even learns from contemporary neuroscience about modes of cognition that are somehow intuited by the great modernist writers. We need to understand the 'lark' as well as the 'plunge'.

For this is the rhythm, of flowering and withdrawal, ecstasy and terror, which is 'life' in Woolf's novel: open the first page and the mind that is encountered is hardly solipsistic or withdrawn (though ominously

we are told that the doors are to be taken off their hinges). In the very first sentence, Clarissa thrusts *open* her windows and steps out onto the London street, immediately negotiates traffic and shops and passers-by, registering the sounds of engines, the cries in the street, the smells of flowers; at one moment, she is transported back, through memory and imagination and the warm feel of sunlight, to the visceral sensations of adolescent passion; at the next, she is suddenly knocked back into the present as the boom and leaden circles, the sound waves of Big Ben, spin out into the air and assault the ears; immediately, as they fade, she is propelled towards the future, as the interim lull is registered viscerally as a sense of foreboding, of some terror lurking, waiting, biding its time before it bursts upon the scene. But this is not simply the presentation of an introspective consciousness. It is a view through a mind thoroughly immersed in, and engaged with, and negotiating the world through a process of constant and imperceptible adjustment, extension and distribution of itself: a mind splitting itself off spatially, at one moment, so as to externalise itself empathetically and take up residence in the perspective of an onlooker in the present (Scrope Purvis), while, in the next, transporting itself temporarily so that the past is brought vividly if transiently into the present (Clarissa, Peter and Sally at Bourton, in their youth).

This presentation of consciousness could not be closer to the model of the enactive mind being developed in the work of Damasio, Edelman, Varela, Maturana and Andy Clark. But *Mrs. Dalloway* also reveals the precariousness of the sense of belonging to a world. For though Clarissa hangs on, 'making it all up' one minute and defensively withdrawing the next, Septimus has lost anchorage altogether and, unable to feel (though he says he can think), he experiences his body as corpse-like, the city a place of the dead: in contemporary psychiatric parlance he might be diagnosed as suffering from Cotard's Syndrome, a condition where the loss of existential feeling in extreme depression or trauma produces a depersonalised state in which the individual suffers the delusion of being dead and of inhabiting the world as a ghost.²⁶ But Septimus's insanity is presented as a consequence of a social system governed by measurement and proportion, ruled over by violators of the soul such as the medical professionals Holmes and Bradshaw, destructive of the deeper rhythms of life. His one moment of sanity, of regaining the feeling of flow, of the rhythm of life, as he sits with Rezia making the women's hats, is destroyed as Holmes bursts in on them (an echo of an earlier scene where Peter

Walsh bursts in on Clarissa sewing) and Septimus hurls himself through the window to his death.

Mrs. Dalloway demonstrates how the 'enactive mind' is also, inevitably, a defensive mind, evolved to make its way in the world, yet at the same time coping with the world's threats to the integrity of its being. Joyce's Bloom is another brilliant modernist study of a mind coping with the frantic mental bombardment of the metropolis. Bloom's strategy is one of defensive withdrawal from attentive focus and affective evaluation, as he simply allows the sights and smells and sounds of the city to wash over him in a steady and endless stream, his mind receptive and distracted at the same time, operating in a syntactical mode, largely paratactic, which enacts his refusal or inability to choose or prioritise or admit what is emotionally important to him: additive, associative and neutral in effect, his mental style mingles almost indistinguishably with the banalities of popular commercialised culture. But *Ulysses's* virtuosity has received intense critical scrutiny that has sometimes overshadowed the quieter achievements of Joyce's earlier work. For a particularly masterful representation of consciousness negotiating its environment, constantly readjusting itself, engaging feeling and sensation, memory and desire, 'The dead' from *Dubliners* (1914) is also, like *Ulysses*, a meditation on hospitality, exclusion, *Heimlichkeit* and alienation that draws the reader into the complex flow of existential feelings that anchor human beings to their worlds.²⁷ Its protagonist, Gabriel, is ironically presented as a character entirely unaware of the ways in which he shares the sentimentalism and narrow assumptions of the community he disdains. Separating himself from the crowd at the Misses Morkan's annual dance, he feels himself culturally superior, cosmopolitan – a subtle ironist in a roomful of earnest parochials. Repeatedly, Joyce represents him, through a technique of continuous kinaesthetic foregrounding, as physically positioned in space, constantly looking down or up or away from the gathering: he is positioned minutely in relation to the doorway, the window, the stairs and furniture, doorways, lights and shadows. Projecting a posture of cool indifference towards the moth-eaten brocade of custom, Gabriel is nevertheless shown burning with feeling as his true narcissistic investment in cutting the right kind of figure is gradually – and brilliantly – exposed. Things begin badly: he is immediately wrong-footed by Lily, whose rebarbative response to his intrusive questioning stings him. Blinded by a performative screen of patriarchal bluster, he is entirely unable to fathom the source of her

displeasure with him, but it puts him out of sorts and he never regains equilibrium. As his turbulent and contradictory feelings mount, so the base grammar of his figural narration shifts increasingly into the subjunctive mood. He reaches out to the cool of the window as if to recover his own 'coolness' magically through its touch.

Several times before the end of Joyce's story, Gabriel looks through its dark pane at the snowy spaces of elsewhere. This proleptic mode of consciousness now takes over, Gabriel imagining and projecting alternative scenarios, a dramaturgy of his affective life raised to heroic proportions. He sees himself presiding magisterially at the funeral of his aunt, recovering his place at the centre of the narrative and the community, even though the story is of her death and burial. Even at the crucial moment when he looks up the darkened stairway and first (and literally) misrecognises his wife as a stranger, even here, her story is confiscated from her, and she is framed aesthetically in a hypothetical painting, 'Distant Music', with Gabriel imagining himself as the artist. His only moment of ease and attunement to the spatio-temporal coordinates of the present occurs when he takes the patriarchal seat at the head of the table and takes up the knife ceremoniously to carve the ample meats and supervise their distribution. A story of haunting by the past, 'The dead' is narrated through the proleptic impulse of Gabriel's consciousness as he negotiates a complex emotional and existential relationship with his environment. This processual and embodied 'thinking' is the ground which, through associative and analogical development, allows him to detach himself, to 'think', in more classically Cartesian terms, by manipulating symbolic representations as part of planning, logic and inference, and creative and rational speculation. But this more fully verbalised or representational 'thinking', involving internal speech and pictorial representation, is made possible first through a kind of affective, gestural, embodied and mimetic interaction with his immediate environment. Just as Lily Briscoe conceives of Mrs Ramsay as a high-priestess or a purple triangle in order to detach her from the immediate impingements of context and to use that recreated image as the source of cognitive and emotional reorientation, so too Gabriel's constant embodied and somatosensory remapping of himself in 'The dead' yields fascinating insights into the workings of the human mind and the way in which 'rationality', far from consisting of linear logic or distinct ideas, is actually a complex process of gesture, mimicry, association, affect, proprioceptive adjustment and attunement: and through all of this is somehow achieved a sense of self and a sense of the real.

THE ALIENATED MIND IN MODERN FICTION:
THE HYPER-REFLEXIVE CONSCIOUSNESS

In foregrounding these ingredients for building a fictional world through the activity of enactive minds, modernism lays bare what is required for a feeling of self-presence and a sense of the solidity of the world. According to neuroscientific investigations of the brain, entering the perspectives of a fictional world and picturing the movements of its characters seem to involve the same neuronal pathways as actual perception and movement in the world. Similarly, there is no module for 'aesthetic' emotion: the same emotional areas of the brain are engaged in response to events, characters and settings in a novel as in the world outside.²⁸ What confers on this world the feeling of reality for the reader too is the sense of immersion in an inhabitable depth. In *The Psychology of Imagination* (1940), Sartre argued that the verbal image, built out of the mental or imaginary, and therefore not an actual object of perception, always teeters on the brink of the hallucinatory. This purely intentional image, for Sartre, inevitably feeds on its own reflection, sustaining itself through the auto-creation of the spectral shapes of desire, lacking the solidity of the real. Yet fictional worlds, though built on the daydreaming imagination and modernist fictional worlds self-consciously constituted through the minds of their imaginary inhabitants, do take on a solidity of specification (solidity being Locke's fundamental intuition of the real), of the feeling of existence and a sense of touching ground. Modernist fiction enhances this sense of depth through spatial and perspectival focalisation and temporal thickening produced by the continuous retrieval of the past as an experience indistinguishable from the present moment: think of the ending of *To the Lighthouse* as Lily Briscoe's eyes move back and forth from her painting to the receding image of the boat carrying Mr Ramsay and the children; or of the auditory effects, so powerful in Woolf's *Jacob's Room* (1922) and in Joyce's 'The dead' and Conrad's *Heart of Darkness* (1899), of voices heard, trailing into the distance, disappearing into darkness, conjuring the fringes of consciousnesses, of James's horizon of perception; or of the perception of objects through screens or veils that seem to confer on them an extra solidity, the sense of a hidden dimension, a behind. We might recall Jacob's mother surveying the shimmering bay through a film of tears, Marcel observing the wall through the projections of the magic lantern, Mr Verloc watching the projection on the wall of his own shadow as Winnie plunges the knife into his chest. This sense of depth is created through the focalisation of selective human minds

attentively scanning their environments for that salience and affective relevance that confers phenomenological meaningfulness on a world that would otherwise be dead and inert.

But there is an alternative mode of modernist fiction that operates as a kind of thought-experiment, allowing the reader to enter a character's consciousness conceived in entirely Cartesian terms. This is an alienated, disturbed and purely introspective consciousness, one that moves through dead, hypertrophied or glassy worlds providing neither the rough grip of the 'real' nor any sense of what phenomenologists refer to as 'ipseity', an indubitable sense of existing as a self. The modernist fiction examined so far is *anti-Cartesian* in its depiction of mind, but this second trajectory of modernism proceeds through an exaggeratedly inward turn and *intentionally* but absurdly perpetuates the Cartesian picture in order to reveal its essential pathologisation, diminution and destruction of human subjectivity and experience. As the mind turns inward – and this *is* an 'inward turn' – the world is drained of affective meaning and becomes a place of the *imaginary* in Sartre's sense, shimmery and strange and *like* a world but never achieving that depth and solidity that gives the feeling of reality. This hyper-reflexive modernism begins as early as Dostoevsky's *Notes From Underground* (1864), is developed by Kafka, Wyndham Lewis, Camus, Beckett and the Surrealists, and is extended in such contemporary contexts as the 'blank' fictions of Brett Easton Ellis, the flattened affect of J. G. Ballard or Will Self and the behaviourist mimesis of Muriel Spark's middle novels.

I have borrowed the term 'hyper-reflexivity' from the clinical psychologist Louis Sass, whose work in phenomenological psychiatry develops the concept as the key to understanding schizophrenia as a consequence of overinvestment in the Cartesian model.²⁹ His work defies the mainstream psychiatric tradition, established with Bleuler's physicalist account of *dementia praecox* (1911) as a degenerative condition of the brain or the Freudian account of psychosis as extreme regression. On the contrary, Sass reads schizophrenia in terms close to those of modernist 'dissociation of sensibility', as a pathology of over-intellectualisation, a consequence of construing mind as a conceptual tool entirely unrelated to the body. In Sass's account, once the mode of the hyper-reflexive becomes 'operant', what is ordinarily taken for granted becomes disrupted, hyper-aware and self-conscious: the implicit or tacit sense of existential feelings of being, the solid sense of selfhood, of belonging to and being anchored in a world and of comfortably inhabiting the body as the medium of relations with and perspectives on it. World and mind begin to disintegrate. The body

comes to be experienced as an alien thing, as carrion, as something dragged around, and the world too appears dead, flat, screened off, offering no affordances, no hierarchy of salience, no selective pressures or evaluations. When the body effectively ceases to be because it has ceased to be a *feeling* body, then Descartes's idea that the self persists because the individual would still continue to reason (in *Méditations*, especially 'Méditation VI') would seem to be far from the case. Schizophrenia becomes a kind of bizarre and disturbing exposé of the madness lurking in the Cartesian picture. As introspective withdrawal increases, a paralysing *akrasia* of the will sets in; the most trivial or routine action in the world outside requires a constant and explicitly formulated, enormous and energy-draining, effort. It is as if the actual world has to be rebuilt from scratch, like a child struggling to achieve its first movements or earliest perceptions, or a novelist making the first mark on the page to give birth to a world.

Fredric Jameson's seminal essay, 'Postmodernism, or the Cultural Logic of Late Capitalism' (1984), famously argued that the postmodern condition is characterised by such a waning of affect, a disruption of temporality marked by the feeling of living in an illuminated and hyper-real and perpetual present and the sense of dwelling in an aestheticised or sublime space.³⁰ Jameson insists in the essay that he is not talking about *clinical* schizophrenia and is simply using the idea of the disease to encapsulate the mood of the postmodern (though, like Sass, he quotes extensively from Marguerite Sechehaye's *Autobiography of a Schizophrenic Girl*). For as in the experience of the schizophrenic, writers working in the mode of the hyper-reflexive, and postmodernists in particular, often remove from their fictional worlds those tacit and invisible threads that serve to bind selves to historical worlds and which weave the texture of the realist novel, or the integrative mode of modernism, with their sense of psychological depth, temporal and spatial anchorage and close and multi-perspectival observations of behaviour. But although the hyper-reflexive emerges as the dominant of postmodernism, I would argue that it was always one of the two major trajectories of modernist writing. Kafka's 'Metamorphosis' (1915) is a famous early example, with its representation of the strangely flattened and habituated consciousness of Gregor Samsa whose absence of mental perturbation as he surveys his bodily transformation into a giant beetle produces a kind of ghastly comic effect. For the world built through Gregor's consciousness, one where the appalling becomes the banal and where bureaucratic rumination has already reduced Gregor's relation to his affective body as if to that of a form of

alien or insect life, is a world uncannily familiar to the twentieth-century urban dweller. Beckett would go on fully to exploit the comic potential of this mode of Cartesian splitting and, like Kafka, to flag up the disabling *akrasia* that follows such fundamental disconnection.

SOME PARADOXES OF THE FICTIONAL REPRESENTATION
OF MIND

The stark distinction between an 'integrative' and a 'hyper-reflexive' model of mind in modern fiction is heuristic, of course. In practice, almost all modern novelists are aware that any attempt to represent embodied thinking purely linguistically, even in aesthetic language, has to struggle against the ingrained tendency to conceive of thinking as purely mental representation or the manipulation of internal symbols that either stand in for an absent pre-given exteriority (or 'the real'), or constitute interior worlds of their own. The very attempt to represent consciousness *in writing* threatens to subvert even the most anti-Cartesian commitment by reconstituting consciousness itself as an *explicit* effect of the materiality of the text. Discussing how the loss of a background or tacit sense of embeddedness produces a sense of the world as representation, Merleau-Ponty, in *Phenomenology of Perception* (1945), offers the activity of writing itself as an example. So, if we turn our focus too obsessively onto the activity itself, as the hand gripping the pen, or the finger touching the keys of the keyboard, or the nib scratching the surface of the paper, then the foregrounding of the medium and the act of representation begins to displace the flow of absorption in the world that is being built through the words. The activity, the writing, then becomes inhibited, the imaginary world vanishes into black marks on a white surface; awareness dawns that consciousness is never an entity locked away in a skull but always distributed and prosthetically extended. But the intrusion of that awareness of its extension also threatens to disrupt its flow, producing a disturbing and alienating awareness of the material processes and conditions of its extension.³¹

The problem of how to *represent* an experiencing mind is the problem of preserving a sense of the tacit flow of feeling and consciousness that anchors the individual in an environment, while accepting that in order to build such a picture in a verbal medium, what is normally tacit must of necessity be explicitly constructed and selected and therefore carries the potential to disturb the 'flow' by intruding the act of representation and

an ontological awareness of the condition of fictionality, the status of ‘as if’. In *Saturday*, for example, McEwan is preoccupied with such problems throughout the novel, for he recognises, like all the modernist writers examined here, that the essential problem in depicting and exploring the embodied or enactive mind in fiction is the question of *how* you represent the non- and pre-verbal through the medium of language: it is easier by far to effect an ‘inward turn’ and to depict the self-communing or introspecting or internally dialogic mind. McEwan again makes things explicit for us: as Perowne swings his car into a side-street to avoid the anti-Iraq-War march, the narrator articulates the challenge for any writer who seriously sets out to represent, in all its sheer *economy*, the workings of the human mind:

The assertions and the questions don’t spell themselves out. He experiences them more as a mental shrug, followed by an interrogative pulse. This is the pre-verbal language that linguists call *mentalese*. Hardly a language, more a matrix of shifting patterns, consolidating and compressing meaning in fractions of a second, and blending it inseparably with its distinctive emotional hue, which itself is rather like a colour. A sickly yellow. Even with a poet’s gift of compression, it could take hundreds of words and many minutes to describe. So that when a flash of red streaks in across his left peripheral vision, like a shape on his retina in a bout of insomnia, it already has the quality of an idea, a new idea. Unexpected and dangerous, but entirely his.³²

Ironically, of course – and McEwan knows it – in bringing into such explicit focus what is normally tacit and lived, the novel’s *hyper-realism* produces something of the very hyper-reflexivity that he is attempting to avoid. The effort to be more ‘truthful’ about how the mind works seems to produce instead the kind of effect of those neo-realist paintings that look so much more real than photographs that our ontological certainties concerning the distinction between artifice and reality are uncannily and profoundly disturbed.

ENDNOTES

- 1 Pinker, Stephen, *The Blank Slate: The Modern Denial of Human Nature* (London: Allen Lane, 2002), pp. 412, 416, 418.
- 2 Woolf, ‘Modern fiction’, in *The Crowded Dance of Modern Life: Selected Essays of Virginia Woolf, Vol. II*, ed. Rachel Bowlby (Harmondsworth: Penguin, 1993), p. 11.
- 3 Sigmund Freud, ‘Beyond the pleasure principle’, in *On Metapsychology* (Harmondsworth: Penguin, 1991), p. 298.
- 4 See Andy Clark, *Supersizing the Mind: Embodiment, Action and Cognitive Extension* (Oxford University Press, 2008); Antonio Damasio, *The Feeling of What Happens: Body, Emotion and the Making of Consciousness* (London:

- Vintage, 2000); Gerald Edelman, *Wider than the Sky: The Phenomenal Gift of Consciousness* (Harmondsworth: Penguin, 2004); H. R. Maturana and Francisco Varela, *The Tree of Knowledge* (Boston: Shambhala, 1987); V. S. Ramachandran, *Phantoms in the Brain: Human Nature and the Architecture of the Mind* (London: Fourth Estate, 1999); Matthew Ratcliffe, *Feelings of Being: Phenomenology, Psychiatry and the Sense of Reality* (Oxford University Press, 2008); Sean Gallagher, *How the Body Shapes the Mind* (Oxford University Press, 2005); Eric Kandel, *In Search of Memory: The Emergence of a New Science of the Mind* (New York: W.W. Norton, 2007).
- 5 Ian McEwan, *Saturday* (London: Cape, 2005), p. 254.
 - 6 McEwan, *Saturday*, p. 279.
 - 7 *Ibid.*, p. 5.
 - 8 *Ibid.*, p. 5.
 - 9 Woolf, *To the Lighthouse* (London: Hogarth, 1960), p. 11.
 - 10 T. S. Eliot, *Selected Essays*, 3rd edn (London: Faber and Faber, 1951), pp. 209–10, 287, 135.
 - 11 *Ibid.*, p. 252.
 - 12 Bronislaw Malinowski, *A Diary in the Strict Sense of the Term* (New York: Harcourt Brace, 1967).
 - 13 John Dewey, *Art as Experience* (London: Allen and Unwin 1934), p. 263.
 - 14 Woolf, 'On being ill', in *The Crowded Dance of Modern Life*, pp. 43–4.
 - 15 Virginia Woolf, *Mrs. Dalloway*, ed. Claire Tomalin (Oxford University Press, 1992), p. 255.
 - 16 Antonio Damasio, *Descartes' Error: Emotion, Reason and the Human Brain* (New York: Quill, 2000), p. xiii.
 - 17 Antonio Damasio, *The Feeling of What Happens: Body, Emotion and the Making of Consciousness* (London: Vintage, 2000), pp. 30–1.
 - 18 See Matthew Broome and Lisa Bortolotti (eds.), *Psychiatry as Cognitive Neuroscience: Philosophical Perspectives* (Oxford University Press, 2009).
 - 19 Martin Amis uses this term throughout *Time's Arrow* (New York: Harmony, 1991).
 - 20 Robert Richardson (ed.), *The Heart of William James* (Cambridge, MA: Harvard University Press, 2010), p. ix.
 - 21 William James, *The Principles of Psychology* (New York: Dover, 1950), II, pp. 297, 298.
 - 22 *Ibid.*, p. 452.
 - 23 *Ibid.*, p. 467.
 - 24 Woolf, *The Waves* (London: Penguin, 1964), p. 22.
 - 25 See Woolf's 'Sketch of the past', in Jeanne Schulkind (ed.), *Moments of Being: Unpublished Autobiographical Writings* (Brighton: University of Sussex Press, 1976).
 - 26 For an excellent discussion of Cotard's Syndrome, see Matthew Ratcliffe, *Phenomenology, Psychiatry and the Sense of Reality* (Oxford University Press, 2008).

- 27 James Joyce, 'The dead', *Dubliners*, ed. Terence Brown (London: Penguin, 2000).
- 28 See Shaun Nicholls, *The Architecture of the Imagination* (Oxford University Press, 2006).
- 29 Louis A. Sass, *Madness and Modernism: Insanity in the Light of Modern Art, Literature, and Thought* (Cambridge, MA: Harvard University Press, 1992) and 'Affectivity in schizophrenia: a phenomenological view', in Dan Zahavi (ed.), *Hidden Resources: Classical Perspectives on Subjectivity* (Exeter: Imprint Academic, 2004), pp. 127–47.
- 30 Fredric Jameson, 'Postmodernism, or the cultural logic of late capitalism', *New Left Review*, 146 (1984), pp. 53–92.
- 31 Maurice Merleau-Ponty, *Phenomenology of Perception*, tr. Colin Smith (London: Routledge and Kegan Paul, 1962).
- 32 McEwan, *Saturday*, p. 81.