Of course, it’s rather grave for all of us because, whether you believe in heredity or environment, either way we are boiled, shut up here with this old sub-human of a father!

Jassy on Uncle Matthew, from Nancy Mitford’s *Love in a Cold Climate*¹

What if Henri Lefebvre, my lonely observer,² were alive today, pondering in his isolated Belgian village on what science has since discovered about our capabilities and how they work? Much has been discovered that makes the existence of spatial intelligence an ever stronger presence in the ways that we work in the world. But we (my observer and all the scientists at work in the field of cognition) would have to acknowledge that we face a central mystery: while we know more and more about how we are put together, and of the material that constitutes us, and how it organises itself and faces the challenges of being in the world, a working hypothesis on how the bundle of matter that we are achieves consciousness eludes us. How does the assemblage of particles of which we consist, organised within the observable laws of physics, self-organising and replicating through the coding of DNA, achieve self-awareness and consciousness of its being in the world? And how extensive is the phenomenon itself? Is all life conscious? Are plants conscious to some extent? Does the universe ‘learn’?³
We simply do not know. Worse still, we cannot work out how to begin to know – even though we have more and more facts about how we (our neurones, that is) perceive and experience the world.\(^4\)

The problem of consciousness and intelligence

Thoughtful commentators ruefully acknowledge that this is a problem that has to be set aside, for the moment. There have been moments when artificial intelligence has been thought to give the key to this question. People have argued that if we can create a machine that is intelligent, we may have uncovered the nature of consciousness. There is a famous ‘test’ for artificial intelligence: the Turing test. Mathematical philosopher Alan Turing (1912–54),\(^5\) credited with cracking the Germans’ Enigma Code and turning the tide of the Second World War at sea, was also a lonely observer! His test is disarmingly simple. We will know we have created intelligence...
when we recognise it in a machine, just as we recognise it in other beings. Such recognition has not yet occurred. Some mathematicians believe that computers are inherently incapable of fully recognisable intelligence. One of these, Roger Penrose (1931–), in proving this (at least to his satisfaction) gives a wonderful account of how our perceptions of human intelligence are shifting as discovery proceeds.

We now know, he argues, that every cell in the body has enormous calculating capability – as much as we once attributed to the brain itself. Cells consist of bundles of micro tubules lined with pouches arrayed around a central tube – each looking, I imagine, rather like a Giacometti sculpture – and these are suspended in water that has its molecules aligned rather in the way that heavy water has aligned molecules. Each sac on each tubule may contain or not contain a particle – and this gives the cell a binary memory capability. When we talk of human (or animal – though perhaps not of plants because they do not have a nervous system) intelligence, we now have to consider that intelligence is a distributed system: not something held like a command centre in the brain and distributed, but something that is present throughout the organism, and linked together through the nervous system but also possibly through quantum effects made possible by the alignment of the molecules in the water in each cell. (So plants might have a ‘quantum’-enabled diffuse intelligence after all?)

Intuitively we have known this – partly through observing what happens to us after traumatic accidents. We now think that the ‘lost limb’ syndrome in which an amputee feels pain or other sensations in a removed limb, and is still sometimes confronted with the spatial presence of the lost limb, may be explained by continuing memories in the body adjacent to the lost limb, and to the spatial self-perception of the whole being – not just the perception held in the brain. A PhD candidate at RMIT has discovered a range of experiments in which blind people gain a form of navigational spatial awareness when a video camera is mounted on their heads, and the image is projected onto the skin of their abdomens. Being ‘differently abled’, as are some people who are described as ‘autistic’, has been shown to intensify a person’s awareness of their own spatial intelligence such that they can draw what they have seen with total recall, while in one case at least awareness of the ways in which others respond to space – even if unconsciously – has become the basis for a career in the humane design of cattle handling facilities. Entertainingly, architect Peter Wilson (1950–) describes in conversation (perhaps apocryphally) how an autopsy
on the great German architect Karl Friedrich Schinkel (1781–1841) – a renowned master of spatial design – revealed that he had suffered from a brain wasting disease, and was practising out of the stem of the brain – supposedly its oldest part – suggesting that architectural intelligence is a primitive, or indeed primal, business!

**Kinaesthetic intelligence: its spatiality**

In other realms, we may be able to understand the extremes of spatial intelligence at work in some kinetic environments. How the rugby player Jonny Wilkinson, ‘squeezing out the crowd’ by bringing his hands together, sensing the breeze and imagining his position oblique or acute on the rectangle of play, can then marshal all of his ‘consciousness’ to kick that ungainly ovoid ball accurately between two distant posts. Or how English footballer David Beckham, whose ‘ability to compute and execute the exact angles and forces required to score a goal from a free kick’, is a ‘genius’ in his spatial intelligence.10 Or how a golf professional like Tiger Woods can summon up the concentration – not just by visualising it in his mind, but by suppressing the conscious command of the mind and working through the whole of his bodily distributed intelligence – to create a spatial awareness in a complex geography of vales, ponds, bunkers and roughs, and a varying microclimate, that allows him to hit a hole in one far more often than the laws of probability would allow. These are miracles of awareness. They are not confined to sport, though...
more observable in sport than in other fields of endeavour, perhaps because sport necessarily brings the whole of the body into play.

Aboriginal art in Australia is perhaps an example of distributed intelligence at work. There is an often-remarked-upon ‘uncanny’ resemblance between some ‘dot’ paintings and the landscape inhabited by their creators, but it is a resemblance that they can never physically have observed. It is as if they had hovered over the landscape in a helicopter, or worked from aerial photography. Distributed intelligence offers an (unproven) explanation: a person who knows a landscape through walking over it barefoot, knows where the watercourses are, where the plants offering edible tubers are, where the animals will shelter, who has learned its dimensions through the kinetic intelligence of hunting – stalking, running, spearing – such a person ‘knows’ the landscape in a way that engages the whole of their distributed intelligence; and in painting, with its repetitions and its quiet ‘squeezing out’ of distractions, all of this knowledge resolves itself into a simulacrum of that landscape seen from the air.

Spatial intelligence uncovered

This speculation brings what we are discovering about our intelligence into the realm of design and spatial intelligence. Architects know that the complex problems they work with cannot be solved parameter by parameter. I think that even people who claim that they solve problems like this are aware – if they care to admit it – that it does not work that way. They just do not find what actually happens ‘respectable’, or logical, or sensible. What really happens – as we know from account after account, beginning with Archimedes in his bath at his Eureka moment – is that when we embark on a quest, we become well primed about our prospective journey, and we seek out everything we can know about its likely course. But the way is made clear not by a logical step-by-step system – though such a process may be a necessary part of beginning the quest – but by some unexpected concatenation that suddenly brings everything together. Often we ‘sleep on it’, and wake with our solution. Archimedes was relaxing in a bath, and the moment of awareness was so apposite that we have probably learned the wrong lesson from his experience. Well, now even the most unpoetic of us can relax. There is an explanation, and it comes from twenty years of sleep research combining neurological mapping of what is happening in the brain, and observing the kinds of sleep that we are having – deep sleep, or
REM (rapid eye movement) sleep. What is being discovered is that at night we use a form of ‘weak force’ intelligence to process the events of the day. Experiments have shown that in sleep we can make connections between things that the awake mind resists. It is this ‘weak’ connection capacity that allows us to forge resolutions to complex problems requiring some form of reconciliation between numerous conflicting requirements.

Space and emotional intelligence: our capabilities and the role of sleep

The ever expanding mapping of the way in which the brain reacts to stimuli and to emotions is rapidly extending our hypotheses about how our intelligences work, paving the way to the formulation of what some now call ‘emotional intelligence’. Sleep research and this mapping have led researchers to speculate that during dreaming we are assessing all of our experiences of the day in their fullest form. Awake we are barely aware of our spatial and kinetic intelligences – unless we play in the top echelons of sports, or achieve the obsessive contemplation of an artist or a spatially tuned-in architect. Some of us will have been consciously using our musical intelligence, our natural intelligence; we will all unconsciously have been using the miracle of our linguistic intelligence. And in varying degrees we will, in our inter- and intra-personal relationships, have been using or abusing our ‘emotional’ intelligence.

What underlies all these intelligences is that they are all innate human capabilities. They have evolved – so our best hypotheses and observations indicate – over millions of years. We argue about how they have evolved – whether by a form of social Darwinism in which the needs of survival draw us to select for certain capacities, or whether they are fortuitous accidents randomly generated and then adopted because they confer advantage in the pursuit of survival (or, if you are a teleologist, in the pursuit of an ever growing awareness or consciousness). Recent research in palaeontology suggests the existence of some ‘clock’ that drives the growing capacity of the human cranium, shifting the relationship between the spine and the skull in stepped evolutions that bring ever greater pressure to bear on the lower jaw. The evidence is there, but what do we make of it?

At the moment the most fascinating sustainable hypothesis for designers lies in the relationship between neurological mapping and sleep research.
What this suggests is that all these capabilities that we inherit unfold in the world that we are born into, and adapt to our specific surroundings, both social and environmental. We commonsensically understand this about our linguistic intelligence, for example. Born in France, we speak French, inflected by the dialect of our specific locale or class. Born in China, we speak the form of Chinese common to our region. Argument rages about just what the building blocks of that intelligence are – is it deep grammar, or are there smaller particles of in-built sense associated with certain sounds? Evidence is adduced, challenged, and the research continues. What is now observable about the relationship between the ‘theories’ with which we arrive in the world, and our experience of the world, is that during REM sleep the brain is using parts of itself devoted to different forms of intelligence to assess whether what has happened in the day has impacted on the understandings provided by the capabilities that we have inherited.

So ‘dreaming’ is a kind of mapping. And we know that during sleep calcium is fired into synapses of the brain to form new pathways which hard-wire changes into our mental networks that we believe are the product of our learning from the events of the day, in our specific environment.\textsuperscript{14} Much that we think is rejected as not worthy of assimilation; and perhaps that is what a nightmare is – a rejection of possible changes to our awareness. These are hypotheses, but they are the best-informed hypotheses that we have to date.\textsuperscript{15} And they have the merit of making sense of things that we have intuitively – even commonsensically – known. We must bear in mind, however, that as yet there has not been much mapping of the distributed intelligence that Penrose describes.

**Distributed intelligence proposition supports the concept of mental space**

That we may conceive of our intelligence as even more widely distributed becomes evident when we try to understand how we build realities through our engagement with the world. Discussion of the role of location – inside us? outside us? – in the way we build ‘realities’ confronts us with the fact that, while formed through the engagement of our brains with what our senses tell our insides, these appear to us to exist ‘outside’.\textsuperscript{16} This exteriority may be brought about by kinetic extension (using that distribution of intelligence throughout our being) into the spatially extended ‘phenomenal’ world that we seem to inhabit – as our lonely observer noted – by moving
through it. By adding that to what we know about sporting prowess, we can understand what an architect means when he says of a line that he has drawn: ‘There are fifteen years of hard-won experience in that line. There is stuff that my hand knows that I don’t know that I know. I have to respect that line.’ Knowing how to access this ‘interior’ or internalised knowledge, forged by the unfolding of our inherited capabilities in the world, is acknowledged to be the key to effective creativity. Recognising these emerging facts, Ignasi de Solà-Morales proposed that we think of architecture that acknowledges these ‘soft’ pathways through our intelligence as ‘weak architecture’. Later we will consider how this might be defined, and whether consciously created exemplars are emerging through contemporary design practice.

We are also presented with new ways of thinking about how we as individuals and as members of groups of individuals occupy and navigate space, and how, being conscious about what is happening in every one of us all through our lives, we never stop ‘learning’, never stop building new synapses – though the rate of construction varies through our development. And there is more at work in our spatial intelligence than we have allowed during the relatively short period of professionalised architectural practice.

Neurone mapping in primates and in humans proceeds apace. Recent study of neurones activated by our actions has led researchers to postulate that the purpose of our memory – that networked terrain constantly remapped in our sleep – is to act as a ‘projectory,’ or a predictor of upcoming events in all their dimensions: emotional, intellectual, physical and spatial. These researchers believe that they have an answer for the strange but familiar experience of *déjà vu* – one that we all have from time to time, when we feel that we have lived through an experience before. We have, argue these researchers, envisaged everything before we experience it, using our memories of similar past events.

Other researchers are tracking what are called ‘mirror neurones’ because they seem to induce mimicry (we all must have wondered why it is that if one of us yawns, all of us begin to yawn?). These neurones seem to assist us in learning from others, helping us to – unconsciously – map and imitate those around us. This throws some light onto how language is transmitted from adults to their young. It also perhaps begins to account for the ways in which our awarenesses are shared with the groups with which we have attained them. Interestingly in humans these neurones do not always fire – suggesting that they do in macaque monkeys, in whom they were first identified – but
are suppressed by the act of conscious observation. This further suggests that we build up memory/projectory through a combination of unselfconscious imitation and conscious learning.

This is hardly a new concept, but as the mechanisms are beginning to emerge, we find that our intuitions about some forms of learning are substantiated. In sport, the art of ‘visualisation’ has long been a recognised way of teaching the body to perform actions that are difficult to mimic through observation. Here perhaps suppressing that act of observing forces athletes to use their imagination to picture a motion holistically. Vangelis, the composer who scored *Blade Runner* and *Chariots of Fire*, writes that composing is a matter of ‘consciously not thinking’. He talks of detachment and trying to be totally ‘available’. Again we can find anecdotal examples closer to architecture. The Swiss-Italian architect and educator Aurelio Galfetti (1936–) – founder of the School of Architecture at Mendrisio, where he boasted that the average age of the foundation staff was seventy – once stated in a seminar at RMIT that all he thought you could hope to do for aspiring students of architecture was ‘to put them in the position of being an architect’. Learning through doing, or through visualising and then doing, does seem to lie at the core of many of our more complex activities. This is learning of a very powerful and too often tacit kind, and if we induct students into a certain vision of architecture unconsciously, as we do with the one proposed around the practicalities of construction and technology for example, we are – as Beatrix Potter had her Gardener entrap her rabbit hero – picking up pots that we intend to ‘pop upon the top of Peter’.

In the 1960s Iona and Peter Opie conducted their famous research into the games that children play, tracing many street games and their accompanying rhymes back in a continuous tradition to ancient Greece.
Much that is group consciousness is learned through empathy – mostly unconscious observation and mimicry. In the 1960s Iona and Peter Opie conducted their famous research into the games that children play, revealing that each succeeding generation since ancient times has inherited its games and ditties – at least in part – from previous generations (see Chapter Four).\textsuperscript{22} It is that very osmotic process, combined with the prodigious amount of mapping between our inherited capabilities and theories and the contingent realities of our lives, that makes accessing our spatial knowledge so difficult once we feel that we have mastered it. This is precisely why we have evolved ‘professions’, groups who are charged with taking care of a body of knowledge on our behalf, nurturing it, extending it and ensuring that its horizons are joined to the horizons of the knowledge that is emerging in other fields.

Ways of being in the world supported by new research

This leads to contemplation of systematic ways of being in the world that are assisted by research, through which we are increasingly aware of how we ‘work’, if only at some levels. However, we have to be aware that what we consciously observe is very much the product of what we set out to observe. In the mid-20th century, progressive development through learning was the accepted paradigm. Swiss philosopher, natural historian and development psychologist Jean Piaget (1896–1980) identified a progression of awareness through close observation of the behaviour of infants. For example, he posited a phase during which infants fear that when a person or a thing leaves a room they no longer exist, followed by a phase when continuity of existence is assumed (birth to two years). Succeeding stages of increasingly sophisticated awareness are then posited and observed, with motor skills following (two to seven years), thinking logically about concrete events (seven to eleven), and abstract reasoning (eleven+). It was as if our many capabilities were ‘booted’ one after the other in a logical sequence. The step-by-step development Piaget charted has been disputed by those who argue that our awarenesses are developing in parallel – it is just that observers find what they set out to observe. There have been huge changes in our view of babies over the past thirty years. As Alison Gopnik, Professor of Cognitive Psychology at the University of California at Berkeley, wrote in 2003: ‘We now know that babies know more about the world than we would ever have thought possible. They have ideas about other human beings, about objects and the world – right from the time they are born. And these are fairly
complex ideas, not just reflexes or responses to sensations.’ She continues: ‘Newborn babies have an initial theory about the world and the inferential learning capacities to revise, change and rework those initial theories on the evidence they experience from the very beginning of their lives.’ Other research shows that this process continues throughout life.

Psychologists studying adults also posited hierarchies of awareness, running in a spiral of increasingly sophisticated modes of understanding of the complexity of our world, from ‘first order’ awareness – in which the mode of awareness entertained is conceived of as the only possible mode, to second order – in which the simultaneous uses of different modes are first accepted, then transcended. These stages were argued to map onto many of the staged systems of enlightenment developed by humans in recorded history. These ascending diagrams tend to appeal to those who feel that they themselves have attained a high level of understanding. It is difficult now to feel that these are likely to be stages that develop in a step-like manner, like a ladder of growing wisdom. Most probably these different processes are braided together and we become better able to utilise them as we develop our emotional intelligence. While they may be tendentiously teleological and self-serving, they do map the major ‘ways of seeing’ that we have consciously developed. These ‘human givens’, increasingly understood through research into the relationships between our inherited capabilities and their unfolding in the world, still posit maturation through a sequence of learning that goes from arousal by a stimulus, to pattern-matching of the kind that we have discussed above, to emotional response to that stimulus, to a reasoned response. Contemplating these, it is not difficult to appreciate how a strand of intelligence, its givens and the knowledge that we construct out of the interaction between those and our particular environments, could become submerged once mastered.

Today the battle lies between biologists who substantiate at ever finer levels of detail how selection – working both through and on environment (Steven Rose points out that the natural environment itself changes in response to the presence of faster-running antelopes: lion hunting selects for faster antelopes, faster antelopes means more intensive grazing, reduction in lion population ...) – has brought us to have the capacities that we have, and social philosophers who wonder how we can have a science of the mind that can explain how our values have evolved. There is more and more evidence of selection for empathy, for example. As Jerry Fodor remarks in concluding his attack on evolutionary selection of values: ‘Induction over the history of
science suggests that the best theories we have today will prove more or less untrue at the latest by tomorrow afternoon. In science, as elsewhere, “hedge your bets” is generally good advice.31 Either way, as Nancy Mitford wrote in 1949, ‘we are boiled’.32 But either way the evidence33 seems to move slowly in directions that support our being interested in why we have developed spatial intelligence, what we can know about its operations, how we deploy our spatial intelligence in the world, what that does to the world, and how we could use this knowledge when we wish to better design our environments.

A new basis for professionalism in architecture

What I think we now need is a profession that consciously investigates and cares for the ways in which our spatial intelligence helps us to be at home in the world. In his thoughtful book Experiencing Architecture (1959), Steen Eiler Rasmussen (1898–1990) proposed a developmental hierarchy of awareness around architecture, beginning with childhood playing at making houses and informed by multitudes of interactions with space – kinetic, aural, visual and tactile.34 What has eluded us is a construct with which to connect these founding experiences, unique to each individual, yet shared through the templates we all inherit, back into the practice of Architecture and through design into the daily living of grown-ups who have lost their childhood awareness.

References

2 Henri Lefebvre was a member of the French Communist Party from 1928 until his expulsion in 1957. He published more than 60 books, the most relevant here being The Production of Space, published by Blackwell Publishers (Cambridge, Massachussetts and Oxford) in 1994.
3 Rupert Sheldrake, ‘The rebirth of Nature’, in Pavel Buchler and Nikos Papastergiadis (eds), Random Access 2: Random Fears, Rivers Oram Press (London), 1996, pp 100–21. Sheldrake argues that the universe is a learning system, that the colour blue is a recent – even historically recorded – invention, and that chromium has emerged as an element as the universe learns.
4 John R Searle, ‘Consciousness: what we still don’t know’ (review of Christof Koch, The Quest for Consciousness, Roberts & Co (Reading, PA, USA), 2005), New York Review of Books, Vol LII, No 1, 13 January 2005, pp 36–9: ‘the theory that we can never perceive the real world but only our inner pictures of it is the single most disastrous view in the past four
centuries of epistemology … this view leads from Descartes to Berkeley and then to Kant and eventually to Hegel … failure to make the distinction between content and object is part of (Koch’s) failure to understand intentionality … often we are not conscious of our decision making, but often we are … the idea that all our consciousness is sensory is wrong’ (p 38). John R Searle is Slusser Professor of Philosophy at the University of California, Berkeley.

5 See Andrew Hodges, Alan Turing, The Enigma of Intelligence, Unwin (London), 1986. Hodges’ commentary explains how the Turing machine concept is related to Turing’s philosophy of Mind, breaking new ground by relating Turing’s thought to Roger Penrose’s ideas about computability.


7 Oliver Sacks, An Anthropologist on Mars, Pan Macmillan (Sydney), 1995, p 142. Oliver Sacks has made a study of what trauma and being ‘differently abled’ mean to our perceptual processes.


10 See http:// www.mftrou.com/multiple-intelligence-test.html (Beyond Classic IQ Tests: Howard Gardner’s Multiple Intelligence Test), and Glenn Moore, ‘Football: Science points oversize finger at true genius’, The Independent (London), 18 March 2000: ‘Boys exposed to high levels of testosterone in utero, said Manning, were likely to be gifted either musically, mathematically, or in terms of spatial awareness … . [B]etween 8 weeks and 12 weeks … in the development of the male foetus certain parts of the body become sensitive to testosterone. These are the heart and lungs … the right side of the brain, which controls spatial awareness and the perception of objects, and the fingers.’ Beckham is cited as an exemplar.

11 I have tested this idea with Paul Carter in conversation. His work is the most profound exploration of these issues that I know of. See for example Paul Carter, The Lie of the Land, Faber & Faber (Boston, Massachusetts and London), 1996.


14 Graham Lawton, To sleep, perchance to dream, op cit, p 33, on research by Terrence J Sejnowski, Salk Institute, California.

15 Jonah Lehrer, Proust was a Neuroscientist, Houghton Mifflin Company (New York), 2007, p 93: the author puts forward a hypothesis by Dr Kausik Si that the synaptic mark of memory is a prion, a protein that uniquely has two functional states: active or inactive. It ‘holds’ memory when inactive, but when memory is called upon it becomes active, and therefore labile. So the act of remembering alters the memory. This was Proust’s key realisation.


17 Tomas Nollet to the author at a research seminar in Brussels, September 2007. See also Tomas Nollet & Hilde Huyghe, Stills from a Design Process: Young Architects in Flanders, Flemish Architecture Institute (VAI) (Antwerp), 2004.

18 Ignasi de Solà-Morales (translated by Graham Thompson, edited by Sarah Whiting), Differences: Topographies of Contemporary Architecture, MIT Press (Barcelona), 1995, pp 68–71: ‘weak architecture’, that strength that art and architecture are capable of producing precisely when they adopt a posture that is not aggressive and dominating, but tangential and weak.

19 Jessica Marshall, ‘Future recall’, New Scientist, Vol 193, No 2596, 24 March 2007, pp 36–40: ‘It’s as if, embedded somewhere in your brain, there is a time machine that can take you forwards and backwards at will. What if the thing we call memory works both ways, helping us to both recall the past and imagine the future? The brain areas that are active when you recall your personal past or think about the future are almost identical. Daniel Gilbert, Harvard Psychologist, ‘Stumbling on Happiness’. Schachter – we recall the gist, not the detail. … It seems that unless called upon to do something specific, your brain is busy recalling the past or projecting into the future. So next time you catch yourself staring into space instead of getting on with your work, or drifting into reverie as you try to read a book, don’t beat yourself up about it. Your daydreams will pay off in the long run.’


21 ‘The power of music’, New
is based on an overwhelming body of evidence suggesting there are cells in the brain that compensate for motion, such as eye movement, in order to represent objects as they are in the real world. This allows us to get a sensation of the real world despite the constantly changing stream of sensory inputs, such as smell, vision, and so on that feeds our brain. To me this evidence implies that our brains contain some persistent representation of the outside world, encoded in the electrochemical impulses in their neurons.' Aleksander posits a sequence that starts with a sense of place – the state of being conscious of our world and our place in it, proceeds to imagination – the state of being able to remember and construct hypothetical situations, from which arises the ability to undertake directed attention – purposeful interaction with the world through action and feedback, which in due course leads to planning – a process of learning and repeating sequences of sensory inputs in 'what if' scenarios, and finally to a decision/emotion stage – attaching qualitative values imagined through the imagination to hypothetical outcomes derived through 'planning'. The difference lies in 'human givens' asserting that emotional responses are primitive 'black or white' responses that need to be calmed for the many shades of grey that reasoning brings to bear. According to Rupert Sheldrake (The Sense of Being Stared At, and Other Aspects of the Extended Mind, Hutchinson (London), 2003), such encoding cannot be genetic but is part of an evolving series of templates that pervade the universe and to which growth is patterned.


29 Steven Rose (of Tufts University, Medford, Massachusetts) on Jerry Fodor’s rejection of such a science, letter in London Review of Books, Vol 29, No 22, 15 November 2007, p 5.

30 Daniel Dennett (of Tufts University, Medford, Massachusetts) on Jerry Fodor’s rejection of such a science, letter in London Review of Books, Vol 29, No 22, 15 November 2007, p 5.


32 Nancy Mitford, Love in a Cold Climate, op cit, p 132.
