

Selection Pressures Are Mounting

Susan Blackmore, *The Meme Machine*. Oxford: Oxford University Press, 1999. Pp. xx + 264. US\$25 HB.

By Robert L. Campbell

In 1976 Richard Dawkins posited cultural replicators by analogy to genes, and gave them the snappy name *memes*. The term has colonised the World Wide Web and infiltrated the dictionaries; it has even pushed itself on some of Dawkins' rivals. (Wilson, 1998, has discontinued the house brand and no longer speaks of "culturgens".)

Unfortunately, while some have found the sales-pitch enticing, 20-odd years of meme-talk have yet to give rise to a credible theory of memes. We know how the theory is supposed to be labelled: *memetics*, by analogy with genetics. But what is its content? *Memes are packets of knowledge that are just like genes. That is, they are built up out of atomic units; they encode something; and they replicate or fail to replicate. Memes take over the machinery of (some kinds of) minds to get themselves replicated, just as viruses take over the machinery of cells.* This two-part formulation is readily remembered and easily recited, but it explains hardly anything on its own. So what has Blackmore done to make memetics into a real theory?

Who Cares What Knowledge Is?

Memetics is conspicuously short of a foundation: there is no account of knowledge in it, even though a meme is supposed to be a unit of knowledge (Campbell, 1998). Blackmore admits that she cannot provide such an account. In fact, she tries to be as noncommittal as possible about the nature of memes. "All that is necessary is to assume that people imitate aspects of each other's behaviour and that when they do something is passed from one to the other. We do not need to agonise about what that something is. The simple fact is that if imitation happens (as it surely

does) then something has been passed on and that something is what we call the meme.” (pp. 163–164).

Now, we don't side-step epistemic problems by being non-committal about the nature of knowledge. What trying to be non-committal does is allow widespread, but false, presuppositions about knowledge into our theories, while we fail to recognise what the presuppositions are, or sense that there might be anything wrong with them. So Blackmore casually assumes that internal representation is just like external representation (for instance, that memes are the same whether they reside in a book or in the mind of the person who reads it); that knowledge is a copy or an encoding in the mind of something in the environment (“in classical conditioning some aspect of the environment has been copied into a brain”, p. 44); that language transmits knowledge from one brain to another, indeed that its primary function is to transmit memes; and that creativity does not truly produce new knowledge, just recombinations of old knowledge-atoms (“In our thinking we mix up ideas and turn them over to produce new combinations . . . Human creativity is a process of variation and recombination”, p. 15). Among other things, these presuppositions absolutely preclude the emergence of knowledge, in either evolution or development. I have already pointed out these problems in some detail in my review of Dennett (1995), who puts the presuppositions forward somewhat more clearly than does Blackmore (Campbell, 1998; see also Bickhard, 1980, 1993; Campbell and Bickhard, 1986; Campbell, 1994; Dartnall, 1997), so I will not go over them further here.

Are Human Beings Primarily Imitative?

Blackmore does have one novel thesis about human cognition: she claims that human beings are primarily imitative. In part, her argument consists of denying significant or widespread imitation in non-human species. Rather than take up space challenging that sub-argument, I want to focus on the claim that human beings are imitators *par excellence*.

Blackmore is obviously correct in noting that human beings do a lot of imitating and that, especially in recent times, we have benefited from the development of technologies that allow exact copying (printing, sound recording, *etc.*). More profoundly, she notes (as psychologists seldom do) that imitation is actually rather complicated: “It sounds complicated because it is. Imitation necessarily involves: (a) decisions about what to imitate, or what counts as ‘the same’ or ‘similar’, (b) complex transformations from one point of view to another, and (c) the production of matching bodily actions” (p. 52).

But, as Piaget (1970) pointed out, human knowledge cannot be a simple copy of what is known, and, again as Piaget (1962) pointed out, human development involves both accommodation (modifying one's knowledge to get it to fit the environment) and assimilation (applying one's prior knowledge to the environment). For human cognition to be essentially imitative, it would have to operate as nearly pure accommodation. But human beings are constantly and actively assimilating, which means that the high-fidelity copying that would be required for memes to be truly gene-like replicators simply isn't in the cards.

While Blackmore acknowledges that the human brain consumes an awful lot of energy, she does not regard the human mind as epistemically active. In her stark formulation: “[o]ur memes is [*sic*] who we are” (p. 22). Our minds serve primarily as growth media for memes that our mouths and keyboards will then transmit. Like any evolutionist, Blackmore rejects the argument from design (of the natural world by a supernatural mind). But, unlike most evolutionists, she takes this to rule out the design of anything by minds of any sort. Human designers are not responsible for the artefacts they think they are designing:

As soon as memes appeared, they started evolving toward greater fecundity, fidelity, and longevity; in the process, they brought about the design of better and better meme-copying machinery. So the books, telephones, and fax machines were created by the memes for their own replication . . . The design of computers by memetic selection is . . . no more mysterious than the design of forests by genetic selection. *The consciousness of a designer is not a causal factor in either process* (p. 204, my emphasis).

Similarly, Blackmore argues (p. 239), a science book is not the author's creation; it is the joint product of genes and memes working through the author.

But after radically downgrading innovation in human life, she cannot avoid illicit appeals. For instance, she asserts that in human evolution a selective advantage arose for women who had “genes for choosing men with the general ability to imitate, or even to innovate” (p. 130). And that “creativity and artistic output are ways of copying, using and spreading memes, and hence are signs of being a good imitator” (p. 131).

What Happens When Memetics Tries to Explain Itself?

Blackmore devotes a chapter titled “The Ultimate Memplex” to attacks on consciousness (reflective or otherwise), the self, and free-will.

The way we behave, the choices we make, and the things we say are all the result of this complex structure: a set of memeplexes (including the powerful selfplex) running on a biologically constructed system. The driving force behind everything is replicator power. Genes fight it out to get into the next generation, and in the process biological design comes about. Memes fight it out to get passed on into another brain or book or object, and in the process cultural and mental design comes about. There is no need for any other source of design power. There is no need to call on the creative ‘power of consciousness’, for consciousness has no power. There is no need to invent the idea of free will. Free will, like the self who ‘has’ it, is an illusion (p. 236) .

It’s refreshing to encounter a genuine incompatibilist/hard determinist who has the courage of her convictions; Blackmore finds Dennett (1984) lacking in the “right stuff” because he thinks that the illusion of free will might be benign, and that determinism need not rule out moral responsibility. Blackmore maintains that we would be more moral if we would just do away with moral responsibility, and with that dreadful ego that is expected to be responsible: “If I live by this kind of truth—without a self that takes responsibility for actions—then what of morality? . . . One of the effects of this way of living is that you stop inflicting your own desires on the world around and on the people you meet” (p. 245).

Trouble starts as soon as we turn Blackmore’s determinism back around on itself. I will argue that Blackmore’s determinism is self-referentially inconsistent (Boyle, Grisez and Tollefsen, 1976): she must assume that she is exempt from it in the process of defending it. Against a subtler brand of determinism, subtler counter-arguments may be required than those that I shall give. But Blackmore’s brand isn’t subtle.

Blackmore seeks to make a scientific case for memetics. But if memetics is true, then science is just another human activity that furthers the interests of our memes. Despite the importance of the issue, Blackmore gives remarkably little space to explicating science. But she does declare that science is epistemically superior to religion:

False theories thrive within science as well as within religion, and for many of the same reasons. Comforting ideas are more likely to survive than scary ones . . . However, at the heart of science lies the method of demanding tests of any idea. Scientists must predict what will happen if a particular theory is valid and then find out if it is so. That is precisely what I have tried to do with the theory of memetics. This is not

what religions do. Religions build theories about the world and then prevent them from being tested. Religions provide nice, appealing, and comforting ideas, and cloak them in a mask of 'truth, beauty, and goodness'. The theories can then thrive in spite of being untrue, ugly, and cruel (pp. 202–203) .

It is hard to square these statements with the epistemic cynicism so frequently expressed in the book. For instance, “[t]he overworked scientist . . . frantic to read all those latest research reports” is just one of those people who “has become infected with memes that drive them to spend their lives propagating those memes” (p. 142). “Truth is not a necessary criterion for a successful meme. If a meme can spread, it will” (p. 14). “Wrong theories in science may spread simply because they are comprehensible and fit easily with existing theories, and bad books may sell more copies because you can remember the title when you get to the bookshop—though, of course, we do have strategies for overcoming these biases” (p. 57). Now obviously human beings don’t always employ these strategies, otherwise Blackmore’s admonition would be a waste of print. Yet if psychological determinism is true, none of us can help employing such a strategy when we employ it—and *none of us can help not employing it when we don’t*.

Blackmore may think that memetics has no repercussions for science because:

There is no mystery about why true and useful ideas should propagate successfully—they do so because people want and can use them. So memetics does not provide much advantage over other ways of looking at the world when it comes to understanding the success of good scientific theories or accurate news. However, memetics does help when it comes to explaining the spread of untrue, bizarre, and even harmful ideas (p. 176) .

The trouble is, memetics has no resources to explain the spread of good ideas except the resources that it uses to explain the spread of bad ones.

Blackmore must be presuming, then, that scientists have been granted a temporary reprieve from the iron laws of memetics—a select few, just enough to certify that memetics is true (Branden, 1969, would say that she is committing the fallacy of self-exclusion). Scientists desperately need this reprieve, if they are to make a successful scientific case for memetics (as opposed to religious preaching, or a sales-pitch). For according to Blackmore’s own preaching, science, too, is an ongoing battle of memplexes (p. 202). And as Blackmore has gone to great pains to tell us, memplexes that are false or pernicious to their hosts have myriads of ways to win out over those that are true or useful.

What's worse, our conclusions about which memeplexes are true and which ones are false must themselves be the result of our infection by memeplexes. Suppose we contend that building explicit theories and expecting them to survive selection pressures in the form of counter-arguments and counter-evidence is more likely to result in true or useful ideas than accepting ideas because we feel that they are true, or because our parents taught them to us, or because the dictator will punish us if we object to them, or because they calm our existential anxiety. Well, in so contending, we give evidence of our infection by scientific-method meta-memeplexes. Whereas those who reject our contentions and prefer to accept their ideas on the basis of subjective feeling, or communitarian tradition, or political compulsion, or the consolations of faith, give evidence of their infection by various anti-scientific meta-memeplexes.

But isn't the scientific-method meta-memeplex preferable to the praise-the-Lord meta-memeplex, or the whatever-I-feel-must-be-true meta-memeplex, or the don't-displease-the-tyrant meta-memeplex? Memetics would lead us to conclude that when we contend that the scientific-method meta-memeplex is better than the others, that means we have been infected by a suitably biased meta-meta-memeplex. Whereas, if someone concludes that the praise-the-Lord memeplex is better, that person has been infected by a rival meta-meta-memeplex. And so on, inescapably. If memetics is true, then our belief in memetics is the result of successful infection by the memetic memeplex. If we claim that memetics is preferable to other doctrines on scientific grounds, then, if memetics is true, our belief is the result of successful infection by the scientific-method meta-memeplex. It's memeplexes all the way up—and being infected by a memeplex is no indication of its truth.

How, if memetics were true, would Blackmore, or anyone else, be in a position to know? What could science be, if memetics were true, but the 'hegemonic discourse' that its post-modern opponents like to say it is? Except that under memetics, it is not individuals or gangs or tribes who seek hegemony over other human beings—it is memeplexes that seek hegemony over other memeplexes.

Spreading Memes to Stop All Meme-Spreading?

Blackmore's book concludes rather unexpectedly, with a chapter urging us all to drop "out of the meme race". Blackmore likes to emphasise the prodigal expenditure of energy by our "big brains", all for the sake of the memes. She counsels energy conservation:

If I genuinely believe that there is no ‘I’ inside, with free will and conscious deliberate choice, then how do I decide what to do? The answer is to have faith in the memetic view; to accept that the selection of genes and memes will determine the action and there is no need for an extra ‘me’ to get involved. To live honestly, I must just get out of the way and allow decisions to make themselves (p. 244).

There is something paradoxical about *publicly advocating* withdrawal from the meme race. If Blackmore truly wants out of the meme race (now, apparently, that her brain has been colonised by a Zen Buddhist religious memplex), doesn’t this imply—if she is being consistent—that she cease spreading memes by any possible instrumentality? Write no more books, send no more emails, give no more lectures, make no more telephone calls? Indeed, as language is the primordial meme-spreader, take a vow of silence? But then, once the “selfplex” has been banished, and there is no self left to worry whether it did the right thing (p. 246), apparently there is no self left to worry whether it is being logically consistent either.

Of course, even deciding to get ‘me’ out of the way requires reflective consciousness—and a self. A clinical psychologist has commented, “As long as there is consciousness, there is ego. As long as there is awareness, even at the highest level imaginable, there is self. After all our self-concepts have been transcended and all our attachments relinquished, as long as we exist as knowing, experiencing beings, in any sense whatsoever, the ‘I’ who thinks, perceives, experiences—the ‘I’ who is conscious—remains” (Branden, 1997, p. 194). Among human beings this, too, goes on inescapably.

In sum, the selection pressures against memetics keep mounting. According to Blackmore, memetics requires: an epistemically passive human mind; a conception of human beings as purely imitative rather than innovative; a view of knowledge as encoding and language as encoding-transmission; a denial of the self; and a hard-deterministic insistence that human beings can’t help how they choose when they choose whether to follow the scientific method or not. We certainly do need a better understanding of cultural evolution, one that allows for the emergence of new knowledge and that explains human capabilities instead of denying them. The service that Susan Blackmore has performed for us is showing that memetics cannot be that understanding.

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Author's Response

By Susan Blackmore

Never before have I read a book review that so completely misunderstands and misrepresents what I was trying to say. Campbell starts by defining memes as packets of knowledge built up out of atomic units and encoding something. They are not—and he has managed three mistakes already. Memes are information copied from person to person by imitation. There is no necessary connection to knowledge here. For example, the habit of facial piercing is currently a successful meme in Britain. All over the city I see people with rings in their noses, and studs in their eyebrows and lips. In what sense do these people know something that they did not know before they joined the fashion? Trying to define memes as packets of knowledge just misses the point. They are behaviours that either spread or fail to spread. Memes are not really units or packets either. Although it is convenient to talk about them as units (and in fact almost impossible not to), they do not come neatly divided into chunks, any more than genes do—a point I discuss at length in *The Meme Machine*. Finally, I never said that memes “encode something” and would not wish to.

This idea about encoding is all Campbell's own, but he even attributes to me “a view of knowledge as encoding and language as encoding-transmission”. I hardly know what to make of this suggestion since I did not once use the word ‘encode’ with respect to memes and I do not hold a strong view on the nature of knowledge. He says “Blackmore casually assumes that internal representation is just like external representation”. But I do not. Fortunately memetics does not depend upon the slippery notions of symbolic reference or representation. Instead we can build new theories about human nature by asking which memes are copied, which are not, and why.

With respect to language, I suggested that human brains acquired their language ability by the co-evolution of memes with the machinery that copies them. As soon as our ancestors began imitating sounds, some sounds were copied more than others. These successful memes then changed the environment of selection for the genes, forcing them to create brains capable of copying the successful memes. This theory of memetic driving may be wrong, but it depends on a straightforward mechanism

derived from the principles of natural selection. It is testable, and it does not depend on any notions of encoding, symbolism or internal representations. Since Campbell's review is based on his false definition of memes it is difficult to know how to respond to many of his arguments. So I will just confine myself to countering two more of the views he falsely attributes to me.

First he claims that “[a]ccording to Blackmore” human beings are “purely imitative rather than innovative”. I fear he may have missed the whole point of the creative power of evolution. Darwin's great insight was to see that if you have creatures that vary, and then selection (most of them die), and finally heredity (the survivors pass on whatever helped them survive), then you *must* get the evolution of new creatures. This is innovation *par excellence*. It is how you and I and all other creatures on this planet were ‘designed’. The whole point of memetics is to apply this same insight to memes rather than genes, and so to understand how human culture and creativity come about. We humans copy masses of memes, and mix them up in our clever brains to produce new combinations. Yes, the whole process is based on copying information by imitation, but it is inherently a creative and innovative process—arguably the only creative process there is.

Second there is my “denial of self”. Here Campbell's mistake is easier to understand and I have probably been guilty of being confusing. So let me try to be clear now. I do not say there is no self—only that the self is not what we commonly think it is. The self is not a persisting entity with free will and consciousness that lives inside ‘my’ body, perceiving the world and making the decisions. Rather, it is a memeplex, or collection of memes that have come together for mutual protection and support. It is a kind of story about a self that does not really exist. And its function is neither to serve us, nor our genes, but our memes. This memeplex can get so entrenched that it colours our entire lives with false dualities, and causes all the suffering of self-conscious embarrassment, disappointment, and fear of failure. I suggested that it is possible to drop this false self.

Campbell clearly disagrees, but his arguments include quoting “a clinical psychologist” who commented (as though it were an obvious fact) that as long as there is awareness there is self. This may be a common view but is not one that stands much scrutiny. There are two ways to tackle it—both equally valid in my view. One is to use intellectual arguments like Dennett's (1991) demolition of the Cartesian Theatre, to show that the notion of a separate self perceiving the contents of awareness must be false. The other is simply to look into one's own experience. Many people, whether spontaneously or through long training in meditation, have arrived at experience with no perceiving self, no inner agent, no separation

of self from other. Their insight is not easily obtained but is reliably described (for example, Pickering 1997, Varela and Shear 1999). To those who wish to deny even the possibility of such experience, I can only say—try it.

Memetics may not be a useful new science, and some of my theories about the memetic origins of the big brain, language, human altruism or the self may be false, but if so it will not be for the reasons Campbell gives, for the memetics he describes does not exist.

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