

And The Meme Raths Outgrabe¹

Donnya Wheelwell²

This is a commentary on “Archetypes and memes: Their structure, relationships and behaviours,” by C.M.H. Nunn (1998) and (more briefly) on the commentary upon it by Harald Atmanspacher (1998). Page numbers in this article refer to these two papers. Let us start with faint praise. Nunn writes well and engages themes that are sure to interest many readers. He is well informed, shows sensitivity to the evolution and elusiveness of Jung’s thought, as well as to the history of medicine, and he (almost) has one good idea. Atmanspacher plays upon the same themes, also seems well informed, and (also almost) has a good idea, though he writes more awkwardly. In brief, Nunn relates Jung’s archetypes to (Dennett’s version of) Dawkins’ memes and suggests an epidemiological angle, Atmanspacher suggests a hierarchical arrangement of memes, and I suggest they are talking dangerous jabberwocky.

Memes, Schemes, Genes and Types

What is a meme? Nunn quotes with approval the definition of Daniel Dennett (1993), according to which memes are “minimum units of cultural transmission ... not the ‘simple ideas’ of Locke and Hume (the idea of red, or the idea of round or hot or cold), but the sort of complex ideas that form themselves into distinct memorable units — such as the ideas of wheel, wearing clothes, vendetta, right triangle, ... deconstructionism” (p. 347). But is this really a definition? To make sense of it, we need to know in what sense a “minimum unit of cultural transmission” could possibly exist, and how to recognize one if we stumble across it. We will see that there are serious problems here.

Most recent innovative work on linguistics, sociology and related areas emphasizes the dependency of meaning on context, including the person doing the interpretation; a partial survey with some examples can be found in Wheelwell (1997). Under this view, meanings do not exist without an interpreter in a context. For example, is “deconstruction” something that an Australian aborigine could make sense of? In my experience, even most professionals in the hard sciences have a lot of trouble understanding what deconstruction is about; it seems that a great deal of cultural context is required for the “deconstruction meme” to exist! And if you think about it, perhaps you will agree with

¹ With sincere apologies to Lewis Carroll for changing a single letter in one of his best-known lines.

² Donnya Wheelwell is the *nom de guerre* of a science professional who wishes to remain anonymous to avoid the scorn of her colleagues. The research reported in this paper has been opposed in part by agencies too numerous to mention.

Originally published in *Journal of Consciousness Studies* 5 (3), 1998, pp. 362–73. Reproduced with permission.

me that the same is true of right triangle, wheel, vendetta, etc. They are neither distinct nor memorable to everyone, and certainly not minimal to those struggling to understand them; they only seem this way to those of us who share all or most of the necessary context.

The only example of a meme that is described with any precision in Nunn's paper is the *mandala*. However, its description is manifestly *composite* ("a symbol of some sort enclosed in a circle," p. 345), and anyone familiar with Indian religion knows that this description is not only highly inaccurate but also radically incomplete: a *mandala* is decidedly not just a simple geometric form, and even its geometrical aspect is certainly not a symbol in a circle; *mandalas* nearly always have a square border and a complex interior. But most importantly, the significance of *mandalas* can only be appreciated within a complex cultural context involving specific details from specific religions, including particular meditation practices (see, e.g., Tucci, 1969). This is very typical: memes (as well as schemes and archetypes, which are discussed below) are constructed by analysts from their own (often very limited) experience — they are not "things out there" to be grabbed and put on paper (or in a mind), and attempts to operate as if they were generally produce gross distortions by wrenching parts of a culture out of their context. In the case of *mandala*, this distortion is so gross as to offend even many contemporary American Buddhists.

Nunn adopts Hofstadter's term *scheme* for "a set of memes": "Schemes sometimes contain only a few memes (as a virus contains few genes) or they may contain many thousand of memes in huge groupings, such as occur in whole civilizations...." The idea is that memes tend "to gather in mutually beneficial groupings" like "religions ... where ideas such as those of God, eternal punishment, etc., become associated and are able to colonize new minds more effectively as a group than would be the case individually" (pp. 347–8). But this is putting things completely backwards: the parts can *only* have their meaning in the larger context. In fact, the "parts" don't exist individually, but instead are extracted out of the whole. When members of some social group speak of such parts for their own practical purposes in the context of their ongoing participation in that group, it doesn't (usually) do any harm; it is just the normal efficient use of language in context. But when outsiders do it for the purpose of supporting some theoretical position within their own entirely different social group (e.g. psycho-therapists, or JCS readers), then much is lost, and very often everything important is lost, as in the *mandala* example discussed above.

Nunn writes "a meme is just as much itself whether it is present in a brain or in an unopened page on a bookshelf" (p. 348). But it's hard to believe he thinks that memes literally lie on pages, like flu viruses waiting to be caught. Considering that a single sentence can be interpreted in drastically different ways by different people, and even by the same person at different times, would Nunn claim that all possible memes for all possible interpretations actually lurk on the page, waiting for a suitable activation? Or would he perhaps claim that the memes for each sentence undergo some transformation, depending on who reads the sentence? Similar difficulties arise with trying to place memes as literally residing in brains, or indeed, in any other physical medium at

all. Perhaps the most plausible way out of these difficulties is to suppose that memes reside in Plato's heaven until they are needed; however, we will see later that there are serious problems with this approach as well.

The atom bomb

The minimality requirement in Dennett's definition of meme calls our attention to an important obsession of Western culture, namely the search for *atoms*. We seem to want to find the simplest constituents of everything, and then go on to explain how all of the more complex phenomena are built out of these simplest constituents. This kind of divide-and-conquer method was perhaps most influentially promulgated by Descartes, but of course it goes back to classical Greek (and Indian) philosophy.

When it works, atomism is wonderful (and fills us with wonder), but we know it doesn't always work, and indeed is particularly inappropriate for social phenomena, which is where questions of meaning belong. I would further say that reductionist, atomistic views are actually harmful, even morally repugnant, in this area, because they imply that meaning as actually experienced by human beings is dead, reduced to patterns of simple atoms, rather than being embodied, situated, holistic and alive. Even in physics, reductionist theories as crude as memes are no longer fashionable. Interactions tend to be understood in terms of fields, and even a "quantum" is not a thing, a particle, but rather an increment of measurement.

Blue genes

Meanwhile on the biological front, empirical evidence continues to mount that the traits of phenotypes are *not*, in general, *localized* to specific sites in the genotype; instead, many (most? all?) traits of interest are complex interactions of multiple DNA sites with the actual physical environment of an actual physical organism carrying that DNA. That is, genes are *not* atoms for physiological form. (On the other hand, the four nucleic acids *do* serve as atoms for the "genetic code," which is a badly misleading term for DNA structure.) This is similar to the experience of brain researchers in the late nineteenth century, who looked for but failed to find specific localizations for functions of the brain (Star, 1989b).

Since Nunn merely follows Dawkins in the analogy of genes with memes, we should perhaps not be too hard on him about this, but still we must note that genes differ radically from memes, in that memes do not have any physical basis like that of DNA. Moreover, as described above, the supposed atomicity of genes that is the inspiration for memes is based on an oversimplified understanding of practical genetics, and is anyway inappropriate for applications to social phenomena.

I am sorry to say that this is not the worst of it. In suggesting the possibility of a "non-imitative" or "acausal" transmission of memes, Nunn enters the malodorous territory marked out by Rupert Sheldrake with his notion of "morphic resonance" (Sheldrake, 1981). This theory says that the more often something happens, the more likely it is to happen again, and that this species-wide "memory" is accomplished through a "morphic field." I don't know of any reputable scientist who accepts this. Nunn calls upon quantum field effects to support the possibility of memes being transmitted in

such ways, but quantum fields do not support the learning that morphic fields are supposed to exhibit, and moreover they are not applicable to macroscopic phenomena. Thus, I must accuse Nunn of being less than candid with his readers, by hiding Sheldrake's radically far from scientific views under a technical-sounding terminology and an unsupportable analogy with physics.

*The quantum tumtum tree*³

It seems that the word "quantum" can be placed in front of almost anything. This word should indicate that quantum effects are involved, at a quantum scale, as in quantum oscillator, quantum computer, etc. But New Age literature has shown a tendency to use it as a synonym for Sheldrake's adjective "morphic," because they share the connotation of non-locality, and because the word "quantum" has an impeccable respectability in physics. I suggest the phrase *quantum seduction effect* for the extra cachet produced by using the word "quantum" where it doesn't really belong.

One of the most egregious examples of this tendency is the book *The Quantum Society* (Zohar & Marshall, 1993), which proclaims a New Age of harmony and peace, because we are ultimately all connected through the same unified quantum fields, which (apparently) license near arbitrary action-at-a-distance effects. I have no hesitation in proclaiming this to be quantum trash, despite the approval of Nunn, who links it with the famous dialogues of Jung and Pauli, and despite my own passionate desire for harmony and peace in our world. There are better ways to pursue such goals than to promote nonsense.

Situation theory

We should also mention Nunn's appropriation of Barwise's situation theory, in the popularized version of Devlin (1991). Nunn is right in sensing the affinity of this system with his views, in that both exhibit metaphysical transcendentalizing tendencies. But in the explicitly realist⁴ mathematical formalism of situation theory, anything that can possibly be used to classify situations already exists (in Plato's heaven) as a *type*: there is nothing to distinguish between types that actually are used to classify situations from those that are not, or in fact never could be used, e.g. because they are too complex for human beings.⁵ Further, situation theory doesn't provide any help at all with the fundamental (and I claim utterly unsolvable) problem of identifying memes.

Summary

The magical powers of analogy and rhyme cannot transfer the respectability of science into difficult areas of the humanities, no matter how good the science involved, no matter how urgent the problems in the humanities, and no matter how excited,

³ With further apologies to the long-suffering Lewis Carroll.

⁴ This word refers (rather perversely) to the position in the philosophy of mathematics that all abstract mathematical objects "really" exist.

⁵ Because every possible type in situation theory actually exists, all but a vanishingly small percentage of them involve (say) less than a trillion distinctions (or any other finite number you like, such as the total number of particles in the universe).

concerned, or well known the hierophants may be.

Memes and Archetypes

What is an archetype? Nunn hedges his bets, suggesting definitions that range from the vacuous to the outrageous. Let's start with the vacuous. Nunn says that archetype "may be a term for the factors which predispose to 'ecological' success for a set of memes" (p. 349). This reminds one of the story about a medieval scholastic examination in which the student was asked the cause of sleep, and after a long pause, suddenly gave a bright smile and gave (the Latin⁶ equivalent of) "dormativity" as his answer. But we learn nothing from such a reduction, except perhaps that its author believes there must exist some causative factor.

Moving on towards the outrageous, Nunn later suggests "a stronger concept of archetypes" in which they are "pictured as features of quantum fields which directly affect the probability that some particular experience will enter individual consciousness" (p. 349). This manages to combine the vacuity of the dormativity explanation with the sleaze of the quantum seduction effect. Maximum outrage is achieved when Sheldrake-like "acausal spread" is added to this already heady brew.

The quotations provided by Nunn show that Jung expressed a variety of views on archetypes. Nunn makes a helpful contribution in separating "archetype representations" from "archetypes themselves," and in suggesting that part of the confusion about Jung's views comes from his failure to make such a distinction, while another part comes from the development of Jung's views over time. Nunn identifies archetype representations with "a set of memes ... plus the extra ingredient of awareness" (p. 348) and explicates Jung's view of archetypes themselves as "the background factors which increase the probability that such themes will crop up in individual consciousness" (p. 346). I think this attribution of Nunn's dormativity error to Jung is incorrect, and along with most commentators on Jung, I claim — especially in view of the distinction between the two kinds of archetype — that Jung's thought shows a clear tendency towards Plato's ideas, attributing actual existence to archetypes, after the manner of natural numbers.

Nunn also gives a biological analogy for the relation of memes to archetypes, saying that "schemes are then analogous to the genotype and archetype representations to the phenotype" (p. 348). However, this formulation is incompatible with the previous idea that an archetype representation is a set of memes plus awareness, and it is also highly implausible. The latter claim is supported in part by the failure of classical structuralism. Despite fifty years of effort and some undoubtedly significant contributions from Lévi-Strauss and others, structuralist anthropology did not succeed, and structuralist psychology and psychiatry never really got off the ground, though some

⁶ The story works better in Latin, where it's clear that all the student has done is manipulate suffixes; the not-quite-English word "dormativity" conveys this effect better than the equivalent "sleepiness." Of course, Nunn's trick is somewhat more subtle, and does not depend only on grammar.

efforts in structuralist literary criticism, for example by Roland Barthes (1974), were notable for their spectacular combination of flaws and insights.

The notorious deconstructionist movement is precisely an outgrowth of these failures, seeking to explain how all such efforts are necessarily doomed. This movement has succeeded to the extent that today it is hard to find a serious scholar in the humanities who still believes that any theory like that of memes is possible. Moreover, the mythic benefits of atomic units of meaning had already been extensively explored without any concrete results by earlier generations of semioticians under the slightly less magical brand name of “sememe.”

The modes of combination of these postulated atomic units of meaning get a very confused treatment from Nunn: sometimes they are said to combine “as genes assemble in chromosomes, nuclei, and ultimately entire creatures” (pp. 347–8), and at other times are said to combine as do the parts of a “complex ecology of representations” (p. 348); Nunn also suggests evolution as still another mode of composition for memes. But these modes of combination are totally different from each other, and moreover are mutually incompatible. Even though they are all biological, each features a different kind of thing to be combined: (1) creatures in an ecology survive by eating each other, while (2) chromosomes are sequences of genes, that (3) are simply replicated across nuclei within the same creature, and (4) evolution involves both genotypes and phenotypes, subject to natural selection. To further muddy the picture, Nunn also suggests that Lamarkian effects play a role.

None of the modes identified above resembles what we currently know about how meanings combine, as discussed by many authors in the humanities, among whom I would particularly mention the treatment of Fauconnier & Turner (1994) for its fascinating detail and great precision; the most important operations seem to be selecting, deleting, blending and collapsing. On the other hand, some aspects of language can be considered pseudo-Darwinian, namely the development over time of accents and dialects, as discussed later in this paper. There is intellectual sloppiness in Nunn’s failure to distinguish between the mechanics of genes and chromosomes, the larger-scale mechanics of ecologies, and the still-larger-scale mechanics of evolution. But most importantly, Nunn fails to make any allowance whatsoever for the non-mechanical “human” modes of composition that are actually found in natural language. His claim of consistency with the work of Cole and Hutchins betrays a profound misapprehension of their work, which in fact highlights the effects that embodiment and cultural context have upon meaning.

Lost in Plato’s cave

Western thought has long indulged a tendency to *reify*, that is, to regard ideas as actually existent things of which our experience is somehow only an approximation,⁷ while at the same time ignoring concrete aspects of the *embodiment* of the experiencer, both literally in a particular body, which is always situated in a particular time and

⁷ That is, to ideal-ize, object-ify, metaphysicalize, or transcendentalize a family of concrete situated experiences into an abstract entity which is then claimed to actually exist.

place, as well as less literally (but not less significantly) in social interaction, which again is always situated, and is also always mediated, for example, by speech, gesture or writing, depending of course on the details of interaction in that particular situation. For example, many people believe, in the face of massive experience to the contrary in everyday life, that each word has a meaning that is independent of the context of its use. Despite the impression created by dictionaries, any actual use of a word is in significant ways coloured by, and more importantly *tailored to*, the particular situation of its utterance. (For example, consider the way that “jabberwocky” comes to mean something like “dangerous nonsense” in this paper.)

In a striking metaphor that has passed down the ages with undiminished vigour, Plato⁸ described the human condition as like being chained inside a cave, so that only the shadows of things can be observed on the cave wall, not the things themselves. The things themselves are ideal types, and the shadows our imperfect perceptions. Mathematicians are infamous for regarding their craft as the investigation of ideal relationships among ideal points, lines, planes, integers, etc.; these entities and relationships are considered to exist completely independently of us, as ideal universal laws. But Platonism is no longer considered obvious, or even easily defended, and its specialization in the philosophy of mathematics to realism is considered at least as problematic, following attacks by Ryle, Wittgenstein, Lakatos, Brouwer, and many others.

Let’s consider the natural numbers, which seem to be everyone’s prototypical archetype. I don’t think very many people would really want to define them to be “background factors which increase the probability that number representations will crop up in individual consciousness” (cf. p. 346). Certainly any competent mathematician would recognize the absurdity of such a definition.

Now let’s go after Plato. Do natural numbers “really exist”? If so, in what sense? If I define the natural number N to be PP , where P is the number of particles in the universe, how can this possibly be more than a rhetorical gesture?⁹ Many modern philosophers of mathematics (in particular, the so-called constructivists) claim that the numbers arise out of situated human activities, most basically, counting; in such situations, numbers “are” certain actual events that occur within these situations. Of course, this is an oversimplification, and much more could be said, but perhaps this is enough to raise doubts about Plato’s metaphor, as well as about the archetypes of Jung, the memes of Nunn, Dawkins, etc.

Nunn’s two-fold version of Jung’s archetypes closely resembles Plato’s metaphor, in that archetypes themselves and archetype representations are entirely analogous to Plato’s ideal types and their shadows on the cave wall, respectively. Despite Nunn’s dubious efforts to appear more “scientific” than Jung, it seems to me that his actual use

⁸ In Book VII of *The Republic*.

⁹ There isn’t enough room in the physical universe to represent this “number” in base ten notation. And if you don’t think N is big enough to cause trouble, it is very easy to generate numbers that are far far larger.

of archetypes is essentially Platonic, and in any case, it is more charitable to make such an assumption than to dismiss the whole thing as a dormative triviality.

Passing to somewhat vaguer realms, deconstructionism, postmodernism, post-Marxist critical theory, and all their friends and relations, are (loosely) allied against Plato, Jung, Nunn and all their friends and relations; while the former may go too far in some respects, many of their arguments seem persuasive to this author, including among other things the extreme dependency of text on context. Whitehead (1969) called the tendency to create archetype-like entities “the fallacy of misplaced concreteness” (though he may have intended a more limited scope for its application).

Freud’s Slip

It is by now notorious that Freud’s use of free association was fatally flawed, producing contaminated data, so that the allegedly scientific, experimental results of psychoanalysis cannot be taken to support anything, let alone Freud’s outlandish sexually-oriented theories; among others, see Macmillan (1997).¹⁰ But at least Freud made a pretence at experimental verification, and possibly he was even serious about it, though unsuccessful. He certainly seems to have been serious in believing that psychological phenomena are entirely deterministic, which is why he didn’t feel the need to control for the influence of the therapist on the patient. There is also growing evidence that Freud simply fabricated¹¹ a good deal of his data (Macmillan, 1997).

One wants to be more sympathetic to Jung than to Freud, for example because of his sensitivity to religion, but it must be admitted that Jung uses nothing but intuition and anecdotal evidence, grafting interpretations onto the case studies that best fit his theory. In this sense, the support claimed for his theories by his clinical experience is open to the same criticisms that have devastated Freud, namely that the therapist can strongly influence the patient’s experience, or at least, what the patient reports as experience. And I am afraid that Nunn is guilty of similar sins in selecting certain phenomena, such as sciatica, grafting on his interpretations, and then claiming that the selected phenomena count as evidence for the interpretation. There is nothing in Nunn’s programme remotely like the null hypothesis and controlled variable experimentation of true science. Apparently this has become a tradition in psychotherapy.

The fact that the explanations of psychoanalysis are easily accepted — because they attribute causal relations to unconscious phenomena that are already familiar for conscious phenomena — was aptly called “*the charm of psychoanalysis*” by Wittgenstein (Macmillan, 1997); that suggestive phrase is just as appropriate for the five other factors identified by Macmillan as contributing to the popular appeal of psychoanalysis; moreover, these factors also apply, sometimes with small adjustments, to most other psychotherapies, including the Jungian. A still more general principle that might

¹⁰ Unfortunately, this work is not yet as well known as it deserves to be.

¹¹ A more charitable formulation, which applies to some cases, is that Freud’s notion of analysis failed to distinguish between patient reports, patient interpretations, and analyst interpretations.

bear the name “charm,” and that applies to many other movements, is that people often believe what they *want* to believe, no matter what the evidence, and some of them are willing to put their money on the line. I would mention parapsychology as a prime example, since much “research” in this area is funded through foundations created by elderly individuals who wish to see their hopes and beliefs, for example, in life after death, supported by “science.”

Shrink-wrapped science

One side effect of Freud’s slip from scientific reputability is an inundation of psychotherapists desperately seeking alternative sources of respectability. There seem to be three main strategies: (1) identify and canonize an alternative patron saint; (2) claim scientific support in ways that are different from those used by Freud — well known but poorly understood subjects like quantum mechanics are the most popular; and (3) seek respectability in areas other than science, such as literary criticism or Eastern religion. Nunn pursues all three strategies: (1) he seeks to canonize Jung, who has not yet received a devastatingly comprehensive critique like that levelled at Freud by Macmillan (1997); (2) he claims support from situation theory, molecular genetics, quantum fields, epidemiology, etc.; and (3) he claims links with social and historical phenomena. But Nunn’s main strategy is the appeal to science.

Phallogocentrism

Although Freud’s misogyny, and the extreme male bias of his theories are too well known to need repeating here (see Macmillan [1997] for a summary and evaluation of Freud’s sexual theories, and their current widespread lack of acceptance among professionals), these facts are part of a larger pattern that is very relevant to our purpose here. Freud’s legacy cannot be escaped just by avoiding some of his grossest errors (such as “penis envy” and the patricidal origin of civilization), or by interpolating a few polite asides (such as Nunn’s parenthetical “male examples only are given here to avoid confusion due to switching genders,” p. 347). In fact, we confront something far broader than Freud’s legacy to psychotherapy. Derrida coined the term “logocentric” for the third persistent fallacy of Western culture considered in this paper, the magical belief that words can control the world.¹² French feminists stuck a phallus on the front of Derrida’s word, to emphasize the strong patriarchal lineage of the beliefs involved. The resulting word, “phallogocentric,” has been given profound resonances by the work of Mary Daly on the Judaeo-Christian religious tradition (Daly, 1973), and today it has wide application in feminist analyses.¹³

Nearly all psychotherapies are “talking therapies,” in which words are supposed to reveal hidden psychic truths, and to heal deep psychic wounds. But it has been shown that these “deep truths” are more likely to be myths constructed in complicity with the

¹² It can be argued that our other two persistent fallacies, namely reification and atomism, are included within this one. See Macmillan (1997) for a summary of studies of Freud’s rhetoric; research in this area is still at an early stage, and corresponding detailed studies for other psychotherapies hardly exist as yet.

¹³ In fact, Daly (1973) says, “This book takes on the task of de-reifying ‘God’.”

therapist, that the healing rate of talking therapies is less than that of behavioural therapies and, moreover, that the healing rate of talking therapies is not statistically significant (Macmillan, 1997). One dramatic illustration of the dangers involved comes from the false memory syndrome, which sparked some spectacular court cases concerning alleged child abuse, found by later legal action to have been therapist-induced false memories.

However, word-centred therapies are not our main concern here. Returning to the thrust of Nunn's position, I think we can say that "memes" or "sememes" are the mythic semen of the psychic realm, claimed to magically inseminate us with their generative power. The entire concept is as phallogocentric, and as phallacious,¹⁴ as it could possibly be.

A Plague of Doctors

We should not lose sight of Nunn's good idea, which is an epidemiology of schemes. However, I insist it is not enough to conjure up a vague popular conception of epidemiology, but rather — for this to be truly a good idea — it would be necessary to successfully deploy the technical apparatus of epidemiology, which involves actual measurements of infection severity, onset rate, density, etc., in order to estimate parameters in equations that can then be used to predict future measurements. If Nunn had done this for outbreaks of mass hysteria (flying saucer sightings, etc.), then he would truly have given us a good idea, one that would allow us to start doing science and stop playing metaphysical games.

In thinking about epidemiology, we should also be clear that the actual data are *diagnoses*, not *diseases* as such, so that it is more than possible that some of the more peculiar looking diseases are actually epidemics of misdiagnosis, that is, their aetiology lies more in the doctors than in the patients. It may not even be meaningful to try to pinpoint the aetiology of such diseases; much as with a patient diagnosed by a Freudian analyst to be suffering from an Oedipal complex, it is less misleading to say that we have a conspiracy between patient and doctor, with complicity from society in licensing such dubious, and sometimes harmful, activities.

Also Sprach Atmanspacher

Atmanspacher's commentary is much more technical than Nunn's piece, but that doesn't mean that it is more accurate or more scientific. Indeed, it seems to me that it does more to confuse issues (and readers) than to clarify them. But first let us note that, to his credit, Atmanspacher accepts that Jung's latter interpretation of archetypes is Platonistic, and does not seek to impose Nunn's dormative error on Jung. However, Atmanspacher does try to recruit phenomenologists to support his strongly dualistic

¹⁴ Gentle reader, pray do not be disconcerted or offended: word play is very much part of the deconstructionist and feminist traditions; its purpose is not to be cute or trendy, but rather to undermine the power that words have over us, by refusing to take them too seriously. Mary Daly is a great artist in this medium.

approach, thus betraying a deep misunderstanding of thinkers like Varela and Merleau-Ponty. I could say much more here, for instance defending (some aspects of) Lévi-Strauss and (even) Kant from Atmanspacher's confusions, but I doubt it is worth the trouble.

However, I cannot avoid mentioning the great dollops of indigestible quantum theory that Atmanspacher serves up. These appear to have only a tenuous connection to Nunn's ideas, and have the effect of dulling the reader's critical thinking about issues of greater importance (though I do not suggest that Atmanspacher has deliberately aimed for this effect). Even the extremely unlikely assumption that acausal transmission of memes has somehow been clearly demonstrated by unambiguous experiments, would still be very far from establishing that the effects are due to quantum fields. There is only a crude analogy between meme transmission and quantum fields, based on their common attribute of action at a distance; one can easily imagine far simpler explanations, that do not require macroscopic manifestations of quantum effects quite different from anything previously known to science. Atmanspacher's (almost) good idea is to relativize the notion of minimality involved in "minimal units of cultural transmission" by postulating a hierarchy of levels, in which what is "ontic" at one level appears "epistemic" at another. While this parallels successful theorizing in many areas of science, it cannot be considered anything more than speculation here, especially in regard to the purported connection with "algebraic quantum mechanics" (which he admits as yet lacks any "systematic presentation," pp. 357-8). On this whole area, I cannot do better than to quote Atmanspacher: "It remains mandatory to distinguish sound results from wishful thinking" (p. 360).

A Great Hypocrisy and a Great Divide

It seems a strange ironic coincidence that I have elsewhere (Wheelwell, 1997) used and embellished the well known aphorism "Language is a virus" of the great American novelist, William S. Burroughs (1986); this aphorism has served, for example, as the basis for a popular song by Laurie Anderson (1986). But in this paper I attack what seems like a remarkably similar proposal. Is this hypocrisy? Let's look a little more closely.

Nearly forty years ago, C.P. Snow (1959) decried the "two cultures" that divided Western civilization in his time; since then, this great divide has only grown, as both the sciences and the humanities have developed in ever more sophisticated and specialized ways (Bowker *et al.*, 1997). Results in the sciences are subject to stringent acceptance criteria,¹⁵ whereas the humanities clearly develop in a quite different way. Great literature, for example, is considered to express the feeling of a time and place, while still revealing what is universal in the human condition. It is born in the subjectivity of the author, and it lives only in the subjectivity of the reader. By contrast, in the late twentieth century, scientific results are still considered more reliable and more respectable, because they are grounded in an impersonal objectivity. (Here I'm

¹⁵ This remains true despite the fact that the usual descriptions of "scientific method" are hopelessly naive about what really happens (cf. Star, 1989a,b; Latour, 1987).

just trying to suggest some dimensions of the Great Divide.)

Nunn, Atmanspacher, Dawkins, Dennett, Sheldrake, Freud, Zohar and Jung (among many others) seek to cloak humanistic speculations with the respectability of science, while on the contrary, Burroughs, Anderson, Daly, Wheelwell and their ilk have a soteriological goal, to challenge, inspire, wake up, and improve their audience.¹⁶ The first group is doing pseudo-science (or perhaps, to be slightly more generous, bad science), while the second group is willing to openly engage in the huge and messy dialogue that constitutes the evolution of values in culture.

Science, with doctrines like reductionism, atomism and controlled experiment, and its deep entanglement in the exploitation and defilement of nature through technology, has never been a healthy role model for the humanities. The logic of the humanities, especially the arts, is completely different, having more to do with emotions, feelings, and stories (the “heart”) than with ideas, concepts and reasoning (the “head”).

Science and the humanities have perhaps come closest together in certain areas of linguistics and sociology, including sociolinguistics, discourse analysis, conversation analysis, and ethnomethodology. I would like to particularly highlight the careful empirical work of the sociolinguist William Labov on language change (Labov, 1972a,b), because it is so closely related to the epidemiology of memes, as explained (of course without the misleading terminology of memes) in Wheelwell (1997). The first prerequisite for science is variables that can be measured. For spoken language, this is provided by electronic processing of acoustical data, using tape recordings and spectral analysis, plus various standard demographic variables¹⁷ like age, income, location of home, and of course, time. Then one needs to find and explain some systematic relationships among these variables. Based on extensive statistical analyses, Labov found systematic vowel shifts in the speech of certain social groups in New York City, which are most simply explained as attempts to differentiate these groups from, or to ally themselves with, other social groups. The words and vowels involved are easily recognized by all speakers and have characteristic spectral analyses; there is no need to postulate metaphysical entities, or to call upon morphic resonance or quantum fields. Oversimplifying a bit, we might say that it boils down to status.

I am far more sympathetic to artists who seek to improve society through their art, than to those who seek to infiltrate the humanities with the sciences, to shore up their positions, often having only the slightest familiarity with the fields involved, however noble they might consider their motives to be. It is unfortunate that our civilization is so deeply split, but efforts to colonize the humanities with reductionist pseudo-science do far more harm than good, and cry out to have their inadequacy and hypocrisy exposed. We have great art; we have great science; we have splendid research bridging

¹⁶ With characteristic directness, Burroughs said the overarching purpose of all his work was “to wise up the marks.”

¹⁷ With the caveat that such variables are always somewhat ill-defined, for systematic reasons having to do with how social groups operate (Garfinkel, 1967).

the gap between them;¹⁸ we don't need to descend towards superstition through New Age post-psychiatric speculation.

This paper has tried to show how Nunn (Atmanspacher, Dawkins, Jung, etc.) perpetuate three of the most vile, vicious, virile, virulent viral¹⁹ strains of Western culture: atomism, reification and phallogocentrism.²⁰ I have tried to provide some warning and protection against them, through viral metaphors and other inoculations and deconstructions, but I am not very sanguine that these modest efforts will have much effect against the powerfully seductive and addictive "charm" of these very widespread and dangerous infections.

Acknowledgement

This piece is dedicated to William S. Burroughs, who died while it was being prepared.

References

- Anderson, L. (1986), *Language is a virus, Home of the Brave*, B:1. Warner Brothers.
- Atmanspacher, H.A. (1998), Commentary on Chris Nunn's "Archetypes and memes," *Journal of Consciousness Studies*, 5 (3), pp. 356–62.
- Barthes, R. (1974), *S/Z: An Essay and Attitudes*, trans. Richard Miller (Hill and Wang).
- Bowker, G., Star, L., Turner, W. and Gasser, L. (1997), *Social Science, Technical Systems and Cooperative Work: Beyond the Great Divide* (Erlbaum).
- Burroughs, W.S. (1986), *The Adding Machine: Selected Essays* (New York: Arcade).
- Daly, M. (1973), *Beyond God the Father: Toward a Philosophy of Women's Liberation* (Boston, MA: Beacon Press).
- Dennett, D. (1993), *Consciousness Explained* (Harmondsworth: Penguin Books).
- Devlin, K. (1991), *Logic and Information* (Cambridge: Cambridge University Press).
- Fauconnier, G. and Turner, M. (1994), Conceptual projection and middle spaces, *Technical Report 9401* (University of California at San Diego, Dept. of Cognitive Science).
- Garfinkel, H. (1967), *Studies in Ethnomethodology* (Englewood Cliffs, NJ: Prentice-Hall).
- Labov, W. (1972a), *Language in the Inner City* (Philadelphia, PA: University of Pennsylvania).

¹⁸ I would again mention areas like sociolinguistics, discourse analysis, ethnomethodology, and its offspring conversation analysis, which emphasize the situatedness of language. In particular, conversation analysis says that all (real) language is *recipient designed*, i.e. intended for a very particular audience in a very particular context. These disciplines get along very well without transcendentalized reifications of linguistic entities, and ethnomethodology goes to great lengths to show that such moves are not only unnecessary but are actually harmful.

¹⁹ See footnote 14.

²⁰ Note added in proof: Readers with a taste for science fiction might enjoy *Snow Crash* by Neal Stephenson (Bantam, 1993), despite the sometimes lame humour (especially in the opening few pages), for its imaginative exploration of themes from the three papers on memes etc. in this issue of JCS. The idea that language is a virus is made quite literal, and the information and speculation on Sumerian culture is interesting. I would especially note that, despite all the excitement of a highly active plot and a great deal of speculative "science," Stephenson avoids the errors of atomism, dormativity and reification, though he does seem to be guilty of phallogocentrism.

- Labov, W. (1972b), *Sociolinguistic Patterns* (Philadelphia, PA: University of Pennsylvania).
- Latour, B. (1987), *Science in Action* (Milton Keynes: Open University Press).
- Macmillan, M. (1997), *Freud Evaluated*, rev. ed. with new Afterword (Cambridge, MA: MIT Press).
- Nunn, C.M.H. (1998), Archetypes and memes: Their structure, relationships and behaviours, *Journal of Consciousness Studies*, 5 (3), pp. 345–55.
- Sheldrake, R. (1981), *A New Science of Life: The Hypothesis of Formative Causation* (London: Blond & Biggs).
- Snow, C.P. (1959), *The Two Cultures and the Scientific Revolution* (Cambridge: Cambridge University Press).
- Star, S.L. (1989a), *Regions of the Mind: Brain Research and the Quest for Scientific Certainty* (Stanford).
- Star, S.L. (1989b), The structure of ill-structured solutions: Boundary objects and heterogeneous problem-solving, in *Distributed Artificial Intelligence*, vol. 2, ed. L. Gasser and M. Huhns (Pitman).
- Tucci, G. (1969), *Theory and Practice of the Mandala* (New York: Weiser).
- Wheelwell, D. (1997), Origins and history of consciousness, *Journal of Consciousness Studies*, 4 (5–6), pp. 532–40.
- Whitehead, A.N. (1969), *Process and Reality* (Free Press).
- Zohar, D. and Marshall, I. (1993), *The Quantum Society* (London: Bloomsbury).