Buddha's Way of Mindfulness, with an Anthology of Relevant Texts Translated from the Pali and Sanskrit. 1st U.S. ed. New York: Citadel, 1969.

Wallace, B. Alan. *The Bridge of Quiescence: Experiencing Tibetan Buddhist Meditation.* Foreword by H.H. the Dalai Lama. Chicago: Open Court, 1998.

Wayman, Alex, trans. *Calming the Mind and Discerning the Real: Buddhist Meditation and the Middle View, from the Lam rim chen mo Tson-kha-pa.* New York: Columbia University Press, 1978.

Zahler, Leah, ed. *Meditative States in Tibetan Buddhism: The Concentrations and Formless Absorptions.* London: Wisdom, 1983.

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MEME. *Meme* is indeed an interesting and apt subject to include in a dictionary of the history of ideas, for it is nothing less than a meta-concept for describing the transmission of knowledge among persons and cultures. Memetics—the study of memes—is, briefly stated, evolutionary theory applied to ideas. The word itself was coined by the British biologist Richard Dawkins in his 1976 book *The Selfish Gene* as a neologism derived from *mimeme* (that which is imitated) and *gene.* However, Dawkins's insight was presaged by William S. Burroughs's observation that "language is a virus from outer space" and by the work of thinkers ranging from the dadaists to Jacques Derrida, who, in seeking to transcend language and textuality, recognized the role that language and ideas play in controlling human behavior. In the late twentieth century and early twenty-first century, however, memetics has drawn its strongest supporters from the rather more literally minded camp of computer scientists and devotees of Internet culture—not only because the memetic model of human intelligence is similar to the programming of a computer but because memes are a useful metaphor for describing certain phenomena that occur in the online world.

Cultures, Dawkins observed, evolve much as organisms do, and he conceptualized memes as ideas that guide human behavior just as a snippet of genetic code can guide instinctual mating or dominance behaviors. Much like genes, memes arise in response to a new stressor in the environment and evolve in response to changing conditions:

> all life evolves by the differential survival of replicating entities. . . . I think that a new kind of replicator has recently emerged. . . . It is still in its infancy, still drifting clumsily about in its primeval soup, but already it is achieving evolutionary change at a rate that leaves the old gene panting far behind. The new soup is the soup of human culture. (Dawkins, pp. 191–192)

A meme can be a concrete technology, such as a technique for making a stone spearhead, or an entirely abstract idea, such as "kingship" or "jihad." Examples of memes range from methods of making pottery and building arches to songs and stories, to tastes in clothing and fashion, to even more sophisticated behaviors, such as manufacturing hydrogen bombs, which require a "meme complex" or group of mutually reinforcing memes—in this case, the concepts of metalworking, atomic theory, and explosives.

As the result of natural selection, some memes become rare or are altogether eliminated from the "meme pool," the collective sum of a society's knowledge; they can also be overwritten by an invading group's memes. For instance, few twenty-first-century Native Americans know techniques that were indispensable to their pre-Columbian ancestors, such as flint-knapping or making a fire with the bow-and-drill method. Some memes (such as "cooking") survive because they are generally useful; others (such as "sports cars") trigger hardwired evolutionary imperatives, such as "food" or "sex" or "danger"; still others use more insidious means to ensure their own survival. For instance, chain letters, though intrinsically useless, have managed to be successfully passed on for decades because they contain instructions for their own reproduction and because they successfully exploit the human desire to get something for nothing, while evangelical religions (to give another example of a self-perpetuating meme) emphasize the virtues of proselytizing.

These latter cases serve to illustrate an important point of Dawkins's conceptualization, namely, the parasitic quality of memes. Lacking any physical way of reproducing themselves, memes survive and grow by imitation or by transmission from mind to mind. The transmission may occur through the observation and copying of a certain behavior or technique; it may occur as a craft is taught to an apprentice or as a farmer shows his or her son how to shear sheep; or it may be verbal, as by a professor's lecturing or assigning reading to her or his students. The participants need not speak the same language, as was the case with American GIs learning judo in occupied Japan. The transmission may be by force, such as the spread of the meme complexes of Islam and Christianity by conquest; or it can be by trade and indirect influence, such as the spread of classical Greek and Chinese ideas and motifs through the ancient Mediterranean and East Asia, respectively. Certain ideas are more easily imitated, or more contagious, than others; these are the memes that tend to be selected for survival, irrespective of the benefits to the individual they infect; in fact certain memes (such as celibacy or kamikaze missions) may be detrimental to the host's genetic survival but are nonetheless highly successful at reproducing themselves. Thus a viral contagion is a more apt metaphor to describe the meme than is sexual reproduction—a comparison Dawkins also used to describe the genetic code itself. To extend the metaphor, one is "infected" by an idea as a cell is by a pathogen, and one is compelled to carry the idea to others so that it may reproduce itself. Much like a computer virus, information begets information.

The Selfish Meme

Even memes like "celibacy" and "kamikaze mission," while detrimental for their individual hosts, may nonetheless be beneficial for the meme pool at large. As Matt Ridley so eloquently explains in his 1996 book *The Origins of Virtue,* magnanimous social behavior is nonetheless often guided by the self-interest of all involved. Like ants, human beings seem to have evolved

to be genetically hardwired to cooperate. Successful memes can build on this tendency. For instance, few animals, including humans, are munificent to those outside their immediate group or tribe, but the "patriotism" meme, by giving us a way to conceptualize an entire nation as an extended tribe, is one way of explaining the phenomenon of the growth of nation-states—or "imagined communities," as Benedict Anderson put it in his 1983 book of the same title. Thus even memes that are detrimental to the individual can confer an evolutionary advantage; to build on the example of patriotism, groups with memes that promote extensive cooperation (such as Caesar's Roman legions) will tend to outcompete groups who do not (such as the tribes of Gaul). *Dulce et decorum est pro patria mori* (It is sweet and proper to die for one's country).

One of the most philosophically depressing implications of memetic theory is that it is our memes, not human genius and creativity, that are the guiding force in history. Just as Dawkins reduced biological organisms to a vehicle for the self-perpetuation of genetic material, so it is with memes. Our various behaviors, from building cathedrals to writing novels, can be viewed as nothing more than our memes attempting to survive and grow. "Memes might come to be viewed explicitly as the primary actors in the drama of human history, exerting an iron-fisted control precisely analogous to that of Richard Dawkins's 'selfish genes' in the pageant of biological evolution," as James Gardner put it in his article "Memetic Engineering" in the May 1996 issue of *Wired* magazine. Such an idea is tremendously troubling for notions of free will. Gardner continued:

> A meme-focused vision of culture and consciousness acknowledges forthrightly that memes are not mere random effluvia of the human experience but powerful control mechanisms that impose a largely invisible deep structure on a wide range of complex phenomena—language, scientific thinking, political behavior, productive work, religion, philosophical discourse, even history itself.

Memetic Engineering

To add to the confusion, the modern world has seen an unprecedented multiplication and proliferation of memes, with mass media being the preeminent transmission vector. Some of these memes are devised with rational ends, such as advertising consumer products; others are devised solely as play; others are "junk" memes. Hula hoops, the Burma Shave billboards of the 1950s, the slogan "There's always room for Jell-O," the synthesizer intro to the 1984 song "Jump" by Van Halen, or the three-note "by Men-nen" jingle, while of no use to those they infect, are excellent examples. The Internet in particular is a virtual memetic petri dish, with examples such as the nonsensical phrase "all your base are belong to us" (from a badly translated 1988 Japanese video game called Zero Wing) spontaneously arising on message boards in 2000, spreading from mind to mind via the ether and then dissipating, not unlike a particularly virulent disease burning its way through the population.

Thus the idea of memetic engineering consists not only in choosing which memes to be influenced by but also in counterpropaganda and countersloganeering designed to purge from the meme pool those ideas deemed deleterious to society at large. The essential component in memetic engineering is faith in human reason to discern the most advantageous memes. Dawkins himself expressed a secular humanist optimism when he wrote, "We, alone on Earth, can rebel against the tyranny of the selfish replicators" (p. 201). (Of course, from another perspective, this could be seen as just another Darwinian struggle, with the meme for "secular humanism" trying to crush its competitor for mindshare, the meme for "theocracy.")

One example of the deployment of this idea is the activist Andrew Boyd's Billionaires for Bush (or Gore) campaign, which used the ironic, parodical image of the superwealthy taking to the streets in support of their candidates in order to "piggyback" on mainstream media coverage of the 2000 U.S. presidential election and thus call attention to social issues neglected by the candidates. The idea of memetic engineering was both popularized and taken to its logical end by the 1992 science fiction novel *Snow Crash* by Neal Stephenson. Though the actual word *meme* never occurs in the book, the plot makes clear reference to Dawkins's work. The title, for instance, refers to a key element in the book's plot, a literal "mind virus" modeled after a computer virus that is capable of destroying a user's mind through merely being seen on a computer screen. The resolution involves a clay tablet from ancient Mesopotamia, on which are recorded syllables in an ancestral ur-language (reminiscent of ideas of the "deep structure" of language popularized by Noam Chomsky and others) that can program human beings, like robots, into performing tasks for those who know how to wield the power. *Snow Crash* is frequently cited in meme circles as an example of the power of memes taken to the nth degree.

Criticism of Memetic Theory

Despite the cult popularity of the idea, memetic theory is hardly discussed in recent texts on evolutionary psychology and linguistics. The prevailing consensus seems to be that the meme is a nice metaphor but one that has perhaps been taken too far. Memes, after all, are hard to define, quantify, and measure; their very existence is somewhat nebulous, inferable but not scientifically verifiable.

Some have also assailed memes not only as bad science but as reactionary politics. The complexity of human development is overly reduced into nonmaterialist, quasi-mystical, pseudoscientific terms, which in turn are only a new Kabbalah, a recasting of age-old ideas of angels and demons and magic words that can control reality. Many also question the memetics community's frequent, almost reflexive, assaults on religion, which they characterize as nothing more than preprogrammed, irrational memetic replication. Moreover the idea of human behavior as nothing but the programming of snippets of information is troubling to many—and not only those who still maintain a belief in free will. To hold with a radical memetic view of human behavior is to ignore the factors of economics, environment, and politics in history. As such, memetics is a fascinating and promising protoscience but further research and experimentation is needed before it can become a full-fledged discipline in its own right.

BIBLIOGRAPHY

Aunger, Robert. *The Electric Meme: A New Theory of How We Think.* New York: Free Press, 2002.

Blackmore, Susan. *The Meme Machine.* New York and Oxford: Oxford University Press, 1999.

Boyd, Andrew. "Truth Is a Virus: Meme Warfare and the Billionaires for Bush (or Gore)." In *The Cultural Resistance Reader,* edited by Stephen Duncombe. New York: Verso, 2002.

Dawkins, Richard. *The Selfish Gene.* New ed. Oxford and New York: Oxford University Press, 1989. Originally published in 1976.

Gardner, James. "Memetic Engineering." *Wired* 4.05 (May 1996). Available at http://www.wired.com/wired/archive/4.05/memetic .htm.

Journal of Memetics. Available at http://jom-emit.cfpm.org/.

Ridley, Matt. *The Origins of Virtue.* New York: Penguin Books, 1996.

Stephenson, Neal. *Snow Crash.* New York: Bantam, 1992.

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MEMORY.

The history of the idea of memory is associated with the cultural uses of two kinds of memory, episodic and semantic. Episodic memory concerns the conscious recall of particular events. Interest in its nature dates from antiquity, and mnemonic techniques for strengthening memory's resources, known as the "art of memory," were developed as rhetorical skills. Semantic memory deals in tacit understandings—habits of mind and implicit knowledge on the boundary between the conscious and the unconscious. In modern times, scholars have treated it as a realm apart from episodic memory in light of a newly discovered awareness of the significance of the social contexts of collective memory.

The Ancient Art of Memory

In ancient Greek mythology, Mnemosyne, the goddess of memory, was revered as mother of the Muses of the arts and sciences. Ever since, students of memory have acknowledged memory's creative power to evoke the imaginative forms through which humankind represents the reality of its experience. The ancient idea of memory was grounded in the concept of mimesis, according to which memory and imagination are reverse sides of the creative act of "imitating nature." In the primarily oral culture of ancient Greece, the rhapsodes were renowned for their prodigious powers of memory, which allowed them to sing the Homeric epics, the repositories of the Greek heritage and the foundation of Greek cultural identity. But the use of memory in oral tradition was uncritical, and scholars have made much of the differences between the intuitive poetic storytelling of rhapsodes and the studied analytical use of memory among the literate rhetoricians of an incipient manuscript culture.

A changing conception of memory, therefore, is coeval with the passage from primary orality to manuscript literacy (beginning about the seventh century B.C.E.), which permitted a newfound critical perspective on memory's nature. By late antiquity, the idea of memory as remembered episode had come to be closely associated with the art of memory, a rhetorical technique of displacement for accurately recalling facts and stories worthy of remembrance. The art located data difficult to remember within easily remembered imaginary structures of places and images. The discovery of this method for associating the unfamiliar with the familiar is attributed to the Greek poet Simonides of Ceos (556–468 B.C.E.) and was developed especially by Roman rhetoricians. The *Rhetorica ad Herennium* (82 B.C.E.), attributed by some to Cicero, is the oldest such manual to have survived from antiquity. Throughout the Middle Ages and Renaissance, the art found expression in ever more complex mnemonic schemes, until it was marginalized by new encyclopedic reference books for storing knowledge in the emerging print culture of the Enlightenment.

The English historian Frances A. Yates (1899–1981) was the first modern scholar to analyze the history of the intellectual uses of mnemonic technique. She grounds this critical perspective in two seminal conceptions of memory derived from ancient Greek philosophy, one formulated by Plato (c. 428–348 or 347 B.C.E.), the other by Aristotle (384–322 B.C.E.). Plato emphasized the power of memory to open pathways to the archetypes of transcendental knowledge. Aristotle presented a down-to-earth analysis of memory's powers of recognition and recall and described mnemonics as a guarantor of the capacity of a well-ordered mind to hold fast to its learning. Yates was especially interested in the ambition the Neoplatonist rhetoricians of the Renaissance had to construct imaginary memory palaces whose architectural structures were purported to mirror those of an ideal universe and so to provide hermetic keys to correspondences between earthly and transcendental realities. But the rise of empirical science in the seventeenth century undercut the art of memory's idealist presuppositions, and while the art remained an elegant technique for the rhetorical display of erudition, it was soon acknowledged that its methods led only to a philosophical dead end.

Modern Memory and Personal Identity

The spread of print literacy by the eighteenth century transformed the cultural understanding of episodic memory. In print culture, collective knowledge could be easily preserved in readily accessible, alphabetically indexed reference books, rendering obsolete the practical applications of the art of memory in information retrieval. The psychological effect was to free memory for personal reflection on formative life experience, particularly that of childhood. The idea of memory thenceforth came to be closely allied with autobiographical soul-searching. The prototypes for this genre of self-analysis were the *Confessions* (1762) by the French philosopher Jean-Jacques Rousseau (1712–1778) and the *Prelude* (1805) by the English poet William Wordsworth (1770–1850). But for early twentieth-century readers, the most poignant introspective evocation of the past was that of the French writer Marcel Proust (1871–1922), who, in his multivolume novel *In Search of Lost Time* (1913–1927), marveled at the way an impromptu experience of sensory recall could spontaneously awaken the brilliant immediacy of an entirely forgotten cultural world. For the literati of the modern age, recovered memory was perceived to be the surest route to the discovery of the deep sources of personal identity.