

ment each other's approaches—albeit not without some tensions arising from their different goals and analytic methods.

For many, the most contentious feature of the book may be the author's position as the Dalai Lama. Had the book been written by someone else, it might have been considered a thought-provoking treatise that explores some of the most challenging problems we face regarding the place of science in society. But the book is written by a spiritual leader of millions, one who is not only the ultimate symbol of Buddhism but, its followers believe, the reincarnation of its founder. The very fact that the Dalai Lama chooses to comment on science is already considered by some to be controversial, as evidenced by the protests to his presentation of a keynote address at the recent Society for Neuroscience meeting in Washington, DC.

But in fact, the book falls in the long tradition of treatises by great religious thinkers whose discussions of age-old questions shaped and extended the philosophical scope of their religions. The rabbis of 400 A.D. in Tiberius, whose similar questions and debate led to the compila-

tion of the Talmud, would surely have agreed. So would the Christian philosopher-monks of the 13th century, such as Thomas Aquinas, and Martin Luther. Indeed, if its spiritual leaders do not continue to ask and attempt to answer such questions in light of new discoveries, a religion risks becoming ossified and losing its relevance to modern society. The Dalai Lama makes this point in his discussion of the Buddhist view of Earth and its relation to celestial bodies, whose "sizes, distances [etc.] are flatly contradicted by the empirical evidence of modern astronomy." He suggests that "Buddhism must abandon many aspects of the Abhidharma cosmology," citing the Buddhist dictum that "to uphold a tenet that contradicts reason is to undermine one's credibility; to contradict empirical evidence is a still greater fallacy." This point is sure to be controversial for those who hew more rigidly to Buddhist tradition.

The Dalai Lama, however, does not limit his controversial proposals only to the side of Buddhism. Many scientists may disagree with his plea for including subjectivity and compassion in science. Furthermore, although he

clearly supports Darwin's theory of evolution as "a coherent account of the development of life on this planet and the various principles underlying it, such as natural selection," he questions some aspects of the theory. Strict Darwinians may balk at his proposal that the theory falls short on several counts, mainly in its lack of explanations of the origin of life and the origin of "sentience" or consciousness, although the author bolsters his arguments with ample logic. Healthy debate, however, does not require agreement. It simply requires a continuing dialogue, open-mindedness, respect, and thoughtful consideration of other points of view. This is certainly consistent with Buddhist philosophy.

In sum, *The Universe in an Atom* presents a thoughtful plea for scientists to not only delve deeply into a subject but to also stand back and take a broader view of the impact of their discoveries on society—and in so doing, to add compassion to their quest. If we are able to take up the Dalai Lama's challenges, science and society will certainly be the better for it.

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## SCIENCE AND LITERATURE

# Reading with Selection in Mind

Harold Fromm

Rumor has it that the "science wars" are dead (1). Maybe. Then again, on the same day I began reading *The Literary Animal*, I received the 2005 edition of *Profession*, an annual book-length collection of writings about the state of literary studies from the Modern Language Association (MLA), the flagship organization for literary academics. It opens with a group of essays about science and the humanities, the first of which is by Louis Menand, a literary scholar and well-known writer for *The New Yorker*. Menand remarks,

Faculty members in science and in social science departments tend to regard humanists as reflexively oppositional to what they do and, therefore, as easy to discount. This perception is founded mainly on ignorance. The summaries of the state of ideas in the humanities in books like E. O. Wilson's *Consilience* and Steven Pinker's *The Blank Slate* are appallingly misinformed....

The version of the humanities that would make many nonhumanists most comfortable today is the version in which art and literature are ornaments on or neat illustrations of empirical accounts of human life. (2)

Moreover, Menand claims that intellectual culture is disposed to a blind faith in "the idea that human behavior is ultimately understandable in biological terms." In the next essay, Barbara Herrnstein Smith, another literary scholar and theorist, criticizes the "scientism" willing to import "one or another currently high-profile scientific or sometimes scientoid program" into the humanities to make them seem less "amateurish" and "impressionistic." She alludes with heavy irony to the Sokal hoax (3) and to E. O. Wilson's misbegotten (to her) program to "bridge the gap between the two cultures by integrating the anarchic humanities and the floundering social sciences into the more orderly and grown-up natural sciences..." (4).

From where I am sitting, the science wars are looking pretty alive, and now comes a book that is an implied response to the scholars quoted above. *The Literary Animal: Evolution and the Nature of Narrative* is a collection of commissioned essays mostly from the humanities but produced with the editorial blessing of an evolutionary biologist, David Sloan Wilson (Binghamton University). His co-editor, Jonathan Gottschall, received his doctorate in

English at Binghamton, where he turned to Wilson and others outside his own unsympathetic department to supervise a thesis that filtered Homer through evolutionary psychology.

In their introduction to the book's first and longest section, "Evolution and Literary Theory," the editors comment on the blank-slate social constructionism that disparages biological explanations: "the theories of human nature that have dominated literary theory and criticism since the 1960s now only exist in the humanities." Because

the editors are acutely aware of their own professional emergence from opposite sides of the science-humanities divide, the interdisciplinary mentality of the essays is markedly warmer and more consciously informed than any attitudes about evolution's usefulness as a tool for literary analysis found among the MLA's typical spokespeople. The volume begins with short forewords by E. O. Wilson and Frederick Crews, eminent maverick voices in the sciences and humanities,

and a conciliatory introduction by the editors. These are followed by an essay on human nature by the celebrated novelist Ian McEwan and a benign attempt by David Sloan Wilson to bridge the two cultures of social construction and Darwinian adaptation.

The volume makes a stronger case for consilience than the fledgling anthologies of "biopoetics" (explorations of the arts from the perspective of biological evolution) that began to appear in the 1990s. Far from treating literature as an "ornament," the contributors argue

### The Literary Animal Evolution and the Nature of Narrative

Jonathan Gottschall and  
David Sloan Wilson, Eds.

Northwestern University  
Press, Evanston, IL, 2005.  
332 pp. \$79.95. ISBN 0-8101-  
2286-3. Paper, \$29.95. ISBN  
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The reviewer is at the Department of English, University of Arizona, Tucson, AZ 85721, USA. E-mail: hfromm@earthlink.net



for narrative and drama as more or less adaptive. They share a powerful awareness that everything human ultimately derives from the evolved body and brain, no matter how much culture and individual consciousness are capable of varying the forms of expression. So Brian Boyd very plausibly writes that “[e]volutionary analysis of art may or may not, finally, recognize art as an adaptation, but it will almost certainly show that art depends deeply on evolved features of human minds and behavior.” Yet however adaptive the arts may be, the threat of biological determinism is a hollow fear, for “[n]o one was ever ‘genetically determined’ to write or read something as unprecedented as *Ulysses*.”

Dylan Evans, originally a Lacanian psychoanalyst who wrote a major guidebook to understanding his mentor, describes the transformation that resulted from his gradual recognition of the evolutionary adaptations generating consciousness and the psychogenesis of his own startling defection. He then provides an account of Lacan’s flawed intellectual development. In his essay “From Lacan to Darwin,” he writes, “Lacan’s ideas are hopelessly inadequate because they are predicated on a false theory of human nature.” Because the “value of Lacan’s work lay not in any ability to describe the facts, but in its power to produce novel ways of interpreting literary texts,” it is mainly literary scholars who still cling to this increasingly repudiated body of work. Evans’s attendance at the Darwin Seminars of the London School of Economics during his loss of professional faith produced the requisite “aha!” moment: a recognition of the social sciences’ “shaky creationist notion of a radical gap between humans and other animals.” Evans subsequently gave up his practice and turned his attention to evolutionary psychology, robotics, and artificial intelligence.

When it appeared in 1995, Joseph Carroll’s *Evolution and Literary Theory* (5) intensified the growing interest in Darwinian criticism, and Carroll followed it with a paradigmatic collection of essays on the topic (6). Here, in “Human Nature and Literary Meaning,” he refines evolutionary psychology’s mapping of specific modules for human faculties by stressing the role of domain-general intelligence and

life-history analysis in accounting for human development and flexibility. With his characteristic skill at reading literary texts, Carroll examines Jane Austen’s *Pride and Prejudice*. His analysis demonstrates the insights of a Darwinian social science that can provide literary criticism with “conscious theoretical access to the elemental forces that have impelled all human beings throughout time and that have fundamentally informed the observations and reflections of all writers and all readers.”

For years, scholars in the literary humanities have struggled to achieve at least a semblance of the certitude possible in the sciences, although none of the major schools of analysis—whether Freudian, mythic, Marxian, deconstructive, or socially constructive—could make a claim to the sort of falsifiability that quickly winnows scientific theories. But a running theme throughout *The Literary Animal* is the need for quantitative methods that could provide solid foundations for philosophical and

aesthetic claims. Gottschall’s essay confronts this problem head-on in an eloquent explication of “quantifying the not easily quantifiable” that precedes his report of a test of claims that European fairy tales reflect arbitrary gender norms of western patriarchal societies. He and his student-researchers coded 1440 fairy tales from around the world for explicit and implicit assumptions about the sexual characteristics of protagonists and antagonists, heroes and villains, males and females. Putting to rest (they hope) the impressionistic underpinnings of the gender wars, they found that in tales from societies ranging from the most insular bands and tribes to the most industrialized states, men and women were sexually characterized pretty much as they are in the West.

Will the evolutionary insights about the arts provided in *The Literary Animal* raise the consciousness of Menand, Smith, and colleagues and finally bring the science wars to an overdue end? Check back at the MLA’s annual convention around 2010 for the latest developments. I hope we will then find, as Tennyson put it, “The old order changeth, yielding place to new, / And God fulfils himself in many ways.”

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5. J. Carroll, *Evolution and Literary Theory* (Univ. Missouri Press, Columbia, MO, 1995).
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## BROWSING

**The Past from Above.** Aerial Photographs of Archaeological Sites. Charlotte Trümpler, Ed. [Photographs by Georg Gerster.] J. Paul Getty Museum, Los Angeles, 2005. 415 pp. \$65. ISBN 0-89236-817-9. Frances Lincoln, London. £50. ISBN 0-7122-2478-1. Originally published under the title *Flug in die Vergangenheit* (Schirmer/Mosel, Munich, 2003). Translated by Stewart Spencer.

Gerster has spent the last half-century capturing on film aerial views of ancient monuments from around the world. This volume presents 249 of his images, organized in thematic chapters on villages—such as the settlement mound of Tepe Yahya (right), from the 4th millennium BC in southern Iran—palaces, fortifications, sacred sites, etc. Explanatory notes for the sites (written by archaeologists) are gathered at the end of each chapter. Trümpler’s introductory essay spotlights the pioneers of aerial photography in archaeology.

