

Conspectus

Rhetorics of Biology in the Age of Biomechanical Reproduction

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- 1 *Poroi: An Interdisciplinary Journal of Rhetorical Analysis and Invention* is a peer-reviewed on-line journal devoted to the rhetoric of inquiry. In its most general sense, the rhetoric of inquiry attempts to apply the tools of rhetorical criticism, whose native soil is the critique of political speech, to the production, dissemination, and reception of what counts as knowledge. This research program runs against modernity's conventional opposition between truth and persuasion. Rhetoric, conceived largely of as a battery of figurative devices, has generally been perceived in modernity as productive of the very antithesis of secure knowledge, as a fount of "mere opinion" and even intentional deception. The nod has gone to philosophy, and to the logical tools of which it has been the custodian, in separating the wheat of knowledge from the chaff of opinion. In grappling with the more complex relationships between knowledge and power that have come to general awareness in the contemporary, roughly post-modern period, the rhetoric of inquiry challenges the hegemony of philosophy as an instrument for producing, interpreting, and criticizing claims to knowledge. It does so by attending not only to patterns of reasoning but also to more textual and performative dimensions of the discursive field in which any inquiry operates and to the situated context in which a speaker inserts him or herself, for instance, and to the horizon of his or her audience.
- 2 So construed, rhetoric of inquiry is useful in showing how new developments, orientations, or paradigms in the production and dissemination of knowledge disturb the equilibrium that at any given time tends to obtain among various disciplines. In the "high" modernism that was established after the world wars of the twentieth century, equilibrium of this sort was supposed to exist between the natural sciences, the social sciences, and the humanities. Recently this equilibrium has been disturbed by developments in the life sciences. Beginning in the mid-seventies,

techniques for manipulating genes have increasingly bestowed on human beings abilities to change living systems in ways that promise to become comparable in their magnitude to what applied physics, chemistry, and biochemistry have achieved in the last few centuries. A new era of biotechnology is upon us.

- 3 The influence of molecular genetics has also given rise to versions of evolutionary theory that tend to make the seemingly self-replicating and self-aggrandizing molecular gene both the agent and beneficiary of the process of natural selection. According to this view, the adaptive properties of an organism, indeed the organism as a living whole, serve merely as vehicles for the gene's replicative prowess. By the turn of the millennium, the term "Darwinism" had become closely associated, in both popular and expert communities, with this "selfish gene" theory. It had also become closely linked, that is to say, with the "sociobiological" and "evolutionary psychology" research programs that are built on this genocentric theory. These programs disturb the received division of academic labor by proposing to absorb the human sciences into the natural. The matter is not a purely theoretical one. The prospect of identifying genes that code for this or that particular trait, when combined with the likelihood that genes may be taken in and out of living systems at will, has raised the spectre of a new, aggressive phase in the history of the eugenics movement, which has dogged the Darwinian tradition since the days of Francis Galton, Charles Darwin's first cousin and the founder of eugenics.
- 4 Anxieties about these developments form the background for the essays presented in this first, special issue of *Poroi*. In **Celeste Condit's** cautionary tale, we hear the voice of a speaker from the twenty-fourth century who looks back to the time – our time – when humans, acting presumably to fulfill their personal desires, first began the irreversible process of genetic manipulation and cyborgian suturing that would eventually lead to a palpably "post-human" world. Researching the distant past, he or she (or perhaps both or neither) turns up lots of late twentieth-century talk about a "post-human" body. What he/she/it mostly finds, however, is post-modernist theorizing about the post-humanist condition rather than careful attention to the admittedly primitive set of techniques that would eventually lead to a truly post-human world. One implication is that perhaps late twentieth-century "humanists" should have paid more attention to the first stirrings of the nascent biotechnological revolution in their midst.
- 5 They might have paid closer attention, for example, to the

developments in medical technology on which **Richard Doyle** meditates in “A Coma Speaks: Dead Zones of Media and the Replication of Family Value.” The quasi-cyborgian ways in which hospitalized humans have been connected to machines, and more generally to technological systems, has disturbed in sometimes macabre ways the very meaning of what it means to die, and has rendered ambiguous even such a seemingly straightforward question of when someone can be said to be dead.

- 6 **Chuck Dyke**’s response to the current situation in the life sciences draws upon Bruno Latour’s suggestion in *We Have Never Been Modern* that, at root, the problems we face, or think we face, have actually been brought about in significant measure by the modernist myth of a separation of the natural sciences from the social sciences and of the latter from the humanities. Attempts to meet contemporary challenges by strengthening the hand of humanists against dark, satanic science are likely to be ineffective, accordingly, because they toil within the same abstract categories of what Latour calls “The Modern Constitution” of knowledge. Dyke presents evidence that genuinely engaged scientists and science teachers, who make no hard and fast distinctions between what is natural, what is social, and what is literary, are in a position to help – as Rachel Carson helped when she effectively attacked the chemical industry in *Silent Spring* – instead of tilting against abstractions of the sort that are clearly visible today in the frettings and fantasized prohibitions of contemporary alarmists about biotechnological revolution.
- 7 The mid-twentieth century evolutionary scientist Theodosius Dobzhansky once remarked that “Nothing in biology makes sense except in the light of evolution.” Assuming that this is true, it is not surprising that opponents of genetic biotechnology, as well as those who merely advise caution and reflection, have sought to provide backing for their views by questioning the fruits of the neo-Darwinian Modern Evolutionary Synthesis, which has reigned supreme for over half a century as the framework within which the rest of biology is to be interpreted. The presumption is that this background theory has licensed unrestricted genetic engineering or, at the very least, has failed to provide rich enough conceptual and empirical resources to buffer the wilder claims made on its behalf.
- 8 Two lines of argument or topoi are available to those who think, unlike Dyke, that correct theory matters as much as practice, and that bad theory has led to the prospect of unconstrained genetic

engineering. On the one hand, one can presume that the selfish gene theory of Richard Dawkins, the evolutionary psychology of John Tooby and Leda Cosmides, and the original sociobiological proposals of Edward O. Wilson are the logical and empirical outcome of modern Darwinism itself. One can then try to find and commend non-Darwinian, even anti-Darwinian, approaches to evolutionary theory as a way of repudiating the contemporary shift away from ecology toward genetic technology. On the other hand, one might alternatively argue that contemporary genocentric versions of Darwinism are not all that continuous with the Modern Evolutionary Synthesis, many of whose mid-century progenitors, such as Dobzhansky himself, found approval from humanists largely because they opposed the eugenic movement, which they believed had hijacked the good name of Darwinism.

- 9 In her contribution to the issue, **Cristina Lopez** reports on a proposal of the first sort. Guided by her advocacy of the “Gaia hypothesis,” the noted biologist Lynn Margulis, who discovered the symbiotic nature of the cell, and her son Dorian Sagan, envision the evolutionary process as one of ecological cooperation, symbiosis, and self-organization rather than as individualist competition. According to them, selfishness and individualism so circumscribe the Darwinian tradition that it can offer little resistance to the present ascendancy of genetic engineering, even if some of its advocates want to. Margulis and Sagan seek instead to provide an evolutionary and taxonomic mythos in which an ecological and feminist perspective will provide a guiding framework for public policy. Lopez concurs, but regrets some unfortunate Darwinian backsliding that she detects in Margulis and Sagan’s approach to human sexuality.
- 10 The other approach is taken by **Leah Ceccarelli**. By carefully comparing the rhetorics of the anti-eugenicist Dobzhansky and the sociobiological E. O. Wilson, she raises the possibility that an inviting, humanistic sort of Darwinism might still be available within the framework of the Modern Evolutionary Synthesis. Ceccarelli sees in Wilson’s *Consilience* the seeds of its own failure as a rhetorical performance; Wilson’s combative mode of address and figuration, together with his condescending assumption that the cognitively weak humanities and social sciences are just waiting around to be delivered into the hands of an imperialistic sociobiology, are bound to alienate audiences in ways that Dobzhansky’s genial address did not. For Ceccarelli, these differences in style reflect differences in content: In arguing that natural selection has bestowed on all humans alike just enough

genetic structure to undergird the free and independent life of culture, Dobzhansky denies that there is anything inherently Darwinian in the idea that the human sciences should collapse into the natural. One might say, of course, that Dobzhansky had an easier time of it. He had the advantage of living and working before the advent of molecular genetics and genetic engineering. Keeping his inheritance alive in the age of biomechanical reproduction, as his student Richard Lewontin seeks to do in such works as *Biology as Ideology*, is hard work, and fraught with the possibility of failure.

- 11 Finally, a third line of argument about the relationship between molecular genetics and evolutionary theory seems available. One might accept the genocentric findings of contemporary Darwinism as legitimate, insightful extensions of evolutionary theory, but go on to deny that the upshot of genocentric Darwinism is that we have little or no choice about whether to oppose the current along which our genes presumably carry us. **Steve Fuller** reports on and criticizes just such a proposal – the ethicist Peter Singer’s “left Darwinian” proposal that the tendency of our genes to selfishness actually explains why the traditional left, with its naive emphasis on nurture over nature, has failed so miserably to impede the unjust tendencies of capitalism. The lesson for Singer is that genocentric Darwinism should be allowed to instruct what’s left of the left that a truly human politics must fight against tendencies of human nature that manifest themselves in capitalism. In other words, the left should cease indulging (as it has traditionally done, and in the work of Lewontin continues to do) in the dubious assumption that strong-sounding “gene talk” is merely an empty ideological reflection of capitalism.
- 12 Admittedly Singer’s view is inconsistent with any really strong version of genetic determinism, which must claim that our genes have us on such a short leash that our attempts to swim against the tide in the name of justice must be in vain. Singer’s view is rhetorically accessible, however, because very few genocentric Darwinians are as deterministic as their opponents, such as Lewontin, make them out to be. To be sure, Wilson asserts that our genes do hold us on a leash. But he thinks that the leash is fairly long. Nonetheless, even if he is on sound enough ground on this point, Fuller argues that Singer, in taking contemporary genocentric Darwinism to his breast, has also taken on board too much of the calculative, individualistic utilitarianism in which, from the start, Darwinism has tended to express itself. Singer’s “left Darwinism,” Fuller claims, preserves too little of the Hegelian

stress on the quest for mutual recognition as the driving force of history. Ever since Marx, that Hegelian idea has driven what was most progressive about the left. For Fuller, its relevance persists today, when capitalism is creating for the first time a single world-wide market (in part by enclosing what Jeremy Rifkin calls “the genetic commons”), thereby making it difficult for the inhabitants of much of the globe to claim their rightful place in the sun.

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