

Poetic Misprision in Art and Science

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THE RELATIONSHIP BETWEEN ART and biology is in flux, as is that of the humanities and natural sciences, and of art history and neuroscience. The evolutionary biologist Ernst Mayr warned of facile couplings, advising any such attempts should be rooted in solid knowledge of evolutionary theory. Mayr said, “no-one should make sweeping claims concerning evolution in fields outside the biological world without first becoming acquainted with the well-seasoned concepts of organic evolution.”¹ More recently, anthropologist Tim Ingold argues, by contrast, for a unified concept of the biosocial. He says “all life...is social. Yet all life, too is biological,” claiming that the bifurcation between the two areas is the result of decades of blunt-force reductionism in the form of evolutionary theory understood solely in terms of natural selection and inheritance.²

¹ Mayr, Ernst, *The Growth of Biological Thought* (1982), quoted in Tim Ingold, *Evolution and Social Life* (Cambridge, UK: Cambridge University Press, 1986), 1.

² Ingold, Tim, “Prospect,” in *Biosocial Becomings: Integrating Social and Biological Anthropology*, eds. Tim Ingold and Gisli Palsson (Cambridge, UK: Cambridge

Underscoring the flux, both quotes originate in texts by Ingold, that is, the Mayr quote comes from the anthropologist’s earlier writing. Yet both positions are true at once: Ingold is not contradicting himself but consistent and correct. Tread lightly when writing about evolutionary theory within the humanities: know your stuff! And, take heed: the separation of nature from nurture is but an ideological split. By no means a capricious thinker, Ingold has carefully hewn a path between the fields wherein no damage is done to either. That is, in their union, the “soft” (arts and humanities) is not simply made quantifiable and, vice versa, the “hard” (the sciences) is not bastardized. This is the fundamental challenge at stake in forging a union of art and biology.

Two books by art historians, Matthew Rampley’s *The Seductions of Darwin: Art, Evolution, Neuroscience* and Edward Juler’s *Grown But Not Made: British Modernist Sculpture and the New Biology*, play out the vibrant if not fractious state of interaction between fields. If for Rampley the crossovers

University Press, 2013), 9.

between art history and the ideas of Charles Darwin over the last century have yielded far too many instances of insensitive reification, then for Juler the union of art, art history, and biology in 1930s British sculpture proved a bold model of public intellectualism. One is wildly skeptical while the other blithe and halcyon. Yet, in both books, the authors creatively misinterpret science, or perform what literary critic Harold Bloom described in terms of the “anxiety of influence.”³ Such angst, Bloom explained, “comes out of a complex act of strong misreading, a creative interpretation that I call ‘poetic misprision.’”⁴ Creative misinterpretation is willful, ideological, and automatic, or “simultaneously intentional and involuntary.”⁵ It is “part of the larger phenomenon of intellectual revisionism.”⁶ Simply put, imaginative misinterpretation,

together describe the revival at the end of the nineteenth century of Darwin’s theory of natural selection and the incorporation of Mendelian inheritance or genetics into the theory of evolution, both of which became central engines of population genetics. In short, these concepts quickly allayed biology’s “physics envy” by providing modes of quantification to the all-too-difficult-to-quantify complexity of induction, gene action, and phenotypic expression. Scientists such as Julian Huxley and Theodosius Dobzhansky codified Neo-Darwinism and the Modern Synthesis in the late 1930s, which through the work of many others, including James Watson and Francis Crick in the development of the Central Dogma of molecular biology (the oversimplification of genetic determination according to which “DNA makes RNA and

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or poetic misprision, is one of the few ways new ideas come about. The two authors should be commended for their stellar acts of creative misprision. Bravo! Rampley and Juler perform the Lucretian clinamen swerve, a “marvelously gratuitous” act of atomic freedom in which a writer carves out new territory by diverging from standing ideas. And, remarkably, they do so around the same set of evolutionary concepts within science: Neo-Darwinism and the Modern Synthesis of evolutionary biology.⁷

While not quite synonymous, the terms “Neo-Darwinism” and “Modern Synthesis”

RNA makes protein”) in the early 1950s, and later E.O. Wilson’s sociobiology and Richard Dawkins’ “selfish gene” of the late 1970s, drove the zeal for a reductionist gene-centric science based on natural selection during the twentieth century.

In *The Seductions of Darwin*, Neo-Darwinism is a catchall for Darwinist reductionism in art history: the quantification of art by means of rooting it indelibly in the genetic drives inherited from our prehistoric ancestors. It allows Rampley to very willfully dismiss any attempt to think about art and science together. The author never really historicizes Neo-Darwinism. He neither explains its connections to the Modern Synthesis that was codified in the 1930s, nor its position as a force of reductionism across the twentieth century to the detriment of other strains of more

3 Bloom, Harold, *The Anxiety of Influence: A Theory of Poetry* (Oxford, UK: Oxford University Press, 1997 [1973]), xxiii.

4 Bloom, xxiii.

5 Bloom, 45.

6 Bloom 28.

7 Bloom, 45.

complexity-friendly and less reductionist thought within biology and evolution, namely organicism, epigenetics, embryology and evolutionary development.

The kind of dead-end objectification at work in Neo-Darwinist art history happens for Rampley by many means: through evolutionary theories of art that reduce art to an outcome, that is, the results of a universalized male subject whose contemporary cultural mores can be traced back in linear fashion to Pleistocene man; cladograms or phylogenetic trees, such as the famous genealogical tree of modern art designed by Alfred Barr for the 1936 exhibition *Cubism and Abstract Art* at MoMA; the will to reduce “beauty” to neurological fields within neuroaesthetics and neuroarthistory; and the “refusal to adopt normative positions”, i.e. make value judgements, within systems, cybernetics, and second-order cybernetics within art and art history. Rampley invokes Neo-Darwinism as part of an overarching critique of “consilience” between fields (a reference to myrmecologist E.O. Wilson’s idea of syncretism between art and science).⁸ “The theory of evolution,” Rampley explains, “has been of central importance in this context, and one might even argue that the call for consilience amounts to little more than an attempt to create a neo-Darwinian framework for the analysis of art.” The term appears sporadically in the book in relationship to art, art history, and Darwin’s own thinking of the mid nineteenth century, coming across as more of a literary theory than actual science, which it was up until recently. The author makes a resoundingly negative assessment of the idea in the conclusion where he summarizes his demonstration of the “internal flaws in the

logic of the neo-Darwinian position,” according to the fact “that evolutionary aesthetics relies on a self-contradictory view of aesthetic experience, positing a putative ancestral Pleistocene environment as the ground zero of human nature, as if all human history in the intervening 2.5 million years were a superficial cultural overlay, and as if evolution had then come to a halt.”

Rampley is both right and wrong. Reductionist Neo-Darwinian art and art history should be hailed with much skepticism and criticality; but all evolutionary science within art and art history is neither Neo-Darwinist in nature nor about such reductionism. In fact, in works of bioart, evolutionary science is present for exactly the opposite reason, to obstruct reductionism by teasing out complexity. Much thus goes ignored in *The Seductions of Darwin*, the most important of which is that Neo-Darwinism is obsolete science. Never mind that the many tomes by Charles Darwin are part of what evolutionary biologist Stephen Jay Gould called “evolutionary pluralism.”⁹ Never mind that Charles Darwin is not the same thing as Darwinism, a term coterminous with social Darwinism, which is further based on the idea of the “survival of the fittest,” a turn of phrase owed *not* to Darwin but his compatriot and fellow Victorian Herbert Spencer.¹⁰ Never mind that, similarly, the ideas of Neo-Darwinism are closer to those of Darwinism than to the actual ideas of the man himself.¹¹ Never mind that, following Ingold,

9 Gould, Stephen Jay, “Evolution: The Pleasures of Pluralism,” *The New York Review of Books* (June 26, 1997); <http://www.nybooks.com/articles/1997/06/26/evolution-the-pleasures-of-pluralism>. Accessed 01/14/18.

10 For a comparison of Spencer and Darwin see Ingold, Chapter 1, *Evolution and Social Life*.

11 Reid, Robert G. B., *Biological Emergences: Evolution by Natural Experiment* (Cambridge, MA: MIT Press, 2007), 3-4.

8 Wilson, E. O., *Consilience: The Unity of Knowledge* (New York: Vintage Books, 1998).

“Neo-Darwinism is dead,” made obsolete by the emergent complexity revealed in the mapping of the human genome early in the new millennium and the postgenomic sciences that ensued.¹² Never mind that new expanded and extended theories of evolution have become the norm in contemporary biology over and above evolution understood solely in terms of natural selection.¹³ Never mind that whole fields of contemporary art and art history—bioart, bioarchitecture, and new media art history—have opened up based on such complexity-based practices within biology and the expanded evolutionary synthesis.

In *Grown But Not Made: British Modernist Sculpture and the New Biology*, Juler takes a different tack, exploring with great gusto and positive reinforcement the roots of biomorphic sculpture—the sensuous curves and undulating forms of work by Henry Moore, Barbara Hepworth, Ben Nicholson, Richard Bedford, F. E. McWilliam, Hans Arp, and Constantin Brancusi among others—in the voices of 1930s British popular science. The opening pages revisit the 1935 origin of the term “biomorphism” in the writing of British critic Geoffrey Grigson, a term often misattributed to MoMA director Alfred H. Barr, and the Two Cultures argument of C. P. Snow. As the subtitle of the book suggests, the New Biology is the leitmotif of the book, connecting chapters about

“metamorphosis,” “organismal composition,” “the morphology of art,” and “worlds beneath the microscope.” The book truly captures the exciting cultural crosspollination at work in 1930s Great Britain, connecting, for example, the extraordinarily talented creator and editor of the avant-garde journal *Axis* Myfanwy Piper, Neo-Constructivism, and the biologicistic mindset cultivated in H. G. Wells and Julian Huxley’s collaboratively written book of 1938, *The Science of Life*—a nexus of forces which materialized in the beautiful garden suburb of London that is Hampstead. In addition to artists and critics, seminal scientists make appearances in the book, including J. B. S. Haldane, Lancelot L. Whyte, Lancelot Hogben, J. D. Bernal, and Raoul Francé. The author often quotes these figures in their forays as writers into the popular sphere and not their more difficult scientific texts.

An account of the harder science at work in the “New Biology” destabilizes the term, because at its core are contradictory modes of scientific thinking. It embodies simultaneously the opposed orders of the day a century ago: the mechanist and vitalist approaches to biology. Some of the New Biology was rooted in mechanistic methodologies of biology: what were, circa 1930, the freshly innovative modes of reductionism and gene-centrism, namely Neo-Darwinism and the Modern Synthesis. But most of what inheres in the New Biology—its neo-vitalism, neo-romanticism, and neo-Lamarckism—was not exactly new in the 1930s. These were all ideas of late nineteenth-century biology based in part on a thesis that the workings of biological life constitute an irreducible metaphysics (an example of which is Henri Bergson’s *élan vital*). They were made supernumerary precisely by the reductionism of the new sciences of the 1930s, namely rising genetics, molecular biology,

¹² Ingold, “Prospect,” 1.

¹³ See Armin P. Moczek, et. al., “The Significance and Scope of Evolutionary Developmental Biology: A Vision for the 21st Century,” *Evolution & Development*, 17:3 (2015) 198–219; Sarah S. Richardson and Hallam Stevens, eds., *Postgenomics: Perspectives on Biology after the Genome* (Durham, NC: Duke University Press, 2015); Massimo Pigliucci and Gerd B. Müller, *Evolution: The Extended Synthesis* (Cambridge, MA: MIT Press, 2010); and Evelyn Fox Keller, “Mathematics in Biology – Has D’Arcy Thompson been vindicated?” unpublished public keynote address at the Centenary Conference on D’Arcy Wentworth Thompson’s *On Growth and Form*, Universities of Dundee and St. Andrews, 13–15 October, 2017.

Neo-Darwinism, and the Modern Synthesis. Juler creatively elides old and new science, the outdated with the cutting edge, all under the omnibus term “New Biology.” His exploration of the connections between biology and the curving shapes of the 1930s modernism is a rich and necessary contribution, but it does not address the likely fact that a metaphysical neo-vitalism would be completely debunked by the reductionism of figures such as Bernal, Huxley, and Hogben, as well as the Neo-Darwinism and Modern Synthesis that are mentioned in passing.

If the misprision of science at work in Rampley’s book unfolds around a revision of evolution and biology as *tout court* a matter of Neo-Darwinism, Juler’s misprision is carried through the term New Biology, which subsumes Neo-Darwinism almost as if in the blind spot of older ideas once connected to physiology and embryology, such as vitalism and neo-vitalism. Rampley’s misprision seeks to shut down the lively and growing contemporary dialogue at work between art and science by reification of another order, namely by

turning the manifold complexities of evolutionary theory and biology into Darwinism and Neo-Darwinism. Juler’s misprision is quite a bit more generous. It brings to bear the humanist pleasure of the text, or what Roland Barthes called *jouissance*. Juler’s book is all about loving science, at least in the popular realm, and its coexistence and mixing with art during the 1930s. His is what Bloom called “a profound act of reading that is a kind of falling in love with a literary work.”¹⁴ Understanding how science could constitute a literary text – or, that a scientific axiom might even be a poem – must be left for another, perhaps longer discourse to come. A

Matthew Rampley. *The Seductions of Darwin: Art, Evolution, Neuroscience*. Pennsylvania State University Press, 200pp., \$35 cloth.

Edward Juler. *Grown But Not Made: British Modernist Sculpture and the New Biology*. Manchester University Press, 256pp., 97 color plates, \$110 cloth.

¹⁴ Bloom, xiii.