

Critical Response

II

Philosophers, Biologists: Some More Effort If You Wish to Become Revolutionaries!

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Cultural barriers are almost of the same nature as biological barriers : the cultural barriers prefigure the biological barriers all the more as all cultures leave their mark on the human body.

--Claude Lévi-Strauss, *Race and Culture*¹

To live, to err, to fall, to triumph, to recreate life out of life.

-- James Joyce, *Portrait of an Artist as a Young Man* (J. Craig Venter and his team have inscribed this line into a synthetic genome using DNA coding.)

Norman MacLeod's response to my essay "One Life Only: Biological Resistance, Political Resistance" is extremely helpful because it allows for a long-awaited discussion, that is, for a new type of exchange among biologists and philosophers (see Norman MacLeod, "Response to Catherine Malabou, 'One Life Only: Biological Resistance, Political Resistance,'" *Critical Inquiry* 43 [Autumn 2016]: 000–00). The problem is that this discussion is not the one imagined by MacLeod. Rather, it is generated, in a certain sense, by the holes in his response and argument.

When I speak of a "new type of exchange among biologists and philosophers" I mean a discussion that goes beyond the classical, well-known ethical debate on the one hand (which questions what should be the ethical limits of biotechnologies) and the no-less-famous assimilation of biology to biopolitics on the other (which demonstrates how biological science always necessarily ends up being an ideological servant of biopower). In both cases, philosophers — like Monique Canto-Sperber in France or Martha Nussbaum in the US, as representatives of the first debate, or Michel Foucault, Giorgio Agamben, and Roberto Esposito, as representatives of the second one — have always tried to elaborate a strategy of resistance to the political hazards and

¹ Claude Lévi-Strauss, *Race and Culture* (17)

threats potentially and actually contained in biological scientific practices. The exchange I am talking about is clearly not or, at least, not only the “bio-ethico-techno-politico-scientific” one.

In my essay I challenge the critical skills of current biology — molecular biology in particular — namely, its assertion of itself not only as a research field but also as an autonomous sphere of discourse. I state that biologists have never reacted to the meaning conferred by Foucault to the prefix *bio* in the concept of biopolitics — which is that of a pure vehicle of power. I suggest that biologists have never affirmed the capacity of both biology and life itself to resist biopolitical hegemony. My claim that “the biological operator in the transition [from sovereignty to modern biopolitics as Foucault analyzes it] has been entirely passive” nonetheless calls for further clarification (p. 000).

MacLeod very rightly and accurately recalls that biology fought against itself when it came to some crucial issues like eugenics. It has shown a self-critical capacity to resist its ideological fatal drive toward totalitarian, purificationist, and racist ideologies. “Many prominent biologists (for example, Franz Boas, J. B. S. Haldane, R. A. Fischer), MacLeod writes, opposed the political doctrine of enforced sterilization of ‘undesirables’ in order to remove their characteristics from the normative population not only on the basis of moral repugnance, but also because scientific evidence . . . showed clearly that such a program would not produce the effects on human population claimed by the eugenicists” (p. 000). Same thing about the supposed evidence of “hierarchical ranking of the innate capacities of human races” (p. 000). On such urgent issues, biologists have evidently proven their genuine capacity for opposition and have shown no need to have philosophers come to their rescue for this. MacLeod is thereby right when he affirms, “contrary to Malabou’s implication, . . . biology has not simply rolled over and provided scientific justification for the exercise of biopower. Rather, many of its practitioners have been consistent and effective for controlling the expression of biopower at the cognitive, technical, conceptual, political, and moral levels” (p. 000).

Yet my notion of “biological resistance” does not exactly refer to the capacity of biology to go against its own political and ideological driftings. No. It is something else. Among the different “levels” at which MacLeod situates this resistance, one is still lacking. It is on this one that I insisted upon in my essay and continue to insist upon here. This level is the *symbolic*.

MacLeod reproaches my category of the symbolic to “appeal to a somewhat vague metaphysics” (p. 000). I want to argue that this “vague” and apparently “indeterminate” concept is, nevertheless and surreptitiously, the locus for the new discussion. Again, this locus is not that of biopolitics. It is the one that allows new discussion when MacLeod paradoxically wants to end it. It pertains to the following question: *are we facing a revolution in contemporary biology with the postgenomic era and the shift from the genetic to the epigenetic paradigm?*

My article advocates for such a revolutionary turn. The central issue, to reiterate, is not to determine whether epigenetic mechanisms and cloning techniques are manipulated toward obvious biopolitical instrumentalizations and normalizations. Beyond this and in a much more radical way, the challenge that epigenetics and cloning make pertains to the emergence of new conceptual categories. *How is a revolution in biology to be recognized?* Such is the question that we are now challenged to think.

The answer to such a question engages not only the realm of scientific discovery, not only the philosophical gaze, not only epistemological scrutiny, but the originary region where all three interfere with each other. Such a region is precisely the space of the symbolic. Is the symbolic a vague, metaphysical term? No. My category of the symbolic refers to Claude Lévi-Strauss’s, who defines it as the law of exchange that pertains to four domains: the psychic, social, linguistic, and biological. For Lévi-Strauss, the law of exchange (that is, the possibility of exchanging a thing with another, which is the meaning of *symbolism*) is indissociable from the law of reproduction. Exchange implies not only communication or trade but also exogamy, filiation, and inheritance. It is clear, then, that the symbolic designates at once an indissoluble crossing point between the natural

and the cultural, sexuality and language. Roughly defined, the symbolic is the way in which literally, *life makes sense*.

A biological revolution can thus be defined as a phenomenon or an event that necessarily provokes a shift within the symbolic order. The symbolic, conceived of as the articulation point among different systems of exchange, is transformable, mutable, and historically plastic. It is at once synchronic and diachronic, structural and mutable. The ways in which the interactions among the psychic, social, linguistic and biological are assembled and displayed are therefore different each time, different at each of their historical occurrences. To determine how exchanges, reproduction, filiation, and so on are regulated and controlled by the state is one question. It is an entirely different question to examine whether exchanges, reproduction, filiation, and so on are both conceptually and empirically entering a new epoch and knowing a new destiny. It seems that the constant focus on biopolitics is hiding the revolutionary turn that is currently happening to the bio itself. Biopolitics today functions as a form of disavowal of the present for both philosophers and biologists.

Before developing this point, I want to emphasize that structuralism has been far too quickly dismissed. The great accomplishments of Lévi-Strauss's concept of the symbolic—the careful definitions of where the biological meets with the social, of how they both depart from each other and are at one with each other, and of how to “spell out [a] . . . coherent set of biological, archeological, linguistic . . . data”—have been too hastily and contradictorily assimilated with either a pure idealism or a sheer positivism.² After Lévi-Strauss, after Jacques Lacan (the relationship between the psychic and the symbolic), after Pierre Bourdieu (the relationship between the social and the symbolic), Tzvetan Todorov (the relationship between the linguistic and the symbolic), after François Jacob (the relationship between genetics and hermeneutics), no one has ever returned to

² Claude Lévi-Strauss, *A View from Afar*, trans. Joachim Neugroschel and Phoebe Hoss (Chicago, 1985), p. 16.

the essential question raised by the symbolic function. *There is only one life*. The symbolic is the name of the differentiated games life plays with itself without ever fragmenting or dividing itself.

In their haste to criticize or deconstruct Lévi-Strauss and jump into poststructuralism, philosophers like Foucault, Gilles Deleuze, and Jacques Derrida have reintroduced a gap between all the dimensions aforementioned and particularly between symbolic and biological life. Foucault's concept of the body paradoxically bears witness to such a fact. Most of the time, symbolic life (the fashioning of the self, ascetic existence, the economy of pleasures) remains for him apart from the empirical biological life. Body and organism still diverge, and the latter remains subordinated to the former, as a slave to his or her master. For his part, Deleuze affirms that the symbolic body is without organs. Derrida claims that zoology does not know what an animal is. At the very moment when biology has been said to occupy a central political and philosophical space (as it is the case with the notion of biopolitics), the old divide between the biological and the symbolic body, or life, has been secretly reintroduced.

We know how deeply biologists, geneticists in particular, got involved in the structuralist discussion. Through explicit exchanges with Lévi-Strauss, geneticists like Jacob for example, author of the *Logic of Life*, have developed some powerful analyses of the DNA code as a text that advances the notion of a genetic program.³ Richard Lewontin in the US has agreed that the symbolic and the biological are always, as shown by the image of the triple helix, emerging from each other, shaping each other, and exchanging their mutual determinations. Humberto Maturana and Francisco Varela have elaborated the concept of organic autopoiesis.⁴ Duplication, reproduction, filiation (sexually or asexually produced, by cloning) are what make the symbolic and

³ See François Jacob, *The Logic of Life: A History of Heredity*, trans. Betty E. Spillmann (New York, 1973).

⁴ We can think of the multiple dimensions of the work of someone like Gregory Bateson as well. AU : Do you want to cite a specific work by Maturana and Varela and, perhaps, Bateson's *Steps to an Ecology of the Mind* ? yes : Varela and Maturana, *Autopoiesis and Cognition: The Realization of the Living*. Boston Studies in the Philosophy of Science. Paperback, 1991. Yes Gregory Bateson : *Steps to an Ecology of Mind*, Chicago : The University of Chicago Press, 1972.

the biological merge, fuse, and render the difference between the natural and the cultural improbable. Exchange, the very concept of exchange, has no proper sense in one *or* the other but in both at the same time. The symbolic dimension of biology pertains to the impossibility of limiting the definition of life to a mere aggregate of molecules, and the biological dimension of the symbolic pertains to the fact that this excess itself can never be exceeded, that is, extended outside the biological realm toward any kind of spiritual transcendence. As Lévi-Strauss declares, “genetic recombination plays a part comparable to that of cultural recombination.”⁵ They are two faces of the same reality.

Where are biologists now on these issues? Have they not themselves abandoned, along with the structuralist debate, the reflection on the intricacy of matter and meaning?

Let’s now come to the epigenetic debate. When I ask if we are currently witnessing a revolution in biology today, I ask to what extent is epigenetics revealing something like a new epoch in the symbolic order.

Contesting the positive answer I attempt to bring to these issues in my essay, MacLeod declares, “far from being a revolutionary development in molecular biology that changes the way in which we think about inheritance, evolution, and/or the ability of information to be passed between generations in any fundamental manner, this new information represents, at present, a rather limited, minor, and still controversial footnote to our understanding of mechanics of inheritance in complex organisms whose significance is, at best, not well understood” (p. 000).

I will not here remind the reader of the definition of current epigenetics, which is made sufficiently clear in my essay as well as in MacLeod’s response. Is or is not epigenetics a revolutionary tool? MacLeod insists on the fact that I am not a biologist and that I cannot provide an objective answer to this question. I, of course, don’t contest this point. But in his refusal to agree with me he also, by the same token, is in disagreement with a great majority of his fellow scientists. Do I have to

⁵ Lévi-Strauss, *A View from Afar*, p. 18.

summon the names of Henri Atlan, Eva Jablonka and Marion Young, and Jean-Pierre Changeux to mention only a few researchers who affirm that we are currently facing a dramatic shift in both biology and culture with the passage from the genetic to the epigenetic paradigm?⁶ They affirm that our ideas about heredity and evolution are undergoing a revolutionary change, that there are four “dimensions” in evolution—four inheritance systems that play a role in evolution: genetic, epigenetic (or non-DNA cellular transmission of traits), behavioral, and symbolic (transmission through language and other forms of symbolic communication). Whether or not we share these views, it remains extremely difficult, impossible even, to contest that something is happening in the realm of current molecular biology. Evelyn Fox-Keller, as we know, is devoting herself to the analyses of these changes.⁷

My precise (or specific) intervention consists in what I am perceiving about this current change at the level of the symbolic. The images of the musical score and its interpreters used by Jablonka and Young and that of the book and its readers used by Thomas Jenuwein in order to characterize the relationships between the genotype and the phenotype as determined by epigenetic mechanisms show sufficiently and clearly that, with epigenetics, we are starting a new adventure, a new version of the exchange between life and itself, that is between the biological and the symbolic. Revolutions in biology and in the symbolic (in all its dimensions) happen every time reproduction, filiation, lineage, and inheritance are both *experienced* and *interpreted* differently--when exchange exchanges with itself.

I am not nostalgic for the glorious days of structuralism. I worry, however, about the demise of the notion of the symbolic. In my opinion, it has to be revisited and reelaborated because it is the

⁶ See Henri Atlan, *La Fin du "tout génétique"?: Vers de nouveaux paradigmes en biologie* (Paris, 1999); Eva Jablonka and Marion Young, *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral, and Symbolic Variation in the History of Life* (Cambridge, Mass., 2005); and Jean-Pierre Changeux, *Neuronal Man*, trans. Laurence Garey (Princeton, N.J., 1997) and *The Good, the True, and the Beautiful: A Neuronal Approach*, trans. Garey (New Haven, Conn., 2012).

⁷ In particular, see Evelyn Fox-Keller, *The Century of the Gene* (Cambridge, Mass., 2000).

sharpest instrument of analysis of the interaction of social context and biology. Such a reelaboration might help us to conceive epigenetics as both an objective, empirical, and material series of mechanisms and as a moving, fluid imaginary functioning across social and theoretical spheres. I am grateful to MacLeod for giving me the opportunity to express these ideas in a more radical way and mostly for allowing the biology/philosophy debate to sublimate its dead biopolitical form.