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## Complex Realities, Adequate Reductions: A Reply to Joseph Carroll

Let us suppose, because we have good reason to, that everything that exists and happens on this earth has natural causes. If true, this supposition rules out ontological discontinuities in the process of hominization and in the evolution of human culture. Joseph Carroll wants us to believe that this conclusion is a privileged insight—indeed, a distinguishing mark—of the neo-naturalist turn he envisions for the humanities. It is not. Excluding supernatural explanations from rational inquiries is the foundational operation of all post-theological scholarship and science. Hence, naturalist and culturalist methodologies in the humanities rarely disagree about human culture's basic dependence on natural givens. What they disagree about are the epistemological implications of this dependence.

Joseph Carroll's essay is a good example of how neo-naturalists tend to frame this disagreement. According to the underlying logic of Carroll's argument, the natural existence of human beings ("human nature") requires us to understand culture—i.e., human reflections on, and modifications of, their natural needs, capacities, and environments—as a linear derivation of our animal nature: a derivation that has little, if any, qualitative impact on the natural processes it is otherwise able to objectify. Thus, whoever argues that human culture has produced environments and life-ways whose complexity is frequently at odds with the first, pre-cultural mode of nature from which they evolved risks being termed a supernaturalist. In a more polite but no less severe binary, literary Darwinists like to describe their critics as "traditional humanists," "epistemological and metaphysical dualists," or idealistic celebrators of "the spiritual power of humanistic experience." Following a critical essay on neo-naturalist theory and practice, I myself was labeled an "aesthete" by Karl Eibl. In the said essay and the ensuing debate with Eibl, I laid out my reservations concerning the kind of research program now summarized by Carroll.<sup>83</sup> I will not repeat the particulars of my critique here but shall concentrate on one single issue raised by Carroll: the issue of reductionism.

Neo-naturalists typically feel that reductionism is the major charge leveled against them by “traditional humanists.” So they think that if this charge can be neutralized, all external opposition is bound to collapse. Much rhetorical force is therefore invested in branding reductionism as a taboo argument that betrays the theoretical naivety of those who bring it up. Reductionism, we are told (and rightly so), is not a bad word in the theory of science and scholarship because any type of rational knowledge in one way or another seeks to reduce observed phenomena to “underlying regularities” (Carroll) or to an anterior level of argument in a logical system of description. So far, so true. Does it follow that all types of rational reduction provide apt knowledge about the thing thus reduced? Carroll himself is doubtful: in traditional humanist criticism and in postmodern criticism (his chief adversaries), he identifies certain “thematic reductions,” of which he seems to disapprove. In both cases, Carroll observes, literary characters appear as “allegorical embodiments” of humanist norms or of key terms within the respective “source theories.” Apparently, then, Carroll distinguishes between good and bad forms of reductionism—and the criterion of distinction is whether a given reduction produces *adequate* knowledge or not. In the same manner, Carroll addresses scientists whose philological speculations he finds insufficient and notes that their theories “fail to give an adequate account of [their] subject”: “the arts cannot adequately be reduced to didactic lessons and pleasurable fantasy.” And toward the end of his essay, when we read that both groups—scientists and philologists—need to learn from the other paradigm, Carroll speaks of “concepts and modes of thinking characteristic of the humanities and *appropriate to them*” (my emphasis).

I sympathize with Carroll’s insistence on mutuality in interdisciplinary endeavors, and I consider as crucial his concern with *appropriate* reductions. But I believe that this principle needs to be applied to neo-naturalist approaches as well. If done so, the field surveyed by Carroll begins to look a good deal less exciting than its practitioners like to claim. In fact, judged by their own standards and ambitions, neo-naturalist approaches have been rather unsuccessful in their campaign to “ultimately encompass, subsume, or supplant the explanatory systems that currently prevail in the humanities” (as Carroll predicts). If bio-philology so far has been unable to deliver on such promises, this is not because the field is still young and beginnings are always modest, but because most of those promises are immodestly unrealistic. Alarming, even the more humble projects risk failure as long as they do not confront their methodological self-involvement and their tendency towards institutional partisanship.

Concerning methodological self-involvement, Carroll leaves little doubt that he prefers a maverick type of naturalism to one that would try to integrate its perspective within “currently prevailing” culturalist approaches. This is so because Carroll and other contributors to *The Literary Animal* regard those established approaches as diametrically opposed to their own. They claim that the prevailing methods in the humanities are marred by “constructivist” stances, which allegedly “attribute exclusive shaping power to culture.” Social constructivists, in other words, deny the existence of human nature. Carroll and his fellow combatants never consider if their chosen antagonists have already transcended the dichotomous distinction of nature and culture that is so troublesome to neo-naturalists—or whether they are at least trying to do so, and this in a manner highly appropriate to their objects of research. For while literary Darwinists want to get rid of the nature/culture divide by effectively collapsing the concept of culture into the concept of nature, constructivists more often than not attempt to do justice to the unique, hence distinct, traits and regularities that set this realm of existence apart from all other natural orders, without positing an ontological rupture.

Of course, Carroll does not deny that human culture is a special part of the natural world and that it requires special tools of description and understanding. “Most human interactions,” he writes, “are organized within cultural systems, and cultural systems profoundly influence most individual experience.” There are consequences to be drawn and taken from this insight. I am not sure if our current biologists are willing to draw and take them. At the very least, it would be worth recognizing that the “profound influences” of “cultural systems” are exactly what cultural studies methodologies, even with poststructuralist pedigrees, are interested in. Far from denying that culture is an evolved part of nature (albeit one that in turn affects the reality of natural processes), those methodologies have been working hard to develop research tools and descriptive systems that are appropriate to the distinctiveness of their objects.

We could enter now into an extended debate on what constitutes adequate knowledge about human culture. Elsewhere, I have tried to outline some basic thoughts on this question.<sup>84</sup> At this point, I merely want to emphasize that all such knowledge needs to acknowledge that human culture emerges from what neuroscientists call “meta-representations.” While being part of nature, humans are capable of reflecting on their own natural existence and even on these acts of reflection themselves. I maintain that the reality and results of such meta-representations require us to complicate the application of evolutionary principles to issues of human inter-subjectivity and human history. Undoubtedly, one can

question the utility of this or that postmodern theory in this regard as well. But this need not stop us from analyzing culture as “a historical process of differentiation, involving intentions, non-intended determinations of intentions, misunderstandings, appropriations, and contingencies” (Kelleter, “Tale” 176). Contemporary cultural theory illustrates that we can do so without resorting to supernatural or metaphysical explanations. So, while I share Carroll’s uneasiness about the vagueness of much humanist scholarship today, I feel that any alternative research program needs to enter into a serious dialogue with established approaches that have been dealing with these issues for quite some time now. Instead of dismissing them as anti-scientific, simply because interpretive methods are part of their tool kit, one can perhaps learn something from their interest in human representations and conceptualizations of nature. Bio-philologists, for instance, could clarify for themselves what image of nature informs their own data discussions.

Joseph Carroll, for one, subscribes to a paradigm that sees nature as “an unbroken chain of material causation from the lowest level of subatomic particles to the highest levels of cultural imagination.” I am not a scientist, but based on my studies of cultural and literary history, it seems unlikely to me that a causal chain model of culture is able to replace systemic network models of culture, as they are suggested by advanced social and praxeological theories in the humanities (from Pierre Bourdieu to Niklas Luhmann, their individual limits notwithstanding). It seems unlikely to me that a linear chain model can replace such object-attuned studies in complexity, because the most complex natural object on this earth itself seems unfit for structural explanations of a straightly causal kind. Neuroscientists have just begun to conceptualize the human brain as a social organ of unique “plasticity”: a biological organ structurally receptive to environmental changes, including human actions, communications, and artifacts. Already, these investigations suggest that the brain in its higher cognitive functions (i.e., in those functions that are pivotal to the process of hominization) has no center of operational congruence, no hub of linear distribution. Why would human culture be adequately reducible to unified causal explanations, if the human brain is not? From what I understand, the neuronal construction of individual knowledge in its most advanced forms does not occur through hierarchical chain reactions but through parallel processing, self-organizing structuration, and often unanticipated feedback loops.<sup>85</sup> Add to this the emergence of human culture, not as the causal result of neuronal activities within individual brains but as the systematic result of interactions *between* human brains, and it becomes difficult to think of meta-

representations as something other than structure-building communications, not only in the brains involved but in the complex system of culture at large.

To put it less abstractly, humans alone among species can communicatively shape and to a certain extent become the environmental factors that express their biological dispositions. Humans are not only able to gather individual information about the world and to share this information with other members of the species, but these acts of information-sharing can reach self-awareness. By this, they become acts of making meaning: they bring into existence a self-organizing, self-developing system of information called culture, which amazingly lacks a nervous system of its own. Among all social orders in the natural world, human culture is exceptional because it allows information to be redirected and systematized through contact with other observers and reflectors; it allows knowledge to be discussed, modified, organized, interpreted, and stored outside individual brains, making possible self-critique, role play, social and gender identities, imagination and performance, thought and emotion experiments, and competing cultures in the plural (rather than just rivaling populations). In this sense, humans are capable of transcending their animal nature without becoming unnatural. It has always been tempting to idealize this capacity of communicative self-objectification by ascribing a divine cause or a metaphysical telos to it. Carroll's discontent with such idealisms is well founded. But theories that seek to replace complex accounts of culture with explanations of "a single, unified causal structure" are badly equipped for the task at hand.<sup>86</sup> Like ever so many 19<sup>th</sup>-century novels, they find consolation in describing the human species as basically just another animal. In so doing, neo-naturalists certainly find something that is "there" (and in this sense "true")—but their single, unified truth keeps missing the point.

This is why zoomorphic readings of literature are often so disappointing, despite their methodological sophistication. It is not their reductionism that is bothersome but their way of being reductive. Just like the postmodern master theories criticized, for example, Darwinian approaches tend to read literary texts as allegories of themselves, always discovering that this or that novel, poem, or drama is really *about* basic biological universals (mate selection, physical survival, status fights, etc.). And while all of this is true in some way—in fact, it would be surprising if such elements were lacking in narratives produced by humans—these basic insights remain spectacularly incapable of explaining the (historical, cultural, aesthetic) complexities that constitute our objects of research when we study culture. "Human females," Carroll writes, "are . . . distinctive in having menopause and thus a period of life that extends beyond the reproductive years. That period

enables older women to raise their latest offspring to maturity and to aid in caring for grandchildren.” While this rings convincingly in evolutionary terms, it illustrates that evolutionary theory is sometimes of little help, to put it cautiously, when we mean to make sense of the complex realities of, say, gender identities as they are actually lived in historical societies.

Essentially, I am suggesting that the human species’ “psychological exile,” of which E. O. Wilson speaks (*Consilience* 224), is more drastic than sociobiologists and their followers in the humanities are willing to recognize. Carroll and other philologists working in this field have significantly contributed to our knowledge of human evolution by describing the arts as “an adaptive response to the adaptive problem produced by the adaptive capacities of high intelligence.” But the excessive invocation of “adaptive” explanations in this sentence obscures the epistemological demands of studying “high intelligence.” If we, as humanists, are crucially concerned with “the social skills required by living in *exceptionally* complex social environments” (as Carroll phrases it, my emphasis), and if the complexity of these environments has something to do with the emergence of types of sociability and meaning-making that can objectify themselves, thus qualitatively transcending other natural orders and turning evolution into history, we are probably well advised to take seriously social, historiographical, and literary theories that have understood something about the limits of biological perspectives and empirical methods for the study of culture.

As Carroll says, common sense is a good antidote to many of the scholastic excesses in contemporary literary theory. But there is a point where common sense can turn into a resentful ideology. I find this to be the case in the institutional posturing of much neo-naturalist scholarship: there is a sense of camp mentality in these writings, a sense of bringing about a backlash against the omnipresent evil of “constructivism,” a sense of being unfairly left behind and left out in academia, a sense of being beleaguered by powerful enemies with conspiratorial power interests. Such partisanship will do a disservice to anyone’s research agenda—it will do so all the more if one makes exalted claims about one’s own scientific neutrality.

Having been invited by Joseph Carroll to compose this critique, I add with some hesitation that I find this camp mentality particularly pronounced in the Anglo-American sphere, where discussions of science and attendant scientific self-definitions have been determined by the larger context of ongoing culture wars. It is probably no coincidence that many American neo-naturalists take their cue from utopian visionaries like E. O. Wilson or from gifted polemicists and popularizers

like Steven Pinker. Carroll's essay, too, mainly refers to American sources, and quotes Wilson's agenda of "consilience" as if it was an uncontroversial, almost self-evident program. I think it would have been profitable to consider outside perspectives, including European variants of neo-naturalist scholarship. Karl Eibl's book *Animal Poeta*, with its qualms about Wilsonian sociobiology, would have been an obvious candidate (although Eibl disagrees with most of my points here).<sup>87</sup> In any case, to bring in reflections from different cultures and languages is, once more, a particularly appropriate strategy of studying culture, because it facilitates awareness of the fact that even and especially the most self-assured universals are shot through with historical and local knowledge. In this regard, what is remarkable about Wilson and Pinker from a philological (and perhaps a European) perspective is not that they are insensitive to fine aesthetics, as we are sometimes told, but that their partisan ideal of trans-disciplinarity and their hostility to cultural studies derives to a considerable degree from their self-understanding as cultural warriors: from a social and institutional rather than a purely scientific position.

In sum, there is of course nothing inherently wrong with programs such as EvoS at SUNY Binghamton. And Carroll does a good job outlining the promises of such and similar interdisciplinary endeavors. But as long as neo-naturalist approaches refuse to engage genuinely with contemporary theories of culture in the humanities, and instead prefer to cast themselves in the cliquish, perhaps resentful role of iconoclastic truth-sayers, their scholarly practices will continue to fall short of their scientific ambitions. I wish they could become more equanimous about their epistemological position and less assuming in their methodological self-image. Not only would this improve their rhetoric; it would also benefit their scholarship. Who knows, they might even begin to gain something from reading, with sensitivity to cultural and disciplinary contexts, fellow theoreticians of the human such as Foucault and Derrida.

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<sup>83</sup> See Kelleter, "Tale"; Eibl, "Redskins"; and Kelleter, "Polemic."

<sup>84</sup> See Kelleter, „Polemic.“

<sup>85</sup> See Singer, *Beobachter* 120-143.

<sup>86</sup> „That unified explanation is intrinsically satisfying,“ Carrol claims. Even if this was true – which I doubt – the question of adequate unification would remain.

<sup>87</sup> Also see Eibl and Mellmann's highly critical review of *The Literary Animal* („Literatur“).