NEUROPHILOSOPHY AS CULTURAL POLITICS

Tibor Solymosi
tibor.solymosi@gmail.com

ABSTRACT: I discuss Rorty's view of philosophy as cultural politics in order to do cultural politics to challenge Rorty's cultural political rejection of ontology in favor of cultural politics. My primary source for this challenge is Patricia Churchland's neurophilosophy, which is itself in part a product of cultural politics. In drawing on resources in neurophilosophy, I am critical of Rorty's core distinction between causal relations and the space of reasons. This criticism, moreover, affords further reflection on the Sellarsian game that both Rorty and Churchland play in their physicalisms. I conclude with considerations about a naturalism more Deweyan than Sellarsian and the Deweyan neurophilosophy of neuropragmatism.

I.

Richard Rorty's view of philosophy as cultural politics develops out of his earlier reflections about philosophy as edification. Cultural politics is thus concerned not only with "arguments about what words to use" but also with "projects for getting rid of whole topics of discourse" (Rorty 2007, 3). Rorty "want[ed] to argue that cultural politics should replace ontology, and also that whether it should or not is itself a matter of cultural politics…" Rorty drew upon William James, who "often comes close to saying that all questions, including questions about what exists, boil down to questions about what will help create a better world" (*Ibid.*, 5). This edifying attitude is central to Rorty's philosophy. It is also central to neurophilosophy.

I want to argue that neurophilosophy, broadly construed, is a form of cultural politics. In itself, such a claim is unsurprising from a point of view like Rorty's. I also want to argue, however, that neurophilosophy, broadly construed, challenges Rorty's own commitments within cultural political debate, including the role of ontology. I shall argue that neurophilosophy as introduced by Patricia Churchland directly challenges key claims within Rorty's thought, namely the distinction between reasons and causes, and the claim that "all awareness is a linguistic affair." I shall also argue that regardless of whose arguments win — Rorty's or Churchland's or whomever's — the rising chorus of neurophiles — people who argue that neuroscience is currently revolutionizing our world — needs to be met by cultural politicians because much of the neurophilia is nothing above and beyond a recapitulation of ancient and modern philosophy in a crass and representationalist materialism as especially exemplified by Descartes. In short, while there are many brands of cultural politics, practicing cultural politics does not commit one to Rorty's particular brand. As I make clear, there are myriad varieties of cultural politics – even within neurophilosophy itself.

II.

By *Cartesianism*, I mean the metaphysical commitments of dualism (not only that there are two substances mutually exclusive but also that one of those substances, as Descartes himself conceived them, could accomplish what the other substance does; e.g., Cartesian materialism claims to account for the immaterial soul via the material brain); the endorsement of the epistemological method of introspection, including the warrant attributed to the results of such a method; the epistemic standard of absolute and indubitable certainty; the foundationalist epistemology that drives both the method and the standard; the ontology of representations that, combined with the epistemology, produces the host of epistemological problems that characterize modern philosophy (such as the problem of the external world, the problem of other minds, and the hard problem of consciousness); and the atomism that has led to popular and influential conceptions of moral personhood as rooted in rational self-interest. Despite the efforts of philosophers like Rorty and Churchland to fight off Cartesianism, it continues to infect both scientific inquiry and the conversation that follows from it.[1] While many thinkers who are focused on the sciences

[1] John R. Shook and I have called this *creeping Cartesianism* (Solymosi and Shook 2013). Others have articulated similar (if partial) perspectives. Such as Bernstein's *Cartesian anxiety* (Bernstein 1983, 16–25);

of mind/brain are either hesitant to or simply silent on the consequences of the science for values, the very question of the relationship between science (including how to talk about it among other scientists and how to talk about it with non-scientists) and value is a question of cultural politics that, following Dewey and Churchland, is inescapable. These conversations are not merely academic, for they raise questions about our democratic practices, whether in the rise of neurolaw or in the growing consideration of non-neurotypical experience as we see in autism or Alzheimer's. For Rorty, such democratic and moral concerns have been at the heart of the fear of science and scientism or eliminativism, to which I now turn.

Churchland has recently offered a cultural political reason she and her husband Paul embraced the position of eliminative materialism for their neurophilosophy. It was a matter of academic capital: they were nobodies and Rorty was somebody (Baggini 2012, 70).[2] Early in his career, Rorty articulated and advocated the position, only to move slightly away from it in *Philosophy and the Mirror of Nature* (1979). This move away begins with a qualified acknowledgment of physicalism, namely that it is probably the right ontology but that given the nature of causal prediction, it is uninteresting (because impractical) for what most concerns humans and their lives. Concern for edification develops over Rorty's career into the cultural political denial of ontology's preceding cultural politics (Rorty 2007, 4, 5). Churchland, for her part, does not share Rorty's desire to replace ontology with cultural politics. But she does believe that a neuroscientifically robust ontology is a tool for doing cultural political work. That is part of the reason why she regrets the embrace of eliminative materialism, as it suggests the elimination of the things that matter most to human beings. If she "had to do it all over again, [she]'d call it really nice guy materialism" (Baggini 2012, 70). The question over labeling is itself cultural politics.

In *Touching a Nerve* (2013), Churchland reflects on her teaching this really nice guy materialism and what neurophilosophy means. She writes,

> Having taught neurophilosophy to undergraduates at the University of California San Diego for many years, I understand well that the sciences of mind/brain can be unsettling. Neurophilosophy, as I have described it, works the interface between philosophy's grand old questions about choice and learning and morality and the gathering wisdom about the nature of nervous systems. It is about the impact of neuroscience and psychology and evolutionary biology on how we think about ourselves. It is about *expanding* and *modifying* our self-conception through knowledge of the brain. (*Ibid.*, 20)

The unsettling effects of neurophilosophy have their roots in the rise of modern science and philosophy, from the unsettling of the divine right of kings and the rise of democracy to the concern over what Owen Flanagan and David Barack call neuroexistentialism (Flanagan and Barack 2010).[3] Rorty was no stranger to this unsettling; in fact, how he took up this historical unsettling was itself unsettling to professional philosophy in his removing philosophers from their position as guardians of reason and truth.

Two brief examples of Rorty's shift away from philosophy's grand old questions to new questions of cultural politics come from his 2007 essay. These are the

Barrett's *Cartesian disease* (Barrett 2011, 171–172); and, of course, Dennett's *Cartesian materialism*, *Cartesian theater* (Dennett 1991), and, most recently, *Cartesian gravity* (Dennett 2017, 20).

[2] Rorty's influence on the development of neurophilosophy has been recognized by Dennett 2000, Dennett 2015, and Churchland 2015; cf. Chemero 2009, and Solymosi 2014.

[3] Some readers may find that the threat Flanagan and Barack see in so-called neuroexistentialism is overrated and not on par with the Spanish Inquisition, during which philosophers and scientists risked not only their careers but also their very lives. Churchland's skepticism about the threat lends further credibility to this position. My point is not to make such an evaluation here but, rather, to note that there is unsettling, no matter the degree. While my own view is that this unsettling is healthy for it opens the door to inquiries that are ameliorative, this amelioration is by no means guaranteed. After all, uninformed and closed-minded people are often hostile to new ideas.

question of the existence of God and the question of the nature of consciousness. For Churchland, these two questions are answered ontologically. There is no good scientific evidence to warrant belief in an anthropomorphic God. As for qualia as David Chalmers and others have presented the issue, there simply are none because by definition they cannot be experimented upon. Rorty agreed with Churchland on such answers, but, unlike Churchland, he did not find the questions all that interesting or worth investigating. Rather, he questioned the questions, asking whether we are better off regularly raising these perennial issues instead of creating new ways of talking about ourselves that would create a better world.

Neurophilosophy through ontology does offer ways of thinking about ourselves that can create a better world. Churchland offers several examples of how our growing understanding of various medical conditions affords new ways of being morally responsible. Prior to having scientific understanding of a condition, many people thought themselves to have weak moral characters for not being able to do what one ought to do. An easy example is homosexuality. Another is Klinefelter's syndrome (in which a male has an extra X chromosome, causing effete characteristics), which Churchland's brother has. She tells us that "he found tremendous consolation in the physical explanation, along with release from the fear that somehow it was all owed to a character flaw for which he was wretchedly responsible. Most admirably, perhaps, it gave him a graceful determination to find harmonious ways of living with what he is" (Churchland 2013, 29). Similarly, members of the LGBTQ community may find scientific understanding of sex and gender to be consoling if not empowering. They are able to take responsibility for living their lives without having to live by (yet still having to struggle with) the old oppressive and intolerant religious discourse.[4]

Rorty may have responded to this line of argument by stating that these scientific inquiries began with and are concluded by cultural politicians: the community of scientists themselves who determine the problems to investigate and the methods by which to do so. Perhaps so, but this reply is simply to move the goal posts — a question of cultural politics no doubt. Where Churchland's perspective, however, differs strongly from Rorty's comes in the entangled issues of cause, reason, and the nature of awareness.

III.

Rorty's Sellarsian inheritance makes a sharp distinction between causal relations, which natural science investigates, and the linguistic relations of the space of reasons. The latter is concerned with providing justifications to the members of one's linguistic community (those who are playing the same language game); it is a normative enterprise. The world of causal relations, however, is not normative; it is strictly descriptive and, according to Sellars, not the source of norms or values. For Rorty, the causal relations include the neural world of C-fibers. This world is not the world of justification, the space of reasons in which persons rationally argue with one another. The space of reasons, moreover, is where awareness matters insofar as it is a linguistic affair. The awareness of non-linguistic or pre-linguistic things is nothing above and beyond a causal affair. On this view, the cries of a baby are on par with the squeak of a wheel. It also follows a favorite metaphor of Rorty's for thinking about the relationship between mind and brain. According to the computer metaphor, the mind is to computer software as the brain

[4] My use of homosexuality as an example is not intended to endorse a distinction between biology (or nature) and culture. In fact, I would argue that doing so is tantamount to establishing the Sellarsian distinction between the world of causal relations and the space of reasons. The continuity of culture and nature is elaborated upon later in this essay. The diversity of cultures illustrates the diversity of sexual interests and practices. A case in point is the sexual practices of the ancient Greeks, which are better described as homoerotic than homosexual.

is to computer hardware. Understanding every detail about the hardware or the brain, on this view, tell us nothing about the software or the mind, especially since different hardware can run the same program and different brains can have the same thought. The causal mechanisms do not matter for awareness, so long as the symbolic representations or programs are similarly computed. Hence, Rorty's disinterest in objectivity or truth when it comes to how to make life better for humans.

The computer metaphor, as has been noted since it was first proposed, is deficient. The brain is nothing like a computer, and the mind nothing like software. The metaphor is attractive to many because it materializes Cartesian dualism. As problematic as Cartesian *dualism* is, it's not just the dualism that is problematic. Cartesianism creeps in with the conception of mind as representational and computational. It is not just what the mind is made of but what the mind does that maintains the Cartesianism Rorty and Churchland both seek to evade. Materializing the mind into computer software was a novel way of reimagining the mind-body relationship. But it falls woefully short as the difference in operation between mind and computer could not be more stark.

Churchland describes the difference between computers and brains as follows:

> The slow dawning of deep ideas by human brains stands in stunning contrast with electronic computers. Computers can do many things much faster than we can, such as calculate. But computers — so far, anyhow — cannot do these things that human brains do slowly. They do not come up with new hypotheses about the nature of matter or the origin of DNA. (*Ibid.,* 25)

The Cartesian mind — regardless of its ontology — is a calculator, insofar as thinking is calculation, in which imagination is reducible to deductive inference. For all his talk about the problems of Cartesian philosophy, Rorty's excitement over Daniel Dennett's *Consciousness Explained*, in which Dennett offers an imaginative interpretation of the computer metaphor, illustrates just how pernicious the Cartesian disease is (Dennett 1991).[5] This creeping Cartesianism also finds its way into Churchland's representational view of the brain, for much of her and her husband's neurophilosophical writings are concerned with how the brain, not the mind, *represents* the external world.

For Churchland, the external world is causally closed and determined: so is the internal world of the brain. Here the distinction between reason and cause returns in the problem of free will. For Rorty, there is no problem because asking-for-and-giving-reasons-for-one's-actions is not addressed by causal relations. For many philosophers, contracausal free will seems to be served by such a distinction between physical cause and mental reason: somehow the reason to do something causes the physical body to act accordingly. Rorty finds such an approach confusing. He is not alone: Churchland and most non-philosophers do too. But for this set of people who don't think of contracausal free will as meaningful, the distinction between reason and cause just doesn't hold. Churchland finds the notion that rationality works outside of a "cause-free zone" to be nonsense. For her and the many nonphilosophers with whom she talks about free will, "A reason can be a perception, an emotion, a memory, a solution to a problem, an evaluation of the future consequences of an action, a judgment about the weight of the evidence, and so forth. *Any* of these can be

[5] See Rorty 1993, Rorty 2000, Dennett 1993, and Dennett 2000 for their conversation over realism and metaphor. Others contend that Dennett loses this debate, insofar as he does not proffer a theory of (scientific) inquiry, cf. Elton 2003, Zawidzki 2007, and Thompson. 2009. In Dennett 2017, Dennett comes closest to explicating his understanding of Sellars and his jargon (manifest and scientific image, reasons and causal relations, and so forth) as well as how the Pittsburgh school of Sellarsians (Robert Brandom, John Haugeland, among others) relates to Dennett's position (see pp. 40–43). Further work is necessary, not only on Dennett's relation to the Sellarsians and Pittsburgh philosophers, but also on Dennett's evolutionary account of reasons (what he calls "free-floating rationales") and Dewey's evolutionary account in Dewey 1925/LW1.

reasons, and all involve functions carried out by the physical brain" (Churchland 2013, 180).

The distinction Rorty held between causal relations and the space of reasons becomes blurred in light of neuroscience. Indeed as other proponents of brain research have argued, the brain is the cultural organ. Without nervous systems, there simply would not be human culture. This line of argument — coming from interdisciplinary fields like neurosociology (Franks 2010) and neuroanthropology (Lende and Downey 2012) — suggests that the continuity between nature and culture or nature and spirit is funneled, in part, through embodied nervous systems. Cultural politics cannot be limited to examination of the relations between propositions without understanding that these propositions are of the world, including the en-brained bodies embedded in the world in which they enact. Propositions are not about the world in an epiphenomenal sense. The world not only causes such propositions but is also altered by them.

IV.

Rorty's view of natural scientific inquiry in distinction to humanistic conversation is blurred further by the developments of socio-cultural neuroscience. The early history of neuroscience can be usefully understood as either investigating non-human nervous systems, which are then understood to be natural or non-cultural, or by investigating human nervous systems, most especially the brains of people who have suffered some trauma, such as Phineas Gage or HM.[6] The consideration of neurons in professional philosophy, especially in the 1970s, was focused on rather atomistic examples, notably that C-fibers had something to do with pain. Other popular examples included the lone brain in a vat or hordes of scientists studying single neurons firing. Through the 1980s and 1990s, neural networks were receiving more attention by both practicing scientists and by neurophilosophers. Cultural politics accounts for this shift by noting that the mathematical models (which are expressed in formal mathematical language) developed better accounts of the phenomena under examination. The community of inquiry took the language of networks to be more useful for materially explaining mental representation.

Over the past three decades, our understanding of neural networks has advanced thanks to various imaging technologies that afford us real-time images of neural functions.[7] To consider neuroscience as a programmatic inquiry into a non-human reality is to show a nearly willful ignorance of the science, its methods, its tools, and its problems. Indeed, as exciting as the development of fMRIs, for instance, has been, they can only address questions capable of being handled within a magnetic tube, in which the body within the tube must remain very still. No question we spend part of our lives at rest; but so much of it, especially within the evolutionary-historical context of human being, is active. Moreover, this activity occurs in a world that is both natural *and*

[6] Phineas Gage is now remembered for having survived in 1850 an accident in which an iron bar entered at high velocity through his "head just under the left eye and emerged from the top of his skull on the right side" (Glickstein 2014, 311). It is not simply that Gage survived this traumatic event. Rather, his entire personality was significantly affected by it. He went from being an involved and cooperative member of society to not being able to commit to friends, family, or a job. From his accident and temperamental change, neuroscientists began inquiring into the relationship between the brain and personality. In the first half of the twentieth century, HM suffered a bicycle accident as a child that caused brain injury, which led to a series of epileptic seizures. Doctors hoped to help HM by "remov[ing] a sizable portion of the hippocampus and adjacent structures of the temporal lobe on both sides" (Glickstein 2014, 237). Unfortunately for HM, he was left with anterograde amnesia, the inability to form new memories but still holding on to long-term memories from before his operation. As Glickstein reports, "When looking through a family photo album he would encounter a picture of an uncle he was particularly fond of. Each time when his mother told him that the uncle had died, HM wept yet again" (2014, 237). Fortunately for science, we have learned much from decades of studying HM about the brain and memory.

[7] On the relationship between brain imaging and pragmatism (especially Rorty), see Shulman 2013, 49–53.

cultural. The world is natural insofar as it is not supernatural, but the natural human world is culture. Human brains are cultural artifacts as much as they are natural developments.

V.

As artifacts, humans and their brains are the product and producer of human individuals and cultures. To understand how human nervous systems operate is to understand the bodily and environmental context in which they operate. This context is symbolic; it is linguistic; it is also affective and dynamic. The awareness is far more than a linguistic affair. How we move forward with the new advances coming out of the neurosciences that are anti-Cartesian requires cultural political work.

The anti-Cartesian advances I have in mind are the following three. First, human beings are socio-cultural. Our conversations and our inquiries require human relationships that begin in utero. Second, human intelligence is not modular. Our perceptions, feelings, thoughts, etc., are not separate faculties run by different parts of the brain; rather different parts of the brain contribute to various functions through creative reuse; so, for example, one part of the cortex may contribute to memory during one event but several hours, weeks, or years later, that memory could be handled by another part of the brain while that part of the cortex is doing something else; to put it bluntly, the so-called modules are multitools put to ever new purposes.[8] Finally, human intelligence is not a strictly neural affair (the brain is necessary but not sufficient for mentation; not only are other brains required but so are other enabling conditions like bodies and cultures).

This new neural view, however, remains very much in the minority, as the growing chorus of neurophiles are not finding continuities between nature and culture but are busily reducing spirit to matter. Moral psychology is chock full of such egregious moves, from Jonathan Greene's attempts (Greene 2013) to locate utilitarian ethics and deontic ethics in separate modules of the brain to Jonathan Haidt's recapitulation of Plato's tripartite soul that misrepresents our cognitive processes as predominantly unconscious (Haidt 2012).[9] Indeed, Haidt's view complements other neurophile views of free will and responsibility. The argument, in brief, is that since so much of our daily lives is orchestrated by neural operations below conscious awareness, we have little reason to believe that our conscious lives, notably our rationality and ability to control our behavior via conscious intervention, are not illusory.

Consider Haidt's metaphor of a rider on an elephant, in which the rider is conscious reason and the elephant unconscious cognitions.[10] The rider is under the illusion that his decisions determine where the elephant goes, when the fact of the matter is that the elephant goes where it pleases. The Platonic ideal of the rider having mastery over the elephant is a dream, on Haidt's view. To draw together Haidt and Rorty is to see the rider as the space of reasons, where the rider provides ad hoc rationalizations for why the elephant does what it does, while the elephant represents the causal relations investigated by natural scientific inquiry. Haidt would say that this causal world is the real world; Rorty resists that easy assertion. But the parallel I draw here is at odds not only with Plato but also with Churchland's view of neurophilosophy as modifying, expanding, and enriching our self-conception, which has its ancestral roots in Plato and Aristotle.

[8] This follows from Anderson's neural reuse theory (Anderson 2014) that is not only a thorough criticism of the computer metaphor of mind but also a detailed alternative to the metaphor that develops out of the early pragmatists, notably Dewey's critique of the reflex arc in Dewey 1896/EW5. Cf. Chemero 2009, 18–20.

[9] Haidt and Greene are just two of a growing plethora of works relating brain science to ethics and politics. To provide an exhaustive list goes well beyond this essay's limits.

[10] Cf. Haidt 2012, 44–48, and Johnson 2014, 89ff.

Rorty advocated for philosophy as conversation, notably the conversation of humankind that reaches back to the Socratic dialogues. Humans as conversationalists may well be at the core of our self-conception. That self-conception becomes complicated, however, with greater neuroscientific understanding. On the one hand, we are beginning to understand how it is possible to have conversations — not in a transcendental manner but in a thoroughly natural one — with advances such as polyvagal theory, which inquires into the orchestration of facial nerves and muscles with the larynx and the cortexes of the brain. On the other hand, with neuroscience comes neurodiversity. The Western self-conception that begins with Plato and culminates in the Cartesian-Kantian ego is directly challenged by the growing recognition that non-neurotypical experience is not abnormal but occurs within a normal range of human life. Two examples are autism and bipolar disorder. As we learn more about the neural mechanisms underlying these ways of being human, our cultural politics faces new questions that must reckon with the ontology in order to create a better world, for neurodiversity forces the question of what it means to be human.

Teaching philosophy as the conversation of humanity presupposes that to be human is to be able to converse. For many autistic people, they struggle with everyday conversations because they are not able to pick up or understand unconscious behavioral cues. In my own teaching, I have seen some autistic students struggle with Plato – yet others prove to be master dialecticians from the start. The growing awareness of neurodiversity raises further questions about our communities. For the sake of illustration, consider the difficulties that come with labeling students autistic and thus requiring assistance with their learning difficulties. Some autistic students may struggle with both reading dialogues and participating in them in class. Some autistic students may struggle with the reading but not with participating; others with the participating but not with reading. And still others will struggle with neither reading nor participating, perhaps being adept at both. The cultural political questions that arise from this admittedly oversimplified sketch are many, ranging from questions about objective standards by which to sort students to best aid in their learning to questions about whether there really is such a thing as autism and not a plethora of non-neurotypical experiences hitherto inadequately labeled autism. Other questions are pedagogical, for example, what training should instructors have to aid autistic students with assignments designed for the neurotypical? Further questions are social-political: consider an extreme example, if humans are incapable of conversation, do they deserve full rights and duties in a society designed for conversationalists, or do they deserve protections but not the responsibilities? To treat the causal mechanisms as strictly descriptive and thus carrying no normative weight about how to create a better world is to undermine scientific and democratic endeavors entirely.

It is not only autistic people who may struggle with conversation. Various mood disorders may prevent people from engaging in the critical dialogue. Further still are the difficulties presented by Alzheimer's. Socrates was concerned with the loss of memory that writing would bring about because it would undermine conversation. Without being able to recall facts, stories, past events, etc., as we see with Alzheimer's, conversation devolves into mere gossip, into cooing. Furthermore, without understanding and appreciating the neuroscience of these conditions, our conversations with humans who suffer directly from them and our conversations about these humans are left lacking. Such humans could be reduced to relatively complex squeaky wheels.

VI.

The positions of Rorty and of Churchland, of course, are not the only viable ones in the larger debate about the standing of normativity within a naturalist framework. For example, Michael P. Wolf and Jeremy Randel Koons

argue in *The Normative and the Natural* (2016) for a naturalism in which the normative is not descriptive but about how the world should be, from how inquirers should act according to epistemic norms to how persons should act according to moral norms. But these norms are not simply to be discovered as facts about water and H_2O are. Epistemic norms may guide inquiries into water and H_2O, and social or moral norms may motivate inquirers to examine water and H_2O. But for Wolf and Koons, as it is for many naturalists, science is strictly descriptive and normative claims cannot be descriptive. Wolf and Koons believe that normative claims can be true in some sense (and thus escape relativism) by maintaining the distinction between the world of causal relations (the nonnormative discourse) and the space of reasons (the normative discourse). And so, with Rorty and Churchland, Wolf and Koons carry forward a naturalism influenced by Sellars that creates the conflict between the scientific and manifest images.

But the opposition between causal relations and the space of reasons is simply at odds with our lived experience. The pragmatic naturalism of John Dewey influences the version of neurophilosophy I call neuropragmatism.[11] The key difference between this naturalism and Rorty's or Wolf and Koon's is the conception of inquiry. For Dewey, inquiry of any sort – scientific or otherwise – is never strictly descriptive and thus nonnormative. The scientific realism of many naturalists never arises, nor does the accompanying anti-realism of the opposing naturalists. With Dewey, Rorty and Wolf and Koons reject representationalism, but unlike Dewey they take the linguistic turn. Where Churchland resists that turn through a neural or bodily turn, Wolf and Koon take a different route than Rorty toward embodiment. Dewey, however, never makes any of these turns because he begins with the lived experience of living creatures in dynamic environments.[12]

Rorty resists talk of truth and objectivity (which Churchland, and Wolf and Koons seek to maintain) because such talk brings to (his) mind the mirror of nature. An idea is objective insofar as it accurately mirrors/reflects/represents/corresponds to the real thing in the world that the idea is about. But that view of objectivity is not the only one. Dewey's view of experience as a transaction between organism and environment circumvents the dualism implicit in representationalism. Instead of experience as a passive and removed spectator of the world or of ideas reflecting the world, experience is a doing and an undergoing. An organism does things to its environment. Such doings feedback to the organism as the environment responds. The organism thus undergoes. Such undergoings bring about further doings, and so forth. When an intelligent organism, like a human being, deliberately does something to the environment in the anticipation of bringing about a specific set of consequences, the environment will *subject* the organism to those consequences. If those consequences are amenable to the intentions of the organism, then the organism has found a way to work with the world for the time being. But if the environment responds otherwise, that is, if the organism's anticipations are not met, then the environment has effectively *objected* to the organism's plans. Such a view is the one Dewey

[11] Since Dewey, the word *pragmatism* has come to denote more than an epistemology or philosophy of science. It now means an entire philosophical tradition of which Dewey is a main figure. Nevertheless, it is worth noting both Dewey's later reservations about using the word *pragmatism* (1938/LW12, 4) and his description of his position as *cultural naturalism* (1938/LW12, 28). For more on the historical context of Dewey and the call for a neuro-informed cultural naturalism, see Dalton 2002, 278–292.

[12] Dennett 2017, 291, n. 89 directs the reader to the work of Azzouni 2013, in which we find "his divorce of quantification and ontological commitment". Consideration of this point goes well beyond this essay, but it is one worth much further discussion with regard to cultural politics. Another position worth further consideration because of its rejection of the Sellarsian premises of Rorty, Churchland, Dennett, and others is the Danish philosopher, Jan Faye – whose position is close to Dewey's, despite Faye's becoming influenced by Dewey much later. See Faye 2016, chapter 1, "Evolutionary Naturalism," pp. 1–30.

proffered as a naturalistic way of maintaining objectivity while respecting the situatedness of the inquiring subject. Such a view, however, does not require the further distinctions between nonnormative descriptions and nondescriptive norms.[13] To paraphrase one of Dewey's quotidian examples, if a gardener wants to grow lush tomatoes, then the gardener needs to maintain specific conditions of sun, shade, water, and soil for the specific seed of tomato.

When it comes to neurophilosophy more generally – that is, without concerning ourselves with the differences in variety, such as neuropragmatism – hypothetical imperatives may abound without giving up on objectivity or truth. Rorty's resistance to awareness beyond the linguistic simply does not fit with evidence ranging from gardening to primatology. Take, for example, modern domestic tomatoes (*Solanum lycopersicum*), which share "no more than 5 percent of the total genetic variation present within the wild species and primitive varieties" (Estabrook 2015). The wild ancestor of tomatoes is the *Solanum pimpinellifolium* and "is no bigger than a shelled pea" (*Ibid.*). The tomatoes we have come to recognize at the market are not natural but artificial: they are products not simply of cultural politics – we are not simply redescribing that which was otherwise around – but are the products of agriculture. Agriculture, for Dewey, is a variety of technoscience – both an art and a science, so to speak – that draws methodically and deliberately on historical traditions of cultivating the earth in order to develop better ways of farming. Through technoscience we have created not simply new things to talk about but the things themselves.

Primatology also provides many examples of the limitations of the linguistic turn. A particularly relevant example is Santino, a male chimpanzee housed at the Furuvik Zoo in Sweden. Santino was observed to behave with foresight by deliberately stockpiling rocks within his enclosure that he would later hurl at visitors. The primatologist to first report this behavior, Mathias Osvath, concluded that this was unequivocal evidence of future planning in Santino (Osvath 2009).[14] Louise Barrett discusses this case in terms of autonoetic consciousness, which is just another way of discussing the unique form of awareness that is commonly believed to be possible only with language. For Osvath, Barrett notes, Santino and thus non-human apes have an awareness that is supposed to be uniquely human but evidently is not. Barrett goes on to caution against abusing the anthropomorphizing that is not only tempting but also very useful in evolutionary approaches to life and mind. This cautioning is not an a priori rejection of anthropomorphizing, but rather a call for fallibilism and experimentalism. That is, we should not just assume that an organism of one species is *necessarily* similar to an organism of another species simply because of a shared lineage or similar physiology. Her reasons include the fact that these different species are different because these organisms adapted to different environments. Without understanding those differences in situatedness, Barrett argues, we can easily fall into a trap of anthropomorphizing without evidence: we give a causal explanation that simply reads the space of reasons into the situation without further cause or justification.[15] In some cases, anthropomorphizing works; in others, it ends up

[13] Two contemporary philosophers, who are influenced by both Dewey and Sellars (and in different ways), Owen Flanagan 2007 and Peter Godfrey-Smith have independently taken up a distinction between subjective and objective theories of consciousness or experience. Flanagan seems to succumb more easily to Cartesianism than Godfrey-Smith; nevertheless both would benefit from Dewey's reconstruction of subjectivity and objectivity here. See Flanagan 2007, 7ff., and Godfrey-Smith 2016, 137ff.

[14] Osvath 2009 is originally cited and discussed in Barrett 2011, 1–6.

[15] Indeed, Barrett draws upon Dennett's intentional stance, which, it is worth noting again, Rorty found to be in the spirit of his project despite Dennett's realist objections. See Barrett 2011, 1–19. Cf. n. 5 above, and Churchland 2013, 233ff, where she criticizes Dennett's view of consciousness, which she finds too linguistic as well.

overreaching in light of further evidence. To return to the example of Santino, perhaps he does not have any awareness because he isn't linguistic in the way humans are. Perhaps he does have some awareness much like humans because he is much like humans. Or, perhaps, he has a variety of awareness that is not linguistic but is nevertheless a real feature that we humans struggle to comprehend. Which of these three it is (or if it is some other possibility) is a matter of doing the experimental work of technoscience.[16]

VII.

Neurophilosophy as cultural politics, then, challenges the conversation of humanity that Rorty advocated as the on-going role of philosophy. This challenge is, to be sure, part of this conversation. Rorty valued the capacity conversation has for self-creation. The old systematic ontology of modern philosophy did not fit well with this hope for edification. However, Rorty relied too much on the linguistic turn. Neurophilosophy, broadly construed, opens the possibility for a cultural politics in which ontology plays an ameliorative role. This role is eliminative, but perhaps not in the way Rorty or Churchland would suspect. Instead of worrying that scientific facts will eliminate moral facts or values, the elimination that neurophilosophy is well situated to effect is the elimination of the worry about elimination, about reducing the human to the natural, about reducing values to facts. The classical pragmatists began this reconstruction of inquiry and culture with the aim of democratic amelioration. Rorty welcomed democratic amelioration via conversation; Churchland welcomed the results of scientific inquiry. Neither has taken up the philosophical project of reconstruction that Dewey advocated. Rather, they remain within the Sellarsian project of reconciling two incompatible images.[17] The hard distinction Rorty held between the space of reasons and causal relations requires reconsideration, as Churchland suggests in her claim that causes can be reasons. This reconsideration is especially pertinent to how we think about the relationship between inquiry and conversation. For not only do our inquiries challenge just what it means to have a conversation or to be a conversationalist, our inquiries are blind without conversation, and our conversations empty without inquiry.

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[16] Godfrey-Smith 2016 offers a further and illuminating example of animals that are both seemingly anthropomorphic (because of seeming mischievous and intentional behavior) and utterly alien to human experience (because of differences in natural environment, neural organization, physiological variation, and otherwise different evolutionary history): cephalopods. See especially chapter 3, "Mischief and Craft," pp. 43–76, which focuses primarily on the octopus.

[17] I have argued that classical pragmatism broke into the explicit but scientifically short-sighted neopragmatism of the linguistic turn and the implicit and experimentally-informed neurophilosophy. I propose that the next phase for both pragmatism and neurophilosophy is neuropragmatism. See Solymosi 2014.

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