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How to Handle Humility? Audaciously: A Response to Mark Tschaepe

Abstract:

We address Mark Tschaepe's response to Tibor Solymosi, in which Tschaepe argues that neuropragmatism needs to be coupled with humility in order to redress "dopamine democracy," Tschaepe's term for our contemporary situation of smartphone addiction that undermines democracy. We reject Tschaepe's distinction between humility and fallibility, arguing that audacious fallibility is all we need. We take the opportunity presented by Tschaepe's constructive criticism of neuropragmatism to reassert some central themes of neuropragmatism. We close with discussion of Bywater's method of apprenticeship, as an imaginative education for creative democracy, thereby rejecting Tschaepe's claim that neuropragmatism lacks a pedagogical method.

Keywords:

neuropragmatism, dopamine democracy, digital devices, social media, information and news, education

1. Introduction

Mark Tschaepé's response to Tibor Solymosi's "Affording Our Culture: 'Smart' Technology and the Prospects for Creative Democracy" is a well-intended constructive criticism of neuropragmatism and its early attempts to address Tschaepé's challenge to fight what he calls "dopamine democracy."¹ The core feature of Tschaepé's response is his focus on humility as a tool for inquiry that he says is distinct from fallibility. He believes this distinction is vitally important and insists that humility is a tool that neuropragmatism ought to take up. Tschaepé claims "Solymosi does not pay adequate attention to the function of inquiry necessary for combatting dopamine democracy."² Dopamine democracy is Tschaepé's term for his resurrection in neural garb of Plato's criticism of democracy. Simply, the neoliberal design of digital devices, especially via smartphones and their apps, is aimed at *incentive salience*, which is the feeling of freely choosing despite being manipulated into giving in, unreflectively, to one's baser appetites. Solymosi takes up Tschaepé's earlier challenge to neuropragmatism to address dopamine democracy.³ Tschaepé acknowledges the promise of Solymosi's proposals for expanding 4E cognitive science into 9E (building from Mark Johnson's 7E). In doing so, Solymosi's conception of experience as CE and the role of cultural affordances⁴ therein are acknowledged by Tschaepé as most promising, particularly regarding the ninth E, education.

Yet Tschaepé finds Solymosi's framework lacking, not only in its treatment of inquiry generally but specifically when it comes to the role of humility. Tschaepé presents humility primarily as a tool that is constantly operative in the process of inquiry. Tschaepé states that even though Solymosi is right about the need for education in critical inquiry to combat dopamine democracy there is no foreseeable neuropragmatic method for education.⁵ Tschaepé seems to believe that such a method must include, indeed focus upon, humility.

We appreciate Tschaepé's efforts because they present us with an opportunity to reassert key themes of neuropragmatism. That is, though we are grateful for Tschaepé's cultural affordance, we disagree with much of his approach. Yet common to both Tschaepé and ourselves is a commitment to inquiry. In that spirit, we take up the following issues with Tschaepé on humility and inquiry. We contend that Tschaepé's distinction between humility and fallibility has no cash value. Rather, *audacity* is better called for than humility in the fight against dopamine democracy. *Audacious fallibility* is an operative ideal that governs inquiry much like a Watt governor modulates a steam engine. We also disagree that neuropragmatism lacks adequate attention to both inquiry and education. We reiterate the core function of inquiry within neuropragmatism. To be sure, however, there is more to neuropragmatism than neuropragmatic inquiry – a detail Tschaepé seems to overlook. Audacious fallibility, not Tschaepé's conception of humility, is all we need and it has always already been at the heart of neuropragmatism. This final point is illustrated further by reflecting upon imagination and education for creative democratic life. Such reflection is warranted because the threat of dopamine democracy is real. Its resistance must take into account its connections to neoliberalism and its injustices. We conclude with an examination of how imaginative education can defeat dopamine democracy.

1) Tibor Solymosi, "Affording Our Culture: 'Smart' Technology and the Prospects for Creative Democracy," *Eidos. A Journal for Philosophy of Culture* 2, no. 4 (6) (December 2018): 46–69, <https://doi.org/10.26319/6916>; Mark Tschaepé, "Humility and Inquiry: A Response to Tibor Solymosi," *Eidos. A Journal for Philosophy of Culture* 3, no. 1 (7) (April 2019): 122–131, <https://doi.org/10.14394/eidos.jpc.2019.0009>; Mark Tschaepé, "Undermining Dopamine Democracy Through Education: Synthetic Situations, Social Media, and Incentive Salience," *Pragmatism Today* 7, no. 1 (2016): 32–40.

2) Tschaepé, "Humility and Inquiry," 122.

3) Mark Tschaepé, "Undermining Dopamine Democracy Through Education."

4) Solymosi, "Affording Our Culture," 60–63; Tschaepé, "Humility and Inquiry," 124.

5) Tschaepé, "Humility and Inquiry," 125.

2. Fallibility Is All We Need

In his recently recovered manuscript, *Unmodern Philosophy and Modern Philosophy*, John Dewey makes an audacious call for intellectual integrity. He writes,

Behavior which is marked by the qualities characteristic of minding thus has all the traits which, when they are discriminated, are called volitional, intellectual and emotional. There is care in the sense of concern for the issue; there is the need of observation of conditions in order to determine or decide what to do, the latter constituting the so-called act of will. It is worthwhile in this latter connection to note the case in which *minding* means *obeying*. It contains an element of personal arbitrariness so emphatic as to unfit it for service as an exemplar...⁶

Dewey's characteristic call for verbs over nouns is at work here. Instead of a mind, we are to mind. To mind is to care. "To mind" also carries the connotation of obeying: mind the rules of the game or the laws of the land. As games and lands differ, so determining what is worthy of obeying, of minding, runs the risk of relativism. There is no universal standard because it just depends on where and when you are. Nevertheless, there is also something to obey beyond being the subject of a game or a legislature. Dewey continues:

But the demand for conformity to an environing condition that is involved in obedience is but a one-sided emphasis of a quality found in all minding as attentive behavior. Laws, rules and regulations are *observed* when action occurs in accord with what they prescribe. The property of behavior involved in minding as obeying is that insisted upon by Francis Bacon in his doctrine that obedience to nature is the prime condition of power to command its forces. Demand for obedience is an expression of a certain authority properly exercised by actual conditions over the formation of ideas and beliefs...⁷

Laws carry their authority because of the observed consequences that follow from obeying or disobeying them. Regarding nature, there is further cause for obeying its authority. Sociopolitical laws may vary depending on time and place, but nature's regularity and order holds (at least so far, problems of induction notwithstanding) regardless of time and place. If people are to form ideas and beliefs about how nature works, people ought to mind its regularities. Dewey reflects further, writing:

On the negative side, it contains (markedly so in the case of Bacon) a warning as to the need of freeing the act of observation from all preference for one conclusion rather than other [*sic.*], whether the preconception of prejudice that operates is an 'idol' of the personal or the socially customary orthodox type. Positively, it expresses the need of supreme respect in all cases of knowing; of acknowledgement of the authority of actuality; of the vast importance of readiness to submit to what natural conditions have to say and to teach...⁸

6) John Dewey, *Unmodern Philosophy and Modern Philosophy* (Carbondale: Southern Illinois University Press, 2012), 209; italics in original.

7) Ibid, 209; italics in original.

8) Ibid.

Disinterestedness is a value of genuine inquiry: we must accept the results of inquiry whatever they are. Revise our ideas, change our beliefs, as new evidence from new inquiries demands. This readiness to submit must not only be respected and actuality acknowledged; so long as natural conditions have something to say and to teach, there is the possibility and reality of growth. This scientific attitude is audacious because it is an explicit rejection of any and all authority that is not experimental. This attitude, Dewey carries on, is not passive but active:

Experience of the causes that have led beliefs astray, in matters great and small alike, testifies to the necessity for that attitude that bears the significant name of *admission*. We have, to speak metaphorically, to let events in, and there are so many obstructions in the way to their admission that the attitude of submission required is radically different from that of passive acquiescence...⁹

Learning is not something that simply happens to a person. Learning is a skill a person develops. In developing this active skill, a learner or inquirer cultivates an attitude of submission through which they admit their experience of causal relations. This admission is an obeying, a recognition of *objectivity*. Audaciously, the inquirer has a moral imperative not only to be objective but to be so as a matter of character. Dewey concludes:

The obeying or submission, the “objectivity,” involved in minding specific conditions (or the “world” generally) is an art attained only by discipline and through prolonged practice. The quality that marks off the attitude involved is that which in another context is called fidelity, loyalty; the kind of *conformity* required represents an ideal which it is morally incumbent to strive for but which is never wholly attained. It is the rarest and most difficult to achieve of all kinds of honesty, namely, intellectual integrity.¹⁰

Objectivity is a skill acquired through discipline that balances conformity with the world as it is *with* recognition that through such conformity humans are emboldened to forge new paths of growth. This is audacious. Humans, without supernatural aid (be it from gods, or god-like priests or philosopher-kings), can, through careful effort and action, learn about the world and how to engage with it. This lesson is one neuropragmatism takes seriously. It is one that opponents of dopamine democracy must also take to heart.

It is also a lesson that resonates with Hilary Putnam’s four theses of pragmatism. “Cursorily summarized,” he writes,

those theses are...

(1) *antiskepticism*: pragmatists hold that *doubt* requires justification just as much as belief (recall Peirce’s famous distinction between “real” and “philosophical” doubt); (2) *fallibilism*: pragmatists hold that there is never a metaphysical guarantee to be had that such-and-such a belief will never need revision (that one can be both fallibilistic *and* antiskeptical is perhaps *the* unique insight of American pragmatism); (3) the thesis that there is no *fundamental* dichotomy between “facts” and “values”; and (4) the thesis that, in a certain sense, practice is primary in philosophy.¹¹

9) Ibid.; italics in original.

10) Ibid.; italics in original.

11) Hilary Putnam, “Pragmatism and Moral Objectivity,” in *Words and Life*, ed. James Conant (Cambridge, MA: Harvard University Press, 1996), 152.

Taken together, these four theses cohere with Dewey's call for intellectual integrity that requires objectivity as a skill or practice. Indeed, the combination of antiskepticism and fallibility is audacious because it finds a middle ground between a nihilistic skepticism (where there are no facts nor values, just a pandemonium of doubts) and an equally empty dogmatism (where there are indubitable absolutes, where any clash between fact and value is settled a priori). Skepticism is replaced by fallibilism, for the pragmatist. Skeptics take up a "you could be wrong" position as a mere logical possibility. Fallibilists, however, are open to revision, not because of mere logical possibility, but through active and open experimentation that aims at self-correction and growth. It is practiced. This ameliorative attitude is at the heart of intellectual integrity.

Humility seems to have no place here. But Tschaepe draws on Dewey's own writing on humility in order to distinguish it from fallibility. This distinction, as far as we are concerned, is one that makes no difference in action. We are not so confident that the use of humility, with its Christian connotations of meekness and lowliness, overcomes skepticism in the way that fallibility does. Before we argue for such a conclusion, however, let us take Tschaepe at his word.

Humility, according to Tschaepe, is at the core of Dewey's theory of inquiry. This theory is presented as a pattern with a varying number of steps. Tschaepe gives five.¹² But, as Mark Johnson describes it, it can be as few as three.¹³ In terms of the dynamic system that is CE, inquiry is the result of the disruption of the dynamic system's equilibrium, which is restored through the struggle to survive.¹⁴ This struggle can be a return to the previous set point (as in the case with regulating body temperature when it is either too hot (via sweating) or too cold (via shivering). It can be a random mutation that leads to a new set point. It can be an intelligently directed creative exaptation and adjustment of the environment. Or it can be a change of the organism itself to environmental forces: consider the experience of black Americans struggling to survive in an anti-black environment. Tschaepe describes the nature of inquiry as contextual as well as situational. For Dewey, inquiry is never strictly abstract, it happens in a situation. This is the point of 4E cognitive science, especially the embeddedness of cognition. The impetus for inquiry is the felt need in an indeterminate situation to (re)establish equilibrium.

Humility, as Tschaepe conceives it, is a tool for overcoming the struggle of disequilibrium. He writes,

...humility adjusts to the problem-at-hand. It is an idea that is not a static goal, but an attitude that is practiced. Humility moderates our approach to inquiry, but not in the sense that we are submissive or deferential to a specific other, such as God, other persons, or science. Rather, humility constitutes "*the sense of our slight inability even with our best intelligence and effort to command events; a sense of our dependence upon forces that go their way without our wish and plan. Its purport is not to relax effort but to make us prize every opportunity to present growth.*"¹⁵

12) Tschaepe, "Humility and Inquiry," 128–131. They are: "suggestion, intellectualization, hypothesis, reasoning, testing".

13) Mark Johnson, "Cognitive Science and Dewey's Theory of Mind, Thought, and Language," in *Embodied Mind, Meaning, and Reason: How Our Bodies Give Rise to Understanding* (Chicago: University of Chicago Press, 2017), 44, <https://doi.org/10.7208/chicago/9780226500393.001.0001>. They are: "1. A felt difficulty; 2. Imagining ways of overcoming the felt difficulty; and 3. Acting beyond imagining to overcome the felt difficulty".

14) Tibor Solymosi, "Neuropragmatism on the Origins of Conscious Minding," in *Origins of Mind in Nature*, ed. L. S. Swan (Dordrecht: Springer Verlag, 2013), 273–287. Tibor Solymosi, "Recovering Philosophy from Cognitive Science," in *Pragmatism and Embodied Cognitive Science: From Bodily Interaction to Symbolic Articulation*, ed. Roman Madzia and Matthias Jung (Berlin: De Gruyter, 2016), 143–164, <https://doi.org/10.1515/9783110480238-008>.

15) Tschaepe, "Humility and Inquiry," 125. Tschaepe quotes and italicizes from Dewey's *Human Nature and Conduct*, see Tschaepe "Humility and Inquiry," 125, n. 19 (John Dewey, *Human Nature and Conduct* [1922] in *The Middle Works of John Dewey 1899–1924*, vol. 14, Collected Works of John Dewey, ed. Jo Ann Boydston (Carbondale and Edwardsville: Southern Illinois University Press, 1988), 200.

On this presentation, humility, set apart from the Christian connotations, serves to keep us in check as it reminds us that we are not omnipotent nor omniscient but limited and dependent on contingencies. Insofar as an inquirer practices humility, the possibility for growth is a genuine one.

Here we pause to consider Dewey's presentation of the sentences Tschaepe quotes. The two sentences preceding the italicized passage are: "Humility is more demanded at our moments of triumph than at those of failure. For humility is not a caddish self-depreciation."¹⁶ The latter is further emphasis that humility does not need to carry Christian connotations. The former sentence, however, is particularly illuminating because of Tschaepe's proposal that neuropragmatism be humble. At least for Dewey in this passage, humility is not appropriate at this stage of the battle against dopamine democracy. Neuropragmatism is not triumphant. Nor is it a failure. What it is, right now, in our current cultural milieu, is audacious and fallible. Humility is not appropriate because there is neither triumph nor failure. Moreover, if humility is a reminder of our *slight* inability to control events, what sense does it make to treat humility instrumentally? Tools are for achieving goals; but humility, as Dewey seems to suggest here, is better suited to those who have achieved than to those who struggle to achieve. That is, humility is not a tool for inquiry – for the struggle – but a reminder that struggle will return. In other words, humility in this special sense reminds us, especially at our best, of our fallibility.

Nevertheless, Tschaepe seeks to distinguish his instrumental conception of humility from fallibility. He continues:

Humility is an active recognition of context and our dependence upon context, which is distinct from fallibility. Fallibility means that we are open to acknowledging the tendency or possibility for making mistakes. With humility, we are also open to growth, which is facilitated through context. Without context, neither growth nor inquiry would be possible. Dopamine democracy is a vehicle of regression. Coupled with humility, neuropragmatism is a source for growth, in part, because it recognizes the unceasing importance and fluidity of context.¹⁷

Tschaepe seems to make an important distinction between humility and fallibility. Apparently, fallibility is only an acknowledgment of our limitations and the possibility of making a mistake. Whereas humility takes on a more positive role that encourages growth within a specific context. Our idea of audacious fallibility, however, does not require such a distinction. Later, Tschaepe obfuscates this distinction, writing:

To arrogantly put forth a hypothesis would be to treat it as if it is beyond revision... We recognize the context of the situation and the fact that our observation and insight are fallible. There is a possibility that we do not have the relevant facts or that our hypothesis is inadequate. This does not disable our inquiry but strengthens our ability to adjust our hypothesis in accord with the situation's conditions to improve our investigation.¹⁸

Here the previous distinction between humility and fallibility collapses. Indeed, one may reasonably ask whether the word *humility* is the best choice. Alternatives include *conscientiousness*, *mindfulness*, and *carefulness*. Indeed, Tschaepe's discussion of humility and fallibility leaves one wondering exactly what the distinction is, leaving us to reassert central themes of neuropragmatism.

16) Dewey, *Human Nature and Conduct*, 200.

17) Tschaepe "Humility and Inquiry," 125.

18) *Ibid.*, 130–131.

3. The Neurospectrum: Skepticism, Fallibilism, and Intellectual Integrity

One theme returns us to Dewey and Putnam on intellectual integrity. The combination of anti-skepticism and fallibilism does the work that Tschaepe claims humility alone can do. Though Dewey and Tschaepe seek a characterization of humility that does not have the Christian connotations of meekness or lowliness, this effort is pointless. Fallibility is all we need because there is no point in being fallible were it not for the experimental attitude inherent in pragmatism. That is, amelioration is the product of anti-skepticism and fallibilism. Growth is the whole point to begin with. Humility adds nothing but confusion. Audacious fallibility is a reminder of the need to challenge established norms, habits, and institutions that block inquiry and inhibit growth.

Humility or fallibility or conscientiousness or mindfulness is something that applies to any inquiry, not just neuropragmatic inquiry. The difference between other scientific inquiries, according to Tschaepe, is that they are hubristic and arrogant because they seek to dominate and control everything all at once. “Neuropragmatism,” Tschaepe writes, “with its stress on situatedness, is well-positioned to be a humble form of inquiry.”¹⁹ Tschaepe is half-right (domination and control are simply impossible), but he misunderstands fallibilism. One wonders whether fallibilism, to Tschaepe, is simply lip-service to the mere logical possibility of being mistaken. Such possible cant is often expressed by enthusiasts and opponents of neuroscience.

This arrogance is often expressed in misunderstandings about the role of neuroscience or its data in our everyday lives. For present purposes, we propose two poles of what we call the *neurospectrum*: neurophilia and neurophobia. Neither are desirable positions. The goldilocks zone or the happy medium is neuropragmatism. This golden mean illustrates audacious fallibility in contrast to the skepticism and arrogance of the two poles. The neurophile is so taken up with neuroscience that they declare it revolutionary, if not a panacea for all humanity’s ills. The neurophobe goes to the other extreme in their refusing to recognize any import of neuroscience as means for resolving – including but not limited to understanding – human problems. Both of these positions, we argue, lack humility or fallibility. The neurophile’s extreme eliminativism is arrogant for thinking neuroscience can do it all. The neurophobe’s extreme denial is hubristic for thinking that neuroscience has nothing meaningful to offer. Neuropragmatism takes seriously what neuroscience offers but also contextualizes such offerings, recognizing that there are multiple perspectives, both within and outside of neuroscience, to take on the problems of human life.

This neurospectrum addresses Tschaepe’s abstract concern regarding humility. It also provides a framework for understanding the difficulties in treating humility as a tool. For the neurophile, the only tool is neuroscience; the neurophobe rejects neuroscience as a tool. Such abstractions may be useful for framing a much needed discussion, but such abstractions become dangerous if we forget that “neuroscience” is not a homogenous thing but an umbrella term for myriad things, from the questions, the vocabulary, the accepted ontologies, the data, the theories, and the scientists themselves.

Consider some examples from the neurospectrum. At the neurophobic extreme, there is the acceptance of a phenomenon, such as moral responsibility, but a denial of a mechanism that experiment can investigate. So, for the neurophobe, no matter how much we learn about the brain we would simply not learn anything about moral responsibility. On the other end of the neurospectrum is the rejection of a phenomenon for its mechanistic replacement. That is, there really is not such a thing as moral responsibility, what there is, is this and that neural mechanism. Neither view is tenable, of course; both are arrogant. Neuropragmatism, naturally, takes the

19) Ibid., 126.

view that the more we understand about how nature operates – including humans and thus including moral responsibility – the more responsible we become because we are better able to predict and intervene, which is to say, better able to respond to the problems at hand.

Examples at the neurophobic end include dualists as well as some forms of emergentism. Given Dewey's postulate of continuity, neuropragmatism is an emergentism. The cash value is found in that the more phobic emergentists do not think that any "lower-level" mechanism or causal account generally is useful. Patricia Churchland offers telling examples of the resistance she's experienced for her neuro-enthusiasm. "For example," she writes, "a renowned if rather melodramatic philosopher hoisted himself up in a conference I attended and, hands gripping the chair in front of him, hollered to the hushed crowd, 'I hate the brain; I hate the brain!'"²⁰ In another instance, Churchland recalls entering an elevator only to be greeted by an anthropology colleague, scoffing with repugnance at Churchland's reductionism.²¹

The eliminative materialism of Patricia Churchland is somewhere between neuropragmatism and neurophilia on the neurospectrum. Pragmatically speaking, however, the main consequence of her position has been the impression non-specialists in philosophy, such as the anthropology colleague, have. They presume a rejection of the value of lived experience. From this, they often infer a rejection of values entirely and of what is perhaps most valuable, their conscious lives. This conflict between the scientific and manifest (or human) images is also expressed in the tensions between their respective cultures, the two cultures, as C.P. Snow characterized them, of science (which deals strictly with facts) and the humanities (which strictly deals with values) – recall Putnam's third thesis of pragmatism that denies the fact/value dichotomy.²²

The neuropragmatist has no a priori position on whether a particular causal account is useful or not, as the utility is contingent on the situation at hand. On the other extreme, the neurophile sees only through the neural lens (itself problematic, for there is no one single lens within neuroscientific inquiry) and rejects appeals to other sciences or perspectives. Moreover, many neurophiles are so taken up by the promise of neuroscience that they lack self-reflection on the positions they take up. Neuropragmatists have addressed such extremes of the neurospectrum, indicating contrary to Tschaep's call that neuropragmatism be coupled with humility, that it was always already humble (*viz.* fallible) in its audacious inquiries. Solymosi criticizes neurophiles regarding freedom of the will.²³ Tschaep himself carefully investigates the fad of neuromarketing, regarding oxytocin as the "love" molecule.²⁴ Similar critical inquiry is taken up by Bywater and Piso²⁵ and by Moula, Puddephatt,

20) Patricia S. Churchland, *Touching a Nerve: The Self as Brain* (New York: W.W. Norton & Company, 2013), 13.

21) Ibid, 262.

22) See C.P. Snow, *The Two Cultures* (New York and Cambridge: Cambridge University Press, 1993); Tibor Solymosi, "Can the Two Cultures Reconcile? Reconstruction and Neuropragmatism," in *The Handbook of Neurosociology*, ed. J. Turner and D. Franks (Dordrecht: Springer Verlag, 2012), 83–98, https://doi.org/10.1007/978-94-007-4473-8_7; and Tibor Solymosi, "Descendants of Pragmatism: Reconciliation and Reconstruction in Neopragmatism, Neurophilosophy, and Neuropragmatism," in *Pragmatist Neurophilosophy: American Philosophy and the Brain*, ed. John Shook and Tibor Solymosi (London and New York: Bloomsbury Press, 2014), 83–110.

23) Tibor Solymosi, "A Reconstruction of Freedom in the Age of Neuroscience: A View from Neuropragmatism," *Contemporary Pragmatism* 8, no. 1 (2011): 153–171, <https://doi.org/10.1163/18758185-90000188>.

24) Mark Tschaep, "Neuropragmatic Reconstruction," in *Pragmatist Neurophilosophy: American Philosophy and the Brain*, ed. John R. Shook and Tibor Solymosi (New York and London: Bloomsbury, 2014), 111–126.

25) Bill Bywater and Zachary Piso, "Neuropragmatism and Apprenticeship: A Model for Education," in *Neuroscience, Neurophilosophy, and Pragmatism: Brains at Work in the World*, ed. Tibor Solymosi and John Shook (New York: Palgrave Macmillan, 2014), 185–214, https://doi.org/10.1057/9781137376077_9.

and Mohseni²⁶ on the topic of neuroeducation.²⁷ In these examples, “humility” as Tschaepe conceives it, is not the focus of discussion, but it is operative (insofar as it is the same as fallibility) within the reconstructive effort of these neuropragmatists. Nevertheless, audacious fallibility is the better term for the activity of carefulness or mindfulness of the context in which inquiry proceeds.

The emphasis on mindfulness is particularly striking because, as Tschaepe goes on to state, “Through recognition of our ever-incomplete mastery and necessary dependence upon context, we remain open to new ideas and avoid ‘the conceit of learning’ that is often communicated [as Dewey put it] in the form of ‘catch-phrases, cant terms, familiar propositions.’”²⁸ This raises the question of what Tschaepe has in mind regarding catch-phrases, cant terms, or familiar propositions while dealing with dopamine democracy – itself an expression that sounds like a catch-phrase. To deny catchphrases and their usefulness is self-deceptive. For example, Tschaepe uses them despite finding them unappealing. We, however, approve of their use as our introduction of the neurospectrum illustrates. Such self-deceptive denial undermines intellectual integrity.

As Tschaepe has suggested,²⁹ inquirers must be mindful of our predecessors. And so, we recall that the history of philosophy is chock-full of catchphrases. Plato surely has many to offer, from the endorsement of the Delphic imperative to know oneself to examine one’s life or that justice can be summed up as “one man, one art.”³⁰ Dewey (whom Tschaepe is quoting regarding the conceit of learning) offers his own, “Stop and think.”³¹ And so has Tschaepe, whether he realizes it or not. The most obvious – beyond dopamine democracy – is the implication of his suggestion for neuropragmatism: *Be humble*. But he also writes,

“when we remain mindful of the contingency of our reasoning upon our context, including what is currently known and unknown, we reason with humility. This helps prevent the conceit of reasoning that denies our knowledge and our ignorance. By acknowledging both knowledge *and* ignorance of dopamine democracy, we become better equipped to seek solutions to problems on multiple levels, such as the neurobiological, the sociocultural, and otherwise.”³²

Some catchphrases immediately jump out: Be mindful. Know what you don’t know. Reason with humility.

4. Both/And, Not Either/Or: The Logic of Continuity

Where is such mindfulness or humility when Tschaepe categorizes, in the passage just quoted, hierarchically the neurobiological and the sociocultural? To be sure, he doesn’t say which is higher, but he is clear they’re on different levels. Yet this seems to miss the larger point neuropragmatism is making: namely, that you cannot separate the sociocultural from the neurobiological, whether as neurobiology as a form of inquiry – and thus

26) Alireza Moula, Atony J. Puddephatt, and Simin Mohseni, “A Neuropragmatist Framework for Childhood Education: Integrating Pragmatism and Neuroscience to Actualize Article 29 of the UN Child Convention,” in *Neuroscience, Neurophilosophy, and Pragmatism: Brains at Work in the World*, ed. Tibor Solymosi and John Shook (New York: Palgrave Macmillan, 2014), 215–239, https://doi.org/10.1057/9781137376077_10.

27) Cf. Solymosi, “Affording Our Culture,” 49, 9n.

28) Tschaepe, “Humility and Inquiry,” 126.

29) Ibid, 130–131.

30) Plato, *Republic*, in *Plato: Complete Works*, eds. John M. Cooper and D.S. Hutchinson (Indianapolis and Cambridge: Hackett Publishing Company, 1997), 370b.

31) Dewey, *Unmodern Philosophy and Modern Philosophy*, 217.

32) Tschaepe, “Humility and Inquiry,” 130.

a community of inquirers – or as a subject of such inquiry – and thus requiring the recognition that human experience is a form of nature-as-culture, a point Solymosi emphasized.³³ Or, to return to one of Tschaepé's own points coming out of his reading of Dewey, that the intellectualization phase of inquiry is a mode of analysis, not a representation of realities outside of human influence or interest.³⁴ In either case, Dewey's principle of continuity is at work between the neurobiological and the sociocultural, between the inquiring organism and the inquired-into-environment.³⁵ To set one mode or phase of CE – the neurobiological or the sociocultural – apart from each other, as this loose speak of levels risks doing, is to miss not only the point about the situatedness of any given inquiry but about the continuity or entangledness of all inquiries.

Audacity in inquiry is how neuropragmatism should be understood. Humility is thus assimilated into fallibility. Neuropragmatism takes Tschaepé's suggestion seriously but not uncritically. On the one hand, fallibility, not humility, is a tool, a sort of Watt governor for inquiry. On the other hand, fallibility is also a goal or an ideal, something we care about or mind; that is, we don't achieve it perfectly or permanently. In the former case, it is operative, not striven toward; while in the latter, it is a guiding idea, perhaps, but not fully actualized itself. This juxtaposition may seem like a paradox; but concluding so is to miss the point about continuity and audacity in inquiry. Ideals are not simply out there forever beyond reach in some Platonic heaven. They do real work within CE, especially within inquiry. Struggle can only be endured and deliberately overcome as long as there is the engaged means for modifying CE in a desired direction. This is central to Dewey's ends-means dynamic. Further inquiry becomes valuation, the determination of whether what is desired is also desirable given the rest of CE. Such inquiry is an inquiry into inquiry and is thus properly philosophical, not merely instrumental. As such, CE becomes philosophical because reflection is not restricted to the armchair but becomes a lived practice. A skill of being fallible, of stopping to think, of examining one's life.

5. CE and Inquiry: Audacious Fallibility

Inquiry is audacious. Inquiry is the result of an intolerance for the current state of affairs. There are, surely, better or worse ways of inquiring, arrogant as well as humble ways. Given the gravity, however, of dopamine democracy *right now* – that is, our situation isn't just dopamine democracy but is also metabolic syndrome and anthropogenic climate change³⁶ – being humble may not be enough. It may not work.

The hope that science and rationality could work to bring about a better world is expressed in Immanuel Kant's "An Answer to the Question: What is Enlightenment?"³⁷ in which Kant gives a famous catch-phrase: *Sapere aude!* Dare to know! We do indeed dare to know and believe it is such daring that is necessary to combat the doltishness of dopamine democracy. Educational reform must reflect such daring. Moreover,

33) Solymosi, "Affording Our Culture," 57.

34) Tschaepé, "Humility and Inquiry," 128–129, <https://doi.org/10.14394/eidos.jpc.2019.0009>.

35) This theme of continuity cannot be overemphasized as far as neuropragmatism is concerned. The logic of continuity is distinct from the logic of identity, which is the logic of modern philosophy and much of contemporary cognitive science today. Continuity, to be clear, has been a theme from the start in neuropragmatism. See Tibor Solymosi, "Neuropragmatism, Old and New," *Phenomenology and the Cognitive Sciences* 10, no. 3 (2011): 347–348, 352–354, <https://doi.org/10.1007/s11097-011-9202-6>. See also, Solymosi, "Affording Our Culture," 51, 56–58.

36) On metabolic syndrome, see Solymosi, "Affording Our Culture," 51. On anthropogenic climate change, see Tibor Solymosi, "Reconstructing Photohumanism: Pluralistic Humanism, Democracy, and the Anthropocene," *Essays in the Philosophy of Humanism* 24, no. 2 (2016): 115–134, <https://doi.org/10.1558/eph.31443>.

37) Immanuel Kant, "An Answer to the Question: What is Enlightenment?" in *Perpetual Peace, and Other Essays on Politics, History, and Morals* (Indianapolis: Hackett Publishing Company, 1983).

this educational daring must also question sociopolitical authority – with daring! This education must take into account how our minds actually develop, which is far from how Kant or his followers like Kohlberg believe. There are no noumena where there is $\mathcal{C}\mathcal{E}$. Our inquiry is not into a phenomenal world of causal relations that are somehow connected to a space of reasons but not connected in a way that we can know.³⁸ Such mysterianism is not humble; it is arrogant. Similarly arrogant is the belief that we have all the theory figured out and just need to apply it. Yet given the problem of dopamine democracy as it is entangled with white patriarchal supremacy, catch-phrases like “be humble” are all too easily weaponized to silence and oppress genuine inquiry.

After Darwin, as Dewey was perhaps the first to appreciate fully, the Kantian distinction between facts and values is no longer tenable. Neuropragmatism, with the proposed evolutionary and experiential unit of $\mathcal{C}\mathcal{E}$, pays no further heed to such atavism. Indeed, the audacity of neuropragmatism is a result of the desire for intellectual integrity. Tschaepe points toward but never explicitly expresses such a desire in his discussion of humility regarding knowledge and ignorance.

For neuropragmatism, Putnam’s four theses of pragmatism are characteristic of its mode of inquiry, especially regarding the defeat of dopamine democracy. Tschaepe’s presentation of dopamine democracy and Solymosi’s further characterization of it are not the result of armchair skeptical musings. Rather, dopamine democracy is a justified problem that is afflicting all of humanity in myriad ways. The details of this affliction, in both diagnosis and prognosis, are still being developed as the ongoing inquiry corrects earlier misconceptions about $\mathcal{C}\mathcal{E}$. Among the inherited misconceptions are the impoverished conception of experience as sensationalistic and the fact/value dichotomy. These dualisms – between mind and world, and fact and value – serve only to block inquiry and inhibit growth. In order to overcome these dualisms as well as the atomism of the Kantian person – none of which can be supported or endorsed in light of our best scientific understanding of ourselves – humans must learn to practice intellectual integrity, which requires not only objectivity but also imagination. This practice cannot be solely individual; it must be communal. It must be educative.

6. Education for Critical Inquiry

Finally, we must point out that, although Tschaepe comments that neuropragmatism has no concrete proposal about how education can challenge dopamine democracy, Bywater’s work on apprenticeship³⁹ has done exactly what Tschaepe says is missing. Bywater’s apprenticeship was initially built to foster critical inquiry into matters related to race. A central aspect of this apprenticeship is learning to tarry with the negative.⁴⁰ In a 1941 article Dewey observes, “Our anti-democratic heritage of Negro slavery has left us with habits of intolerance toward the colored race – habits which belie profession of democratic loyalty.”⁴¹ He makes it clear that white people have betrayed democracy by failing to cooperate with black people. As a white person in the United States, to

38) See Tibor Solymosi, “Neurophilosophy as Cultural Politics,” *Pragmatism Today* 8, no. 1 (2017): 174–184.

39) Bywater and Piso, “Neuropragmatism and Apprenticeship,” https://doi.org/10.1057/9781137376077_9, and Bill Bywater, “Becoming a Deweyan Apprentice: A Struggle Against White Supremacy,” in *The Role of the Arts in Learning: Cultivating Landscapes of Democracy*, ed. Jay Michael Hanes and Eleanor Weisman (New York: Routledge, 2018), 19–35, <https://doi.org/10.4324/9781315207643-2>.

40) Bill Bywater, “Tarrying with the Negative,” *Kettering Review* (December 2011): 53–58.

41) John Dewey, “Basic Values and Loyalties of Democracy,” in *The Later Works of John Dewey 1899–1924*, vol. 14, *Collected Works of John Dewey*, ed. Jo Ann Boydston (Carbondale and Edwardsville: Southern Illinois University Press, 1988 [1941]), 277. See Bill Bywater, “Education for Democracy: The Daunting Task Before Us,” in *Educating for Critical Consciousness*, ed. George Yancy (New York and London: Routledge, 2019), <https://doi.org/10.4324/9780429431654-13>; for a more detailed discussion of the development of Dewey’s thinking about race.

be told that one is a traitor to democracy is a blow which would take great integrity (in Dewey's sense) to seriously examine. This is an example of tarrying with the negative.

Tarrying with the negative – whether it be data that challenges a favored hypothesis or a dimension of social experience that puts oneself or one's group in a negative light – is the greatest strain on retaining a robust sense of fallibility in the process of inquiry. Apprenticeship requires its practitioners to prepare themselves for this encounter with the negative and even encourages them to seek out such circumstances in order to better understand themselves and their social surround. Potentially, a researcher's disappointment at the outcome of an investigation can reveal information about the researcher who, because of some precondition, is too strongly attached to a certain outcome or to a certain range of possibilities available for inquiry. Such disappointment must not result in a wholesale rejection of the results of inquiry. Instead it must use the researcher's sense of fallibility to open new possibilities for inquiry; to use imagination in a Deweyan fashion as described, for example, in *A Common Faith*:

The aims and ideals that move us are generated through imagination. But they are not made out of imaginary stuff. They are made out of the hard stuff of the world of physical and social experience. The locomotive did not exist before Stevenson nor the telegraph before the time of Morse. But the conditions for their existence were in physical material and energies and in human capacity. Imagination seized hold upon the idea of a rearrangement of existing things that would evolve new objects... The new vision does not arise out of nothing, but emerges through seeing, in terms of possibilities, that is, of imagination, old things in new relations serving a new end which the new end aids in creating.⁴²

Critical inquiry returns the researcher to the hard stuff of physical and social experience to look again and more deeply into that stuff and into the researcher's capacity for rearranging *both it and* the researcher's habits of thought to be more imaginative when encountering the world. We see here Dewey's point about admission and submission: first, letting events in and then, instead of passive acquiescence, being disciplined enough, having the integrity, to be faithful to the possibilities contained within them. This is how Dewey's objectivity is attained, how it is practiced.

Bywater's apprenticeship advocates a pedagogy which teaches critical inquiry by tarrying with the negative. This process pushes students to become more objective (in Dewey's sense) when encountering the world. It challenges their socialized habits so students learn to see more possibilities in the world and they learn to treat themselves in a different way – they become thinkers critical of their own beliefs. They learn fallibility. Growth occurs when a greater understanding of self and world are achieved. Students stop, think and begin to sense their involvement in CE. The critical inquiry of apprenticeship can create resistance to the forces of neoliberal atomistic consumerism. For example, inquiry into those excluded from markets, or actively harmed by them, could give students captured by dopamine a basis for questioning their experience. The distress of others and one's connection to that distress takes on salience. Conversations in which blacks, whites and other persons of color listen to one another's experiences require postponing gratification and inhibiting immediate responses. There is no room for Tschaep's incentive salience in this process. As students become more aware of CE, the shallowness and the meanness of dopamine democracy will stand out for them.

Bywater's apprenticeship – the active experimentation of tarrying with the negative – is not a solitary

42) John Dewey, *A Common Faith* in *The Later Works of John Dewey 1899–1924*, vol. 9, *Collected Works of John Dewey*, ed. Jo Ann Boydston (Carbondale and Edwardsville: Southern Illinois University Press, 1988 [1934]), 33–34.

enterprise. Nor is it just a series of conversations over a semester in the classroom. We dare suggest that this pedagogy be understood in terms of Solymosi's 9E's⁴³ and Robert H. Lustig's 4C's⁴⁴ (as Solymosi has gestured). The 9E's are the four from 4E cognitive science – embodiment, embeddedness, enaction, and extension – the three Johnson added – emotion, evolution, and exaptation – and the two proposed by Solymosi, ecology and education. Lustig's 4C's are "connect (with other humans directly), contribute (value to oneself and to one's communities), cope (via commonsensical activities like sleep, exercise, and meditation), and cook (real food for oneself and others)."⁴⁵

7. Conclusion

Tschaep's considerate response to Solymosi's direct attempt to characterize dopamine democracy in neuropragmatic terms richly provides fodder for further inquiry. His main assertion that neuropragmatism should be coupled with humility is rejected in favor of audacious fallibility. We make this rejection because humility, as Dewey conceived it, is appropriate in triumph, as a reminder of our fallibility. As neuropragmatism is yet to triumph, we favor audacity. In the specific case of dopamine democracy, we also favor audacity over humility because of neoliberalism's refusal to stop and think about a range of human values within CE, especially its inadequate action on anthropogenic climate change. Humility is too easily weaponized by imperialistic and oppressive capitalists. Humility can be used against audacity. Too easily can a neoliberal say, "be humble" to someone who dares to question the authority of the status quo. For creative democracy to remain a task before us, we must not only be fallible but also audacious: we must dare to inquire. Neuropragmatism has no patience for authority that is not inherently experimental. To be experimental is to be anti-skeptical and fallible. It is to value growth made possible by our better understanding of the facts – an understanding that is itself growing through careful and deliberate inquiry. Dopamine democracy is a direct attack on intellectual integrity. Integral to resisting and ultimately undermining dopamine democracy is the skilled and disciplined practice of objectivity, which is to say, of active intellectual integrity.

43) Solymosi, "Affording Our Culture," 59ff.

44) Robert H. Lustig, *The Hacking of the American Mind: The Science Behind the Corporate Takeover of Our Bodies and Brains* (New York: Avery, 2017).

45) Solymosi, "Affording Our Culture," 51.

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