

A Process of Truth: A Reply to Steve Fuller's Essay on the Silver Anniversary of Social Epistemology
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Steve Fuller's essay "Social Epistemology: A Quarter-Century Itinerary" is dense and complex, as would be required to cover the past twenty-five years of his work. My own reply offers what I consider the best use of the autobiographical moments of our elders: searching in what they have done for opportunities for departures and developments. I proceed mostly as a direct reply to Fuller's essay, one representative of the next generation (so far as I can ever really represent anyone but myself) in dialogue with the established.

Introduction

I take a central element of Fuller's work over the last twenty years to be how he made a problem of the supposedly simple concept of consensus in a scientific discipline. Fuller describes social epistemology as a philosophy of science and scientific practice, and the book *Social Epistemology* largely discussed science. However, his conclusions apply not only to science, but to any institution or community where members take themselves to agree on any set of principles or facts. Understood simply, the term 'consensus' implies total uniformity of thought on any matter on which a community's members take themselves to agree. Fuller showed that any consensus in real life is never purely uniform, but a complex predominance of agreement over disagreement. Individual interpretations of what is agreed upon may vary, but never enough to make a practical difference. That threshold varies with the singular structure of each communal consensus, shifting along with the thoughts and daily lives of the individuals whose community composes that consensus. As well, a change in the conditions of life for the community will also change the threshold of a consensus' stability, and also force changes in the principles and beliefs held in consensus. Being subject to all these subtle possibilities for change, a consensus can never be fixed and left certain in its stability. For a consensus to persist, a community must actively maintain it.

The function of a community's consensus maintenance, what such maintenance is for, strikes me as the core difference between the writers Fuller sets himself against, Analytic Social Epistemology (ASE), and his own perspective, Political Social Epistemology (PSE; see Remedios 2003). Maintenance is a process, so one cannot understand maintenance without making explicit the underlying principles, in ASE and PSE, of time and humanity's temporal nature. Fuller says as much when he writes of his dissertation, foundational for the ideas of social epistemology, that its core focus was "the issues that arise from having to make decisions in the present, the justification of which must be drawn from past cases while, at the same time, setting precedent for future judgments".¹ Knowledge and consensus is never permanently fixed, but always operates in the flux of time.

¹ Fuller, "Social Epistemology: A Quarter-Century Itinerary," 1.

§1 How One's Conception of Consensus Is Linked to Truth

As one may expect from any self-confident person looking over his intellectual career, Fuller is a strong advocate of his approach to social epistemology. One reason for this is that Political Social Epistemology (PSE) comprehends the dependence of scientific institutions and practices on the activity of institutional consensus formation and maintenance, while Analytic Social Epistemology (ASE) remains blind to these relationships. Because this is his anniversary, let's grant him this point. The question now becomes, given its greater comprehensiveness, why have practitioners of ASE not been universally converted to PSE?

Which approach is more comprehensive of the phenomena under study is not the most important question in understanding what draws people to the PSE and ASE perspectives. The actual dividing line is a principle regarding the nature of truth. The central inquiry of an analytic social epistemologist, as Fuller describes it, is whether some scientific institution or community searches for truth. This inquiry must make two underlying presumptions in order to make sense. The first presumption is that the truth for which a scientist searches is beyond the practice of its daily activities. That is, the practice of a community, or its consensus, cannot be justified by a practice or principle that the community itself generates. Truth is the necessity which serves as the standard for the success of the various contingent practices: if a community's activities put it en route to converge with the truth, that practice is good.

The second presumption of ASE regards the nature of this truth. It must not be a truth specifically detailed to any one practice within science, as this would let the daily practice of scientists determine the truth to which they aim. Truth is universal for all scientific practices, so its content is general enough that it can apply to all the diverse sub-disciplines of science without itself being modified. This vision of truth puts ASE in direct conflict with PSE, whose central presumption is that scientific practices aim to uncover a variety of truths for which individual practices are minutely tailored. Paying close attention to scientific practice makes philosophical theory matter for science in a very concrete sense. Whatever truth would be universal to evolutionary biology, physics, quantitative sociology, and fractal geometry would be so general in its statements that it would have almost no useful content.

Indeed, a truth universal to all scientific practices would not even be a set of scientific laws, or even a single such law. For example, I remember a conversation on bloggingheads.tv in 2010 between philosopher Jerry Fodor and evolutionary biologist Elliott Sober about Fodor's recent book on philosophy of biology, *What Darwin Got Wrong*.² In this book, and the conversation, Fodor argued that the principle of natural selection was not a scientific law and any practice that employed the principle was not a science. Fodor's reason was that evolutionary biology could only produce models of particular ecosystems and track various developments in them over time. This was in

² Fodor and Piatelli-Palmerini. *What Darwin Got Wrong*. New York: Farrar Strauss Giroux, 2010.

contrast to physics, which Fodor called a true science, because physics produces universal laws necessarily governing all behaviour of some general kind of body. True science, he said, aims to discover truths that are not subject to flux over time. Sober responded that Fodor was right: evolutionary biology does not produce universal truths, but tools to predict and track contingent changes in ecosystems over time. And evolutionary biology is a science.³ Universal laws of motion are useful to physics, and models to track contingent developments are useful for evolutionary biology.

For Fuller and I, usefulness trumps universality every time. In order to make useful contributions to science, philosophy's principles and investigations must follow the practices of the scientific community of which we want to be part. This requires abandoning any pretense to universality over science as a whole, and engaging in the fluctuations of daily life. Striving for a truth that would apply universally to a physicist and an evolutionary biologist will only have two entirely counter-productive results. One will, like Fodor, misapply the supposedly universal principles of one discipline to another, where it is inappropriate; or one will recognize the radical differences among all sciences and develop principles that can only apply to all of them because they are virtually empty of positive content. ASE's focus on universal truth for all science traps itself in either of these mistakes. PSE rushes into the changeable world, and so escapes such a trap. Letting a practice determine its own standard does not create problems, but escapes them.

§2 The Problematic Origins of Epistemic Standards

An analytic social epistemologist is motivated by a strong faith in truth's ability to deliver us from the uncertainty of a contingent world. The central presumption of Analytic Social Epistemology (ASE) — a presumption still intuitive to the majority of people — is that if a discipline sets its own standards of practice by consensus subject to the flux of circumstance and decision, those standards are ultimately arbitrary: This is what we do because we do it. A corollary is that there is no authority to such a science other than its assertion of authority: The world is as we say because we say so. Insofar as Political Social Epistemology (PSE) and its fellow communities in philosophy and science has not convinced the majority of humanity that a lack of universality is not the same as arbitrary disorder, we are failing.

At issue is the temporality of epistemic standards: How much should an epistemic standard by which one measures the adequacy of a practice be subject to the fluctuations of time? For ASE, an epistemic standard must be subject to no flux, an anchor of necessity and consistency for otherwise contingent and changeable practices. Such an epistemic standard does not stand outside time per se; thorough atemporality is timelessness, separate from any time-bound activity. The temporality of an epistemic standard, on an ASE conception, is a continual and constant presence; universal truth is present in time, but not subject to its flux.

³ Fodor and Sober. Science Saturday. bloggingheads.tv. 20 March 2010.

The PSE conception of epistemic standards is that they are principles arrived in a community through the maintenance of a consensus through which that community constitutes itself. A discipline's epistemic standards are as subject to flux as its practices. As practices change, the standard of what a good practice is will change accordingly. The upshot is that adequately understanding a discipline's epistemic standards requires not only understanding the content of those principles, but the means by which that content changes. Hence the importance of rhetoric for Fuller; rhetoric is the study of how consensus shifts through conversation, unjustified by appeal to the epistemic standards that are themselves at issue.⁴ This conversation is not necessarily an argument that appeals to reason, but any means to affect change. Perhaps someone invents a new technique or apparatus for a scientific field, and demonstrates the new things one can do with it. Historically, rhetoric has been devalued as affecting change without justification by a universal truth. But when we understand our epistemic standards as embedded in time's flux, rhetoric becomes a means of spurring the process of discovering new ways to make truths. The intellectual of PSE's conception is a Processual Intellectual. When process is more important to someone than fidelity to a changeless presence, one prefers to utter a falsehood that opens a possibility for its potential correction than to speak a truth that shuts down all further inquiry.⁵ A philosopher is true to science not in following slavishly its pronouncements, but in applying its answers to her questions, and her answers to its questions, a dialogue that need never end.⁶

An epistemic standard becomes a tool to regulate practice for discovering new truths about the world, which can be better or worse suited to the task depending on the nature of the practice. The more productive one's standard, the better it is. PSE's problem at its silver anniversary is not anything within this conception, but the reception of this conception outside PSE. Many practitioners of science, philosophers, and everyday people share a conception of an epistemic standard that is much more in line with the ASE vision. If one demonstrated the thorough temporality of science's epistemic standards to them, they would dismiss science as changeable. So until political social epistemologists can work out how to convince people that contingency is okay, we must make an unfortunate use of rhetoric. To prevent the institutional breakdown of scientific institutions, communities, and their supporters through the dissensus following a communal loss of faith, we must maintain the false belief that an epistemic standard subject to flux is actually a continuous presence.

In practice, this is how dominant scientific institutions (and dominant institutions generally) justify the current consensus that maintains their dominance: We rewrite history to emphasize those elements of the past that supply the components of the current consensus, brushing away or de-emphasizing practices having incompatible epistemic standards. Workaday scientists would only be disrupted if they knew their epistemic

⁴ Fuller, "Social Epistemology: A Quarter-Century Itinerary," 5.

⁵ Fuller, "Social Epistemology: A Quarter-Century Itinerary," 4.

⁶ Massumi, *Parables for the Virtual*, 19.

standards were subject to radical change through shifts of consensus. The vast majority of people believe ASE that consensus is an arbitrary process, no matter how many PSE analyses have shown that it is not. Because of the still-widespread belief that only genuine universality can protect us from arbitrariness, what Thomas Kuhn called normal science depends on the lie that the arc of history flows smoothly.

PSE is well-suited to understanding its own quandary, because the problem is inherently political. The Science Wars were, on the surface, a “public crisis in scientific authority.”⁷ But under the surface of this public crisis was, I believe, a fact that many social epistemologists of both ASE and PSE are afraid to admit publicly: popular support of scientific institutions requires perpetuating the belief that science has peculiar access to a universal truth that does not vary with time. Alan Sokal's hypocrisy in blaspheming all norms of academic honesty with his 1996 hoax to discredit critical accounts of science's claim to universal truth is understandable (though not forgivable) if motivated by a kind of institutional survival instinct.⁸

ASE and PSE seem locked in an unbreakable conflict over whether the scientific community can convince the general public that changeability is not the same as arbitrariness. The PSE critique is that maintaining a false belief in the unchangeable universality of science's epistemic standards fosters dogmatic quietism: the belief that all of history justifies the current knowledge regime stifles critique and any possibility of progress or adaptation to changing circumstances. ASE offers the equally legitimate critique that conceiving of epistemic standards as subject to time's flux destabilizes any claims science has for truth. Whether or not this is so epistemically does not matter because it is so politically: scientific institutions lose public authority if they disavow any privileged access to universal truth. The work of PSE, despite having been done in the highest fidelity to science and understanding how it develops, has supplied an intellectual tradition that anti-science religious zealots and corporate interests can easily hijack.

§3 Truth as Deference and Deviance

Fuller's recent work on the community of intelligent design theorists is commendable and dangerous for these reasons. I commend Steve Fuller for speaking up for a community of knowledge practitioners who have been derided as ignorant cranks for well over a century. Design theorists are one community offering a critical voice to a scientific orthodoxy that, like all orthodoxies, must not be allowed to slip into dogmatism. But many powerful people would use work like Fuller's for nefarious purposes.

⁷ Fuller, “Social Epistemology: A Quarter-Century Itinerary,” 2. For more detail on this crisis from Fuller's perspective, see his 2006 *The Philosophy of Science and Technology Studies*.

⁸ Riggio, Adam. “Right Thinking for Right Science? On the Pitt-Collier Exchange Over the Purpose of STS.” *Social Epistemology Review and Reply Collective*. social-epistemology.com. 30 January 2012. For more detail on why I consider Sokal's hoax among the most reprehensible academic behaviour of the twentieth century.

Major educational authorities in one of the most powerful states in the U.S.A. are susceptible to lobbying — sometimes by their own state governor — not only to include creation science in their textbooks for children, but to remove and devalue evolutionary science. Fuller speaks respectfully of creation science as a form of productive deviance to keep evolutionary biology from falling into dogmatic rigidity. But in our wider society, creation science is a tool in the arch-conservative arsenal of enforcing deference to their authority. He risks his keen and professional scholarship being twisted into a mere pawn in the campaigns of zealots whose dogmatic conformity and hostility to dissent mock the principles of open-mindedness that motivate Fuller's own work. For taking that risk, he is a stronger man than I could ever hope to be. I commend him. But I also fear for him.

Fuller's account of the conflict of Analytic Social Epistemology (ASE) and Political Social Epistemology (PSE) reveals paradoxes in both approaches that may offer a glimmer of hope in the danger of our current political environment: the relationships of each approach to authority. A political social epistemologist positions herself as a gadfly in relation to authority: any established consensus of practice and ideas runs the risk of becoming inflexibly dogmatic in its maintenance procedures.

When a consensus is maintained only because of its traditional existence, it becomes oppressive. Instead of solving problems in daily practice with a mind open to novelty, one builds a myth of Whig's progress, that the entire history of the discipline has been a series of necessary steps to the present enlightenment. An equivalent activity, though I think it even worse than Whig's progress, is simply to erase history, to act as though the current consensus has always held, and the past is not worth studying, because it is simply an extended present. PSE aims to smash these blinding walls with the cry of a thousand subjugated voices. By this means, a political social epistemologist hopes to make a positive material contribution to the practice and progress of science.

An analytic social epistemologist aims to justify authority of an institution and its consensus as it currently stands. Fuller describes ASE's self-positioning with regard to the institutions of science as deferential. ASE does not aim to change science, but only to reflect and make explicit the techniques and habits of what scientists actually do and think. Implicit in this self-image as the handmaiden of science is the presumption that science needs no critic. The self-image of ASE gains a healthy irony when one considers that this deference to the daily practices of science as inherently right and without need for critique is wedded to a vision of scientific truth that is so abstract as to dissolve all conceptual difference among the various scientific practices. The drive in ASE to wed its work closest to science co-exists with a tendency to abstract from science's daily practice.

While the irony of ASE may be farcical, PSE has its tragic irony. Philosophical practices and techniques intended as a critique of dogmatism and deference can be easily co-opted by forces that are far more oppressive in their dogma than orthodox science ever was. Fuller's admirable stand against the dogma of institutionalized science is based on a more noble fidelity than that of the seeker after a continually present universal truth. The faith

of a political social epistemologist is in the power of thoughtful research, ideas, and words to change reality and how we understand reality.

To defend itself from hijacking, PSE must not let itself become too gleeful in its critique of scientific institutions: if a critique is too successful, its object will fall with nothing to replace it. The zealots and robber barons who would prefer an entirely deferential population would love to witness the fall of science to its own defenders of good conscience. PSE admirably combats dogmatism inside the sciences, but this is not the most dangerous enemy of free thought. The religious extremists and corporate interests who hold significant political power would destroy the critical and creative aspects of science for their own ends. These forces act against everything about philosophy, science, and knowledge that Fuller and I believe in; they must be fought.

PSE must adopt from ASE its fidelity to scientific institutions: not to maintain the current consensus at all costs, but to maintain the institution itself. PSE would transform that fidelity from the Whiggish acceptance of the status quo into an institutionalized transformation: a consensus that accepts its flux in the name of service to a fluctuating world.

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