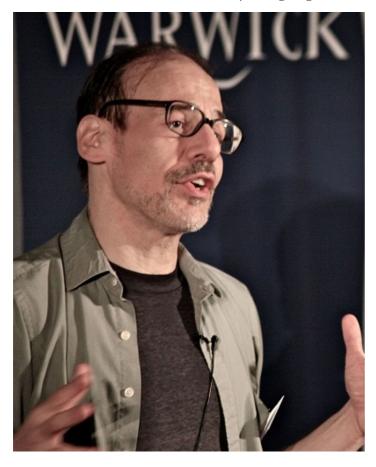# Modal Power, Self–Conscious Science, and the Critique of Epistemic Paternalism, or How to Change your Mind: An Interview with Steve Fuller

SHARON RIDER

STEVE FULLER is Auguste Comte Professor of Social Epistemology in the Department of Sociology at the University of Warwick, UK. Originally trained in history, philosophy and sociology of science at Columbia, Cambridge and Pittsburgh, Fuller is the author of twenty–five books, and his work has been translated into thirty languages. From 2011 to 2014 he published a trilogy relating to the idea of a 'post–' or 'trans–' human future, all with Palgrave Macmillan under the rubric of 'Humanity 2.0'. His most recent books are *Knowledge: The Philosophical Quest in History* (Routledge 2015), *The Academic Caesar: University Leadership is Hard* (Sage 2016), *Post–Truth: Knowledge as a Power Game* (Anthem 2018) and *Nietzschean Meditations: Untimely Thoughts at the Dawn of the Transhuman Era* (Schwabe 2019). Fuller was awarded a D.Litt. by the University of Warwick in 2007 for sustained lifelong contributions to scholarship.

S. Rider (✉)
Uppsala University, Sweden
e-mail: sharon.rider@filosofi.uu.se

He is also a Fellow of the Royal Society of Arts, the UK Academy of Social Sciences, and the European Academy of Sciences and Arts.

Introduction by Sharon Rider

First of all, I would like to thank Steve Fuller for kindly agreeing to the Interview for *Disputatio*. As the brief biography above indicates, even a minimally adequate account of his positions and contributions would require a long article, given the range of his interests and studies. But in the minds of most readers familiar with his work, he probably best known for establishing *social epistemology* as an interdisciplinary field of research in its own right. It is the name of a quarterly journal he founded with Taylor & Francis in 1987, as well as the title of the first of his many books. He is also well known for his highly public and controversial arguments in defense of the teaching of intelligent design in schools alongside the theory of natural selection, as well as his leading role in debates about transhumanism, academic freedom and the role of the intellectual. In this interview, I have chosen instead to focus on questions related to our conceptions of the nature of philosophy as an academic enterprise, the advantages and risks (real or perceived) of his notion of modal power as an epistemological ideal, and the value of acquaintance with the Western philosophical tradition as a starting point for solutions to current problems.

The Interview

Sharon Rider [SR]: I would like to start off with a very general question regarding philosophy as a discipline. One of the complaints that have been lodged against professional philosophy in the latter half of the twentieth–century is that it often presumes, if not a view from nowhere, at least the position of a spectator looking at the whole of language, the mind or human action, entirely decontextualized, as an object of possible knowledge. The objection to this approach is that the received ideals and assumptions about the point and purpose of philosophy as a kind of science of necessary truths distorts the knowledge that it takes itself to categorize and systematize. In short, the conceptual apparatus becomes primary, what the claims are ultimately "about". You seem to be sympathetic to this criticism; on the other hand, one could make the same point about hypothetical models as such. You seem to have no qualms with abstract theory, terms and concepts borrowed from economics, for instance. Is that because you take them to be more useful for actual human endeavors and concerns?

Steve Fuller [SF]: You've started at the deep end! When I was recently given the opportunity to reflect on my intellectual development as part of a symposium on the 'future history of the human sciences', I focused on just the set of issues you've raised, which have framed my thinking from my teenage years (Fuller 2019). The first point to make in response is that while I'm fairly seen as a 'social constructivist' and even an 'antirealist', I've never considered myself a 'relativist'. Moreover, self–described 'relativists' don't normally identify me as one of their own. The best way to see this is that during the 'Science Wars' of the 1990s I was very clear that the controversial 'deconstructive' approach pursued by Science & Technology Studies (STS) to science's default self–understanding was simply the second moment of a dialectic, the third, synthetic moment of which would be a socially self–conscious science that was 'universal' at two levels: in terms of not only the comprehensiveness of its epistemic coverage but also the comprehensiveness of those capable of accessing and contributing to that knowledge (e.g. Fuller 2006). I regard the continuing fixation of much STS research on 'local' and 'indigenous' knowledges to be at best an epistemic holding pattern and at worst an amber–like presentation of people who might otherwise wish to be seen in motion.

Nevertheless, my self–described 'anti–relativist' opponents regard me as a relativist, even though these people — and I think here of Alvin Goldman and his band of merry band of analytic epistemologists — are quite comfortable with the idea of deferring to expert authority. Indeed, Goldman himself once defended in the pages of the *Journal of Philosophy* a position he called 'epistemic paternalism', which reminds me of why Protestants even today bristle at Papal pronouncements, including those that comport with what they would otherwise believe. For me 'expertism' epitomizes relativism, as what Alfred Schutz smartly called the 'the distribution of knowledge in society' (repackaged by Philip Kitcher as 'the division of cognitive labour'). The very idea of expertise trades on the metaphor of knowledge as a kind of intellectual real estate that is divided into discrete 'domains' that are the preserve of the relevant epistemic natives, aka 'experts'. I have discussed this matter in the context of my support of 'deviant interdisciplinarity' (Fuller 2013). The domain metaphor persists even in the more politically correct forms of analytic epistemology associated with the idea of 'epistemic injustice', except that the 'domains' are now identified in terms of the knowledge that only people living in certain sorts of bodies (e.g. non–male, non–white, etc.) can possess.

And so while my opponents and I agree that 'relativism' is a 'bad thing', we disagree on who is the real relativist! On the one hand, I believe that my opponents are the real relativists because they basically identify 'truth' about

some matter with whatever the relevant experts happen to believe at the moment. Their position normally seems less crude only because it's paraded as 'naturalism', which suggests that experts have access to a 'causal' level of reality that ordinarily eludes non–experts. The experts certainly have a different way of coding the phenomena from non–experts — but calling it 'causal' simply privileges that coding. (This lesson comes from Richard Rorty.) On the other hand, my opponents think I'm the real relativist because I see no reason to defer to experts. Of course, experts shouldn't be ignored, but in the end individuals bear the consequences of their decisions on what to believe, regardless of whether they defer to experts. More generally, the freer the society, the more the burden of proof lies with the party who claims that they were 'misinformed' or 'deceived' when they took a decision.

But what is of primary importance, as far as I am concerned, is that individuals can justify the decisions they make. This is an idea that I take from Martin Luther, who thought holistically in terms of 'justifying' oneself before God. This is the spirit in which we should understand people who dissent from expert opinion in science and medicine. They believe and act in accordance with what comports with their mode of being in the world. What matters mainly to them is not whether they live or die but that they are free to think and act for themselves. This incredibly powerful proposition is obscured by analytic philosophy's insistence that 'justification' be rule–based. And so, instead of giving good reasons, one must give the right reasons — as if all rational agents were interchangeable. (Stephen Toulmin already critiqued this approach in his Ph.D. dissertation, which became *The Place of Reason in Ethics*.)

To my mind, the truly serious problem with Luther's original brand of justificationism is that decisions taken in one's own name may have serious consequences for others who had nothing to do with the decision — libertarianism's problem of 'collateral damage', so to speak. This places a limit on the feasibility of what is sometimes called, with a nod to Paul Feyerabend, 'epistemic anarchism'. Even if at the end of time we must justify ourselves to God, in the meanwhile we must justify ourselves to each other. Economists, to their great credit, speak of 'externalities' in this context. Moreover, also to their credit, they are open–minded about how to deal with the issue. In particular, they don't necessarily think that one should refrain from harm, if the harm can be compensated in some way because people are capable of thinking of themselves 'instrumentally' in terms of a larger system in which they operate. In other words, the harm done to them is more than just that: At the same time it also functions as a means to some systemic end in which they play a crucial role — and that 'systemic end' may involve some 'higher' version of who they think they are.

Perhaps one doesn't need to adopt a 'view from nowhere' to appreciate this point. Nevertheless, one must be able to understand one's own existence as transpiring on two levels — first order and second order. This is something I make much of in my recent writings on 'post–truth', with which I have considerable sympathy (e.g. Fuller 2018). At the first order level, I may see a harm as 'permanent' or 'irreversible' because I regard myself exclusively as a unique animal concerned with maintaining its physical integrity. I can't imagine any other way of regarding myself as taking precedence. However, at the second order level, I effectively step outside my default self–understanding to consider the various ways I might understand myself for purposes of rendering myself whole. While this is reasonably described as 'self–transcendence', it can be discussed in less mystified terms as well: e.g. Quine's 'semantic ascent'. In terms of post–truth, I may concede losing one game (where I feel the *pain*) while playing multiple games at once, in one of which I may turn out to be a winner (where I make the *gain*).

Ultimately what I'm talking about is the capacity to translate what is meaningful in one's life into another medium for its expression. It's why 'art' has been so closely associated with the rendering of the human spirit. It also helps to explain the lingering appeal of 'dualism', aka spiritualism — notwithstanding the great pains taken by virtually all recent Western philosophers to show that they have 'overcome' Cartesianism. The transhumanist desire to upload one's finite consciousness (understood as a unique information stream) into an infinite computer is an especially vivid contemporary way of thinking about the relevant 'translation' that would be involved — and hence the prescience of Ray Kurzweil's 1999 book, *The Age of Spiritual Machines.*

But there is also a quite practical side to this, which is reflected in the increasing tendency for courtroom litigation to be mitigated if not pre–empted altogether by insurance payouts and financial compensation schemes designed to deal with harms both anticipated and committed. The 'law and economics' movement has especially championed this approach, but it is also interestingly defended from a broadly Kantian standpoint by my old Pittsburgh classmate, Arthur Ripstein (2016), now Professor of Law at the University of Toronto. I take this prospect seriously in *The Proactionary Imperative* (Fuller and Lipinska 2014) in support of transhumanism's advocacy of 'risky' experiments (i.e. ones that violate university Institutional Review Board standards, even when subjects would grant consent) with the potential to transform the human condition. The key to all this is that people accept *money* as *lingua franca* for the transaction. In other words, that potential experimenters and subjects are willing to agree to translate their various issues into an amount that would change hands under a variety of

conditions specified in a contract. Everyone understands the possible costs and benefits — even if death results.

The sociologist Georg Simmel famously discussed this universalization of money in social relations as both objectifying and liberating for people wishing to explore alternative identities ('assimilated' Jews like himself were in the forefront of his mind): He was groping for the idea of 'human capital', which started to be promoted in the early twentieth century by the US Progressive economist Irving Fisher and subsequently became a cornerstone of neoliberalism. The key point in this trajectory is — which I take Ripstein to be defending — is that Kant *malgré lui* started it, when he defined the categorical imperative as requiring the moral agent to imagine that anyone would act as they propose to do. This means that agents must abstract from the specificity of their situations — that is, by translating themselves into a new guise, in which the moral probity of their intentions can be judged. It is here that the discourse of 'risk' — and its talk of 'costs' and 'benefits' — enters the frame. In this respect, the 'black swan' theorist Nassim Nicholas Taleb is on to something when he claims that you can only trust what someone says if they have 'skin in the game'. If you're willing to bet your life on something, then it's probably very important. It also vividly illustrates the sense in which Friedrich Hayek thought that the market's 'price mechanism' spontaneously generates social knowledge. (Think of the price that a market agent is willing to pay for some good as a Kantian move in miniature.)

SR: Regarding the limits of theory, you refer now and again to Wittgenstein: I see a certain resonance with his thought (for instance, in your interest in tracing the roots of certain standard assumptions to show the original use as a way of releasing us from the captivity of concepts). But you would seem to disagree with him on a least one point, if I understand you (and him) correctly. It is important for Wittgenstein that the conditions that make science possible cannot be stated as such: the kind of understanding or insight that we can attain about the foundations of mathematics as of morals is not itself a kind of fact nor a hypothesis, but a reflection on what we de facto can find intelligible under the circumstances, when justifications seem to come to an end (we reach "bedrock"). Would it be fair to say that you consider that idea too "conservative", in other word, that it's just another case of avoiding responsibility for the exercise of one's own "modal power"?[1]

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[1] "Modal power" is Fuller's term for enhanced control over what is conceivable as true or false, possible or impossible. This increased capacity to change the rules of discourse benefits all, he argues, insofar as it can be further intensified when it is more widely available and broadly distributed.

SF: The short answer is yes — and the explanation of my disagreement with Wittgenstein on this point relates to a fundamental theological divergence between him and me. Wittgenstein's allergic reaction to the idea that we could discover ultimate foundations for knowledge, being, judgement, etc. was a constant throughout his work. Even in the *Tractatus*, he was clear that the sort of 'foundations' that he thought were possible was relative to particular languages formulated as logical systems. But even then, he deferred to an 'ineffable' realm that transcends all logical systems as the ground of everything. In the *Philosophical Investigations*, the ineffable is demystified as lived experience in a particular community of practice. Both amount to the same *apophatic* theological move, though the deity that Wittgenstein seems to be imagining in the *Tractatus* is transcendent, whereas in the *Investigations* it is immanent: the former due to Kant, who saw God as radically other from humans (due to Original Sin), the latter to Spinoza, who saw God as effectively living through all of nature in its totality, which of course includes us.

The basic idea in all this is that God is the unnamable namer, a feature of the Abrahamic religions, in which the deity creates by dictating things into existence (*logos*). But God cannot be defined by his own instruments, in which case insofar as we are created *imago dei* yet remain *imago* and not the real thing, we can use language to define everything in the world but God himself. This aspect of *apophasis* is often called 'negative theology'. Religious suspicion of science, especially after the science–driven devastation of the First World War (in which Wittgenstein served), begins from this point. In this context, science is seen as transgressing divine ineffability insofar as it persuades humans to bring about a 'new world order' by simulating God's powers in science's own technical terms (i.e., formulas that allow us to split atoms, splice genes, rearrange molecules, etc. replace the divine *logos*). Thus, the most astute cultural observer of this scene, Oswald Spengler, described science's centrality to *Homo modernus*' self–understanding as 'Faustian' — and predicted it would lead to the eclipse of 'Western civilization'.

However, it's worth recalling the alternative point of view, with which I am more sympathetic. It does indeed amount to second–guessing God, but that is possible because humanity's ontological privilege means that we 'always already' participate — however partially and fallibly — in the divine mind. The 'rationalist' tradition in early modern philosophy was most explicit on this point, especially with its interest in mathematics as a universal language of thought that at the same time governed the material world. And here I would take a very broad view of 'rationalism', one not so different from how the German idealists thought about it. Thus, I mean here not only Descartes and his followers — especially

Malebranche and Leibniz — but also Newton, Locke and Berkeley, whose rationalism was more muted largely for political and religious reasons. (The 'Cambridge Platonists' are a reference point for their rationalism.) However, they all shared a strong sense that we are born well–disposed to understand reality in its totality. To be sure, they differed over the role that the environment played in triggering our cognitive dispositions — but the stress was placed on the dispositions. After all, even Galileo seemed to think that experiments were demonstrations that operated, *Meno*–style, as an *aide–memoire* for those who can't readily deduce from first principles, via mathematical reasoning, to an expected empirical outcome. This helps to explain his notorious lack of scruples in how he presented the experiments he claimed to have conducted. He treated them as rhetorical devices to prompt recognition.

SR: As your last answer illustrates, and is abundantly clear from your writing, you are deeply familiar with a broad range of ideas in the European intellectual tradition, which you often use to great effect to remind the reader of both continuities and discontinuities that tend to go unnoticed. Yet you stress the importance of looking forward, rather than backward, in science as well as in society. What, if anything, is the value of a tradition and awareness of one's place in it?

SF: I don't think of 'tradition' as something in which one is situated. It shouldn't have that sort of facticity. Rather I see 'tradition' as a certain dominant way of understanding one's relationship to the past, but the important point is that there are many other such ways. When anthropology and sociology were established as academic disciplines in the late nineteenth century, 'tradition' had a special, almost technical meaning that has always stuck with me. Basically 'tradition' meant 'pre–modern', the implication being that it was the vision of the past that you had to discard in order to move into the future. It doesn't follow that the past thereby becomes irrelevant. But it does mean that a particular vision of the past — the 'traditional' one — has been de–legitimized. This was the context in which, say, the churches lost their prerogative to run schools, forms of work were no longer tied to family origins, and so forth. As for the visions of 'progress' that informed the ensuing disruptive social changes, they were — and are — invariably drawn from the past, but typically a past that the 'traditional' understanding occluded or otherwise did not allow to come to fruition.

Perhaps the most extreme version of this sort of thinking was evident in the rhetoric of the English and French Revolutions, when the more radical

ideologues were talking in terms of creating a literal 'Heaven on Earth', a restoration of Paradise, which all traditional forms of authority — from the nobility to the priesthood — had prevented from happening for hundreds if not thousands of years. Here it is worth recalling that 'radicalism' means 'back to the roots' or 'back to the source'. The Utilitarians originally called themselves 'philosophical radicals' because their ideas of good conduct and good governance were predicated on what they took to be the hedonic foundations of human nature, unobscured by unnecessary institutions and other forms of ancestor worship. Indeed, the hostility to ancestor worship (or 'sociological inductivism') sums up my own refusal to grant 'tradition' more facticity than it deserves.

Rather than thinking of tradition as the cumulative wisdom of the past, it should be seen as simply one rather path–dependent way of making sense of a much richer and more complex past that is waiting to be mined for future use. This is why studying history is never a waste of time — but perhaps not in the way that professional historians think! It also explains my attraction to counterfactual historiography, which in turn contributes to the expansion of 'modal power'. What I mean here is simply the capacity to derive a wider range of future prospects by taking a more comprehensive look at what happened in the past and reassessing its import. This invariably involves a large measure of 'reinvention', but there's nothing wrong with that. Indeed, the sketchiness with which the dominant historical narratives tend to present unrealized possibilities from the past may even be a hidden strength, as it invites potential devotees to fill in the details for their own future use.

SR: I think that many of us sympathize with your critique of paternalism on the part of academic elites and blind trust in expertise as undermining the capacity for autonomous judgment and, as such, deeply illiberal. At the same time, certain pressing questions arise as soon as one takes seriously the mission of democratizing knowledge. One of the most salient of these, I think, is the so–called boundary problem in democracy, namely, whom to include in the demos and on what grounds. It's not enough, after all, to say that who shall be included in the demos is a question to be decided by the demos which has not yet been defined. Isn't there a real and present danger here, as the ancients observed, for the tyranny of the majority? And isn't it in the interests of humanity as a whole, but especially certain individuals and groups, to keep certain options (say, deeming certain kinds of people as intrinsically not even potentially part of the demos) off the table?

SF: Let me return to what I said toward the end of my answer to your first set of questions. I was basically arguing that Kantianism provides the transcendental condition for the possibility of utilitarianism, understood as Bentham's global policy science (Fuller 2016). The problematics of modern democracy that you raise now in this set of questions are forged in this crucible. Bentham's policy science only gets off the ground once you accept the need to translate your personal experience into a neutral playing field for purposes of collective judgement and action. And on Kant's side, it is worth recalling that the categorical imperative is not about doing what most people would do, but simply saying what you would do in a language that everyone can understand and use. In post–truth terms, Kant forces the second–order 'semantic ascent': People are not rock solid individuals but players in multiple possible games, in which their strategic prospects vary. However, once the game has been decided, utilitarianism kicks in with a vengeance. In this context, 'money', understood as something deeply woven into the fabric of modern life, fits the bill as a Kant–style universal currency much better than Bentham's own 'hedonic' alternative, which would have social scientists objectively gauge and calculate people's pains and pleasures.

The main problem with Bentham's original proposal is that it requires a very un–Kant–like mediation of people's wills, as if they were not sufficiently competent to speak on their own behalf and so require academically trained researchers, whose findings somehow make their way to Parliament, where a new set of mediators — this time elected — can take the relevant decisions in the best collective interest of the people. It's basically the secular equivalent of how the Roman Catholic Church governed Christendom, with its multi–layered clergy, extending from the pastoral to the ecclesiastical. And here one can see how the Utilitarians made common cause with the Comtean Positivists, who also thought about the role of science in politics in similar terms. In contrast to all this, and harking back to his Protestant and Rousseauian roots, Kant would have people more directly participate in their fate, 'put one's money where one's mouth is', so to speak — in the full realization that it is ultimately a collective fate.

One might think that an obvious competitor to money for a universal moral currency that satisfied Kantian scruples would be for each person to count for exactly one vote. However, interestingly, the egalitarian principle of 'one person, one vote' actually found favour in Bentham–inspired quantitative social science — albeit understood as 'data points' subject to further expert mediation — before it did in democratic politics itself. Indeed, prior to the twentieth century, political philosophers routinely detested democracy precisely because it was associated with the idea that those who speak the loudest rule the day, which helps to explain John Stuart Mill's countervailing proposal for the well–educated

to be given more heavily weighted votes. Neither the closet demagogic nor the closet elitist side of this argument really took the 'one person, one vote' principle seriously.

Those academics who today lip sync to Rawls and Habermas in a desperate effort to ward off the evil demons of post–truth are still harbouring Mill's elitist misgivings about democracy, even though we increasingly operate in a 'one person, one vote' political world. They can't get their heads around the idea that the collective judgement of a well–informed democracy might come to radically different substantive conclusions from the 'elite' or 'vanguard' who enabled and promoted democratic empowerment in the first place. At a deeper level, what these 'retro–liberals' perhaps cannot see is that the sort of 'weighting' that Mill wished higher education to serve in counterbalancing the din of the mob is now served by multiple newsfeeds, virtual academies and public relations firms that claim to be catering to the information needs of their clientele. They are jostling for space with academics in the 'education market' in our 'one person, one vote' democratic society. Indeed, in the 'Bible of public relations', Edward Bernays (1928) struck the same solicitous tone with his readers that educators have done for centuries.

From this standpoint, Silicon Valley correctly intuits the direction of world–historic travel. Its dream of replacing contemporary politics with a technological infrastructure that would regularly channel decisions on all matters of public concern into an automated administrative apparatus may be seen as attempting to blend the 'democratic vote' and 'consumer choice' options into a true 'political economy machine'. Though rarely mentioned, the precedent for this idea was set in the early 1970s by Stafford Beer's cybernetic project, 'Cybersyn', which Salvador Allende tried to implement when he became president of Chile, until it was rudely interrupted by a CIA–led coup that installed Augusto Pinochet in what was described at the time as a 'military junta'. Nowadays this episode is portrayed as a turning point in the Cold War, since a democratically elected Marxist was successfully replaced by a US–backed neoliberal dictator. However, had Allende's cybernetic socialism been allowed to run its course, with all its many automatic self–correcting feedback mechanisms, it might have ended up in a place not so different from what Pinochet proceeded to do on the advice of Milton Friedman. (Here I'm inspired by Philip Mirowski's much underrated *Machine Dreams.*)

SR: A second and related issue regarding the democratization of knowledge has to do with the vulnerable status of the minority in the exercise of modal power.

One way of reading the Platonic dialogues, the conversational ideal of *diaeresis* in particular, or Descartes' methodological doubt, or Hume's experimental method, or Kant's critical philosophy, perhaps even Popper's critical rationalism, is as different ways of defending the smallest and weakest minority everywhere, namely, the individual, against coercion; that is, the point is not to control thinking, but to make the world safe for unconstrained thought by weakening or removing existing (coercive) limitations. One might argue that this is the best way of ensuring pluralism, but more importantly, autonomous thought, in the long run. Why should we read all of these as first and foremost attempts at large–scale epistemic agenda–setting? On another reading, one could see them as meditations in the manner of Marcus Aurelius: as exercises in disciplining one's own thought in the first instance, rather than others'. I assume that you won't find this reading terribly congenial, but I would be interested in your response to the suggestion.

SF: Again, I approach the matter somewhat differently — and here too post–truth is illuminating. I'm never quite sure what people think they're defending, when they claim to be defending 'pluralism' — but it certainly sounds nice! In practice, it looks like an endorsement of relativism in everything but name, but clearly its proponents don't see themselves that way. And the concern for 'minority rights' goes beyond simply allowing minorities to believe whatever they want. The idea, as explicitly argued by Mill in *On Liberty*, is that a minority may be correct on some policy matter of universal concern, in which case its opinion should prevail; hence, his desire to amplify the voice of the well–educated so they can shout the loudest in the *demos*. I see the 'epistemic injustice' people as running exactly this line, only now 'well–educated' is replaced by 'embodied experience'. This is not a criticism but a reference point. For example, I am struck that Helen Longino's original concern to include women's medical data was to improve the quality of medical science, through which women's health might also then be improved.

In the case of the Popperians and other philosophers who take the history of science seriously, one must deal with the brute fact that every field–defining theory began life as a highly improbable speculation, given what the relevant people thought they knew at the outset. Popper had read his Mill — and I read both of them, which is why I argued for a time–limited 'affirmative action' policy for minority scientific viewpoints (Fuller 2000: chap. 4). This turned out to be the thing that caused the most consternation in my courtroom testimony in defence of the teaching of 'intelligent design' in a Pennsylvania high school in 2005, given the theory's outright prohibition from most university teaching in biology and

certainly the peer review literature.

Popper himself set about things the right way when he introduced the idea of 'reversibility' from thermodynamics into epistemology. From the standpoint of advancing knowledge as the defining collective human endeavor, there may be some value in endlessly proliferating alternative viewpoints — but not in preserving them indefinitely. This is where Popper's 'pluralism' rightly diverges from relativism. Open–mindedness is ultimately about the ability to change your mind (aka 'reverse a decision'), which is why you need to be able to hold more than one point of view in your mind at once. But that cognitive capacity for pluralism is simply a means not an end in itself. Your ability to settle on one viewpoint rather than another equally requires the opportunity to eliminate alternatives. The 'Gestalt switch' that loomed so large in philosophy of science in the second half of the twentieth century epitomizes this process. (Popper's Ph.D. advisor, Karl Bühler, was himself a Gestalt psychologist.) You've got to know what both ducks and rabbits look like before you can decide on how to make sense of an ambiguous image. The task for philosophy then is to figure out how that decision is taken — that is, how what the psychologist easily manipulates in the laboratory happens in real life.

Modal power is ultimately about reversibility: the power to change one's mind — and other people's minds in the process. In Fuller (2018), I wrote of this in terms of imagining oneself as potentially playing several games at once, in which one's role in each is somewhat different. Plato thought the world would become a nightmare if this sort of power was democratized, which helped explain his hostility to the theatre. I'm betting against him. I'm also betting against both the 'experts' and the 'identity politicians' who, in their own ways, want a 'pluralistic' version of Plato's steady–state world. Notwithstanding the often emotionally fraught controversies currently surrounding 'intersectionality' and 'trans–', these are helpful concepts to democratize modal power, insofar as they encourage a more open attitude to thinking about who one is.

SR: This issue of a more comprehensive look at the past, perhaps reinvented for future use, leads a question about the state of education. The current epistemic situation is reminiscent of what was perceived, not without reason, to be a cultural crisis in Europe in the late 19th century. All progressive and optimistic political, social and scientific ideals notwithstanding, there was serious concern about developments that seemed to suggest rather that European civilization was in decline, that its *Kultur* and *Bildung* had become sclerotic and feeble. This led thinkers such as Nietzsche (say, in *Untimely Meditations*) to want to make science

and scholarship subserve the real needs of life; he argued that denying the subject's active responsibility for creating and directing his knowledge resulted, among other things, in a generation of degenerated academicians, weak and apprehensive characters armoured in dead and useless conventions which they used to protect themselves from anyone who might be inclined to rock the boat. But also, and importantly, he thought that this lifeless codex for acceptable knowledge made everyone else feel paralyzed and resigned; it in fact drained culture of its intellectual lifeblood. Now, if we were to say that you offer a similar diagnosis of our own epoch, one might respond in the manner of Max Weber, forty years after Nietzsche's book (in the "Science as a Vocation" lecture, but also in "Objectivity of Social Science and Social Policy"). Yes, the old humanist ideal is, *de facto*, obsolete. And yes, endless specialization and industrial production of artificial abstractions following standardized protocols cannot have a value unto itself. That is, now that we no longer believe that more knowledge will lead to better political action, or that science will reveal the hidden nature of the cosmos, science itself has no meaning. But Nietzsche's depth and originality were not mere spontaneous eruptions: they were the products of diligence, discipline and intense commitment. Commitment to what? Whatever I (we) deem is worth knowing, and the genuine desire to achieve clarity, not in general and once and for all, but as far as we can for the purposes we have. Weber appeared to be worried that the cult of creativity and personality that held sway, rightly or wrongly associated with the name of Nietzsche, in the minds of students seemed to give them *carte blanche*, not so much to seek and follow their own paths, but to seek and thoughtlessly follow an inspiring "thought leader". Do you harbour no such concerns that your work can have similar effects?

SF: First of all, that's a very flattering question — and again, one that goes deeply into my own *modus operandi*! I can't deny that when I drafted the prospectus for what became the journal *Social Epistemology* — which happened while I was waiting to defend my Ph.D. — I imagined founding a new field that might be the ultimate metascience. And here I had in mind Emile Durkheim's sense of 'sociology' as a short term goal and Auguste Comte's sense of 'sociology' as the long term goal. In other words, I envisaged social epistemology as updating their ambitious versions of 'positivism', first as a kind of 'teaching the teachers' ideology (which was how Durkheim originally pitched 'sociology' in a newly secularized France) and later perhaps as a full blown progressive political movement (*à la* Comte). In that context, the sorts of issues raised by STS, and postmodernism more generally, functioned as reality checks on social epistemology, which I have always understood as an essentially 'modernist' project.

In short, I originally did see social epistemology as something designed to attract followers in the spirit of a social movement, albeit one with a strong academic orientation. And those who know me from my time at the STS program at Virginia Tech in the early 1990s will recognize what I mean here. My third book, *Philosophy, Rhetoric and the End of Knowledge* — the second edition of which was co–authored with a student of mine from that period — was perhaps the high watermark of this sensibility (Fuller and Collier 2004). Of course, it drew me into the emerging 'Science Wars', during which I stood up for the more radical aspects of STS, which I always took to be about demanding that science live up to its own standards and its full potential, which in turn would serve the interests of universal human emancipation. Unfortunately, I pursued this vision at the same time as I was being reviewed for tenure.

It's now easy to forget that the academics who constitute interdisciplinary programs are often thrown into them because their universities are interested in what the academics' home disciplines have to offer without wanting to commit an adequate level of resources to the development of those disciplines. This can turn interdisciplinary programs into crucibles of competing frustrations and resentments. I entered the Virginia Tech version of this cauldron as an analytically trained but non–sectarian philosopher who believed that divisions between schools and disciplines are simply historically entrenched social constructions — as I continue to believe today. Indeed, I took this to be the most important lesson that STS had to teach academia and perhaps even the larger society. A practical implication of this approach is that one should treat all disciplines as containing wheat and chaff in terms of how one should proceed into the future — and this principle remains at the heart of my pedagogy.

Perhaps I should have seen the trouble ahead at Virginia Tech. But they hired me, I didn't hire them. And they seemed to have hired me knowing my views, which were already well documented in two books and many articles. Nevertheless, because my colleagues saw me as possessing such a 'strong personality', my teaching was monitored to ensure that I wasn't engaging in a form of 'mind control', as they put it, that was designed to undermine the credibility of my colleagues. To cut a story that is long in its twists and turns but was mercifully short in its duration, I was awarded tenure but my students and I were left strongly affected, perhaps even scarred. I returned to Pittsburgh the following year to found a graduate program in the rhetoric of science, and the year after that I left the US for the UK, where I was offered a chair in sociology, and where I have remained for the past quarter–century.

The main lesson I drew from the Virginia Tech saga was that there is a tradeoff

between speaking one's mind and building a discipline, especially if one wishes to do justice to students, who remain vulnerable parties in the arbitrary world of academic politics. In short: The more freedom that an academic would allow to herself, the fewer constraints she should impose on her students. From a Weberian standpoint, you might say that there are two ways to interpret the academic 'calling': One involves literally following the spirit of inquiry wherever it may lead, even if it proves difficult and/or controversial; the other involves recognizing that one's spirit of inquiry is best suited to a specific field of inquiry, to which the rest of one's life is then dedicated. The former is more in the spirit of the Protestant reformers, the latter in the spirit of the monastic orders. To be sure, tenure allows both types of academics to flourish, but they are not the same. And the Weberian question is how do academics set a proper example for students in both cases.

When Weber complained about academics who used the classroom as a bully pulpit, he had in mind people who blurred the two types in ways that effectively usurped the student's 'freedom to learn' (*Lernfreiheit*). Such academics were basically leveraging the cumulative weight of academic authority (the monastic side) to get their students to make unconditional existential commitments (the reformer side). In Weber's day, Marxism was susceptible to such an abuse of the lectern, especially if the academic persistently described opponents as suffering from 'false consciousness' or otherwise obstructing what the academic declares to be the empirically revealed path of history. In our own day, the more radical Green interpretations of the 'Anthropocene' that underwrite 'Extinction Rebellion' would be comparable. In both cases, students are led to believe that epistemic matters are sufficiently resolved that there is only one rational course of action. Doubt or disagreement is tantamount to apostasy. Moreover, the dogmatism bred by this style of teaching sets the students up to be proxies for their teachers, a capacity in which they may be ill–prepared to function when placed in the line of fire. In any case, the bottom line is that any chance for intellectual autonomy is removed from the student's horizon.

My own career since I left Virginia Tech is reasonably seen as having stressed the Protestant over the monastic side of Weber's academic 'calling'. At least that seems to be the side that my students have emulated. Thus, most of them have pursued careers outside of academia, especially the law and media. And even those who have stayed within academia have focused more on the teaching and public outreach side of things. I have mixed feelings about this development but I am willing to own it, since I have always been deeply sceptical about the ultimate value of academic research, especially when presented as a form of 'expertise'. This may be where I am instinctively closest to Weber and Popper, whose

falsificationist ethic was also designed to dispel from science any sense of expertise.

Of course, I don't wish to dismiss the monastic side of things, especially since people who know me only in print might think that I had chosen the monastic path. However, I have drawn a deep practical lesson from trying to get a comprehensive understanding of the different strands of thought that have defined the human horizon: Notwithstanding the complex entanglements of these strands, both with each other and the larger society, the net result is to allow humanity enormous room to manoeuvre. Indeed, the more one learns, the more one realizes that determinism is false: Things neither had to happen as they seem to have happened nor happen as they are likely to happen in the future. It was this point that I originally found so attractive about STS — the stress on *contingency*, which I took to be not simply about how the past worked but also about how the future works. You can perhaps appreciate why I have found Bruno Latour increasingly disappointing as he lends ideological support to the gloomier metanarratives of the Anthropocene. A 'Weber 2.0' would aim to show that even the gloomiest metanarratives are reversible if one is willing to put in the thought and effort. In short, the message to students to uphold their *Lernfreiheit* is that there is always everything to play for. I have strived to live up to that standard.

SR: Thank you.

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SHARON RIDER is Professor of Logic and Metaphysics at Uppsala University, Sweden. Doctor in Philosophy [≈ PhD], Uppsala University. Her main research interests are in 19th and 20th century European thought falling within the domain of philosophical anthropology, broadly understood. She has edited books as *Post–Truth, Fake News: Viral Modernity & Higher Education* (Singapore: Springer, 2018), with Michael A. Peters, Mats Hyvönen and Tina Besley; *Transformations in Research, Higher Education and the Academic Market: The Breakdown of Scientific Thought* (Dordrecht: Springer 2013), with Ylva Hasselberg and Alexandra Waluszewski; and *Reclaim the science!: om vetenskapens avakademisering* (Hedemora: Gidlund, 2007), with Anders Jörnesten.

INFORMACIÓN DE CONTACTO | CONTACT INFORMATION: Department of Philosophy, Uppsala University, Box 627. 751 26 Uppsala, Sweden. e–mail (✉): sharon.rider@filosofi.uu.se · iD: http://orcid.org/0000-0001-7820-5098

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