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A puzzle about voluntarism about rational epistemic stances

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Abstract The philosophy of science has produced numerous accounts of how scientific facts are generated, from very specific facilitators of belief, such as neo-Kantian constitutive principles, to global frameworks, such as Kuhnian paradigms. I consider a recent addition to this canon: van Fraassen's notion of an epistemic stance—a collection of attitudes and policies governing the generation of factual beliefs—and his commitment to voluntarism in this context: the idea that contrary stances and sets of beliefs are rationally permissible. I argue that while scientific inquiry inevitably favours a high degree of consensus in our choices of stance, there is no parallel constraint in the case of philosophical inquiry, such as that concerned with how scientific knowledge should be interpreted. This leads, in the latter case, to a fundamental and apparently irresolvable mystery at the heart of stance voluntarism, regarding the grounds for choosing basic epistemic stances.

Keywords Stances · Voluntarism · Values · Relativism · Scientific progress · Philosophical progress

> A scholar's heart is a dark well in which are buried many aborted emotions which rise to the surface as arguments—Natalie Clifford Barney[1]

[1] Barney (1975/1929, p. 251): 'Le coeur d'un savant est un puits ténébreux où sont engloutis bien des sentiments avortés qui remontent à la surface en guise d'arguments.'

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1 Propositions and stances, facts and values

Plausible epistemologies of science have always sought to grapple with more than just "the facts". While scientific facts are of interest to everyone (not least philosophers of particular sciences), epistemologists have a special interest in understanding how such facts come to light. From more specific facilitators of belief, such as Ludwig Fleck's *denkstilen* and Kant's (and neo-Kantian) constitutive principles, through Ian Hacking's styles of reasoning and Thomas Kuhn's paradigms, through the most general frameworks described by Nicholas Jardine's scenes of inquiry and Michel Foucault's epistemes, the epistemology of science has generated a family of analytical tools of varying scope with which to shed light on the question of how scientific facts are produced. There is an obvious sense, perhaps, in which these facts live in the world, but the philosophical question at issue concerns how we come to possess them.

Bas van Fraassen's conception of a stance bears a family resemblance to the list of eminent analytical tools just mentioned. Like its siblings, it may be used to help illuminate, I think, how we as human beings come to produce factual propositions commonly associated with scientific theories and models, and knowledge more generally. My goal in this paper is primarily exploratory. I wish to consider how the notion of a stance, and more specifically how voluntarism concerning epistemic stances, leads inexorably to a fundamental mystery at the heart of the epistemic enterprise, regarding the ultimate grounds on which basic stances are adopted. I will begin with a brief review of what is, in this context, a technical distinction between a proposition and a stance, often distinguished by association with facts and values, respectively. In Sect. 2, I will focus more specifically on the concept of stances, how we come to have them, and how, in a voluntaristic setting, one might evaluate the wisdom of choosing one over another. This leads to an inevitable relativism with respect to stances, whose nature, I suspect, has not yet been well understood. I will attempt to clarify the nature of stance relativism in Sect. 3 by situating it in the context of the nature of philosophical investigation more generally, and conclude with some remarks on the fundamental puzzle these clarifications leave unanswered.

So to begin, what is a stance? Here I will be brief, for a significant amount of work has been done already to clarify the idea.[2] My interest here is in epistemic stances in particular, *viz*. ones concerned with the production of knowledge, and I will use the term in this narrow sense henceforth. Stances are most easily contrasted with what might be called propositions: claims regarding matters of putative fact. That leopard seals eat penguins, or that micro-credit programs are an effective means of alleviating poverty, are matters of putative fact, and if endorsed, the appropriate attitude towards such propositions is belief. A stance, on the other hand, is a cluster of attitudes, commitments, and strategies relevant to the generation of factual beliefs. They do not make claims about the world *per se*, but determine how agents go about making claims about the world. Stances are not believed, but adopted, held, and expressed in human action. They may include beliefs, but unlike the case of propositions, their

[2] See van Fraassen (2002), and for some elaboration, Teller (2004), van Fraassen (2004), Chakravartty (2004), and Rowbottom and Bueno (this issue of *Synthese*).

relation to epistemic agents is not exhausted by belief in any strictly propositional content.

A stance characteristic of those who engage in speculative metaphysics, for example, involves taking seriously demands for explanation regarding observable phenomena in terms of things underlying them, as well as attempts to answer such demands by speculating about the unobservable, *inter alia*. I will use 'speculative metaphysics' as a label for this stance henceforth. Empiricism, in contrast, is a stance that rejects such demands and speculations, and that has an affinity for the empirical approach to investigating nature commonly associated with the sciences (rightly or wrongly, and sometimes naively) since the scientific revolution. In a parallel manner, one might view scientific realism and constructive empiricism as stances with respect to scientific knowledge, the former inclining towards interpretations of our best theories which render their claims about unobservable entities and processes true, and the latter towards claims of empirical adequacy instead. In his early discussion of realism and empiricism in the philosophy of science, van Fraassen (1980, p. 8) does not describe these positions as stances as such, but in light of his more recent work, it is certainly tempting to view them this way.

A voluntarist about stances is one who believes that rival stances—i.e., ones that cannot be adopted simultaneously without engendering some sort of inconsistency or incoherence—are rationally permissible, and that there can be no rational compulsion to adopt any one rational stance as opposed to a rival, so long as it too is rational. That is far from saying that all stances are rational, of course; I will return to the issue of what is taken to constitute rationality here in Sect. 2. In any case, for the purposes of this discussion, let us operate with the assumption that there are in fact domains of inquiry in which more than one stance is rationally permissible. This is, after all, a core tenet of the voluntarism whose consequences I aim to explore here, and I will leave the independent plausibility of this assumption for consideration elsewhere.

I have just described the distinction between propositions and stances in the most obvious way: by appealing to differences in the ways we relate to them cognitively. Propositions are capable of being true or false, and are thus susceptible to belief; stances are neither true nor false, and are adopted instead. Given this, however, another means of distinguishing propositions and stances seemingly presents itself, for the idea of belief is often discussed in connection with the notion of facts or evidence of a factual nature; ideally, it is on the basis of facts or factual evidence that one comes to believe a proposition. Adopting an attitude or a commitment, on the other hand, is often associated with the notion of values; it is on the basis of values that one adopts things like stances. So here we have the makings of a dichotomy based on another feature of propositions and stances: what causes or motivates us to endorse or adopt them. It is widely held that facts and values are different sorts of things, the former being objective in some sense, and the latter being subjective in such a way as to preclude rational deliberation or argument. The logical positivists, for example, maintained that unlike properly scientific judgments, value judgments lack cognitive meaning, and this view held impressive sway over succeeding generations.

Distinguishing between propositions and stances on the basis of that which precipitates belief and adoption, however—facts or values—is too simple for at least one reason. Indeed, this reason is suggested by a consideration of the analytical tools I

mentioned at the beginning of this paper: facts, or at least scientific facts, it seems, are inextricably infused with values. That is the reason so many epistemologists of science have sought to provide conceptual resources with which to describe the resulting mix. It is now almost banal to note that pragmatic values such as simplicity, epistemic values such as internal consistency and coherence with other knowledge, and perhaps even social values such as the potential fruitfulness of a research program, have consequences for what ends up as scientific fact. These examples are rather general, but others are more specific. Consider methodological commitments, such those to seek teleological and then mechanistic explanation on either side of the turn of the seventeenth century, or to specific instruments, techniques, and computational devices.

The mingling of facts and values in the analysis of scientific knowledge is not a recent phenomenon, of course. Consider what Poincaré and Reichenbach regarded as conventional commitments to particular geometries in physics. On their view, one's choice of a geometry can be made only on the basis of pragmatic, not evidential grounds. Another provocative and recent example is the idea of commitment to a linguistic framework characteristic of the later Carnap and logical empiricism more generally. On this view, linguistic frameworks comprise analytic principles which (partially) constitute the meanings of theoretical terms, and determine what counts as confirming evidence for the framework as a whole. The choice of a linguistic framework cannot be made on the basis of factual evidence, it was maintained, for there is simply no framework-transcendent conception of evidence here on the basis of which to make such a choice; such determinations are made on the basis of pragmatic values. With the benefit of hindsight, of course, we are at liberty to accept, decline, or modify any of these specific accounts of the role of values in the sciences as we see fit, but the general moral now seems to be widely accepted: values permeate facts and the theories comprising them, and it makes little sense to say that beliefs are motivated by facts alone.

Is this all that can be said to discredit the separation of facts and values? Let us examine the dichotomy a bit further, but now in the other direction, and think about whether there is any way in which the adoption of stances is motivated by facts. I think that this is an intriguing and important question, and I will suggest that facts do play a role in the adoption of epistemic stances, but in a manner that is only partially susceptible to philosophical illumination. In order to see why and how this is so, let us consider more carefully now what is involved in coming to have, and choosing a stance.

2 Relativism: choosing a stance

There is one perhaps common but philosophically unreflective way in which we might find ourselves holding stances. In just the same way that one may be acculturated with certain beliefs, solely as a consequence of immersion in a local culture, one may find oneself holding a particular stance. Being immersed in a socio-political subculture in which the idea of evolution by natural selection is frowned upon may encourage the belief that there is no such thing as evolution by natural selection. Being immersed in a scientific subculture that favours explanations for behaviour in terms of the innate,

goal-directed tendencies of things may encourage one to adopt a methodological principle to seek explanations of that kind. Thinking about acculturation is important, of course, because the ways in which our beliefs and stances may be formed in response to ambient social, political, economic, and epistemological cultures is important. But it is also philosophically unreflective, in the sense that while such factors may well determine how beliefs and stances are passively absorbed, they do not determine—not necessarily, at any rate—the beliefs and stances we choose *upon reflection*. Let us distinguish, then, between merely taking a stance, which can be essentially passive, and choosing a stance, which is the outcome of reflection.

I will not say anything further here about the merely passive absorption of beliefs and stances. Clearly there are interesting psychological and sociological questions to be explored regarding how and under what kinds of circumstances this sort of thing occurs. My interest here, though, is in what sorts of conscious deliberation might go into the assessment of the wisdom of adopting a stance, for voluntarism is relevant only in contexts of deliberate choice. What, then, are the relevant considerations that factor into the conscious action of choosing and expressing stances? van Fraassen (2002) identifies two. The first is rationality: one should choose only a stance that is rational, where this is defined in broadly pragmatic terms as internal coherence. The 'defining hallmark' of irrationality, he says, is 'self-sabotage by one's own lights' (2004, p. 184; see also 2001, p. 168). In the absence of such a failing of one's epistemic project by one's own lights, the stance (or stances) associated with the project is rational.[3] This is a highly permissive account of rationality, but presumably that is just what one should expect in a voluntaristic setting. For again, voluntarism is relevant only in contexts of deliberate choice, and if there were no different, conflicting, but nonetheless rational stances to choose from, the notion of choice would be illusory—stances would be compelled as a matter of rationality.

The second consideration relevant to choosing stances is something we have already encountered, *viz*. the idea of values. Beyond the constraint of rationality, our values play the decisive role in determining what stances are appropriate for *us*. Values are agent-relative, and thus, on van Fraassen's view, the adoption of stances is generally a relativistic proposition: those with different values are at liberty, within the bounds of rationality, to choose differently in accordance with their own values. Consider, for example, the epistemic stances towards the sciences that are commonly associated with scientific realism and constructive empiricism. To the extent that scientific realists extend belief to unobservable entities and processes such as atoms and protein replication, they are not behaving irrationally, says van Fraassen, but merely going beyond what constructive empiricists would embrace, given their empiricist values. Belief in such unobservables 'is supererogatory as far as science is concerned: you may if you like, but there is no need' (van Fraassen 2007, p. 343). While this aspect of realism may be rational, however, others, according to van Fraassen, are not. When realists invoke more speculative unobservables in their descriptions of scientific knowledge, such as laws of nature and causal interactions, they overstep the bounds of rationality: among the various components of the empiricist stance, 'I personally articulate the empiricist

[3] For a more thorough consideration of rationality and irrationality in this context than I can give here, see Ladyman (2004), Psillos (2007), and the references in footnote 4.

negative attitudes to extend to scientific realism, which seems to me to involve some of the typical attitudes of speculative metaphysics' (van Fraassen 2005, p. 89).

Whether speculative metaphysics is indeed irrational, and the extent to which scientific realism does or does not subscribe to it, are questions worthy of more detailed consideration, but I will not engage them here.[4] My present use of the examples of metaphysics, realism, and empiricism (constructive and otherwise) is purely illustrative, and I will simply assume them to be rational for the purpose of this discussion. The important point presently is that different and conflicting stances in a given domain may be rationally permissible, and thus *bona fide* options for epistemic agents with different and conflicting values. Apparently, for example, in line with the quotations above, an empiricist of van Fraassen's stripe would see constructive empiricism and a metaphysically deflationary scientific realism in just these terms. The immediate consequence is relativism: different agents adopting different but rational epistemic stances are insulated from *reductio*s *ad absurdum*. That is not to say, of course, that dialogue between agents holding rival stances concerning their possible merits and defects, comparative or otherwise, is impossible. Varieties of metaphysicians and empiricists, for instance, have been in dialogue for millennia. Neither is it to say that once having taken a stance, one cannot change one's mind, for values can change.

Nevertheless, a form of relativism seems to persist in connection with rational rivals. One reason for this is that, in virtue of their rationality, some stances are remarkably resilient and difficult to dismiss, even in the face of serious criticism. Since stances are different sorts of things than the propositions they may generate—speculative metaphysics, for example, is not simply composed of views like 'properties are Platonic universals', 'there are necessary connections between causes and effects', and so on—the rejection of a stance is never entailed by the rejection of the propositions with which it may be associated at any given time. Admittedly, a dissatisfaction with the propositions generated over the history of a stance—with views of Platonic universals, Aristotelian universals, tropes, and various analyses of causal necessity, for example—may move one to take a rather different approach, and thereby adopt a rival stance. So again, there is no question here that a person's values can change, and with it, his or her stances. But still, relativism remains, because although values can change, they need not and often do not, and even the slightest awareness of the diversity of predilections characteristic of *Homo sapiens* is enough to confirm that most relatively easily-conceived and rational stances will be held, expressed, and defended in a way satisfying the criterion of internal coherence by *someone*, upon reflection.

Regarding stances conflicting with empiricism, van Fraassen often seems genuinely surprised by this, but this itself is surprising, given stance relativism. Almost all epistemic agents make a leap from the data furnished by observation in one way or another. The extent of the leap one is willing to countenance depends on the stances one adopts. Constructive empiricists leap a bit, realists a bit further, and so on. Assuming that there are versions of these stances that are rational, it is questionable what grounds there could be for thinking that there is, in fact, some ultimately compelling

[4] In Chakravartty (2007a), I argue that speculative metaphysics is not irrational after all. For an extended discussion of the relationship between scientific realism and metaphysics, see Chakravartty (2007b).

reasoning, simply waiting to be uncovered or formulated, with which to break this deadlock once and for all.[5]

Perhaps this relativistic conclusion is over-hasty. It has been suggested by some, for instance, that there are facts that can be marshalled so as to break this sort of deadlock. Why, for example, should we leap only as far as the observable, as the empirical stance instructs? The answer is grounded, van Fraassen (2007, p.344) suggests, in *facts about us*, us human beings. As Cartwright (2007, p. 37) puts it, 'we are creatures bound in a world of sensation'. While some of us humans may be interested in epistemic projects whose knowledge claims extend beyond the realm of the observable, there is an important sense in which the observable realm is more fundamental or important, for unlike the kinds of relations we may have to other projects, we simply have no choice but to be creatures bound in a world of sensation.

We have heard something like this before, I think. The phenomenologists, inspired by Husserl (1970/1954), railed against the replacement of the "real" world, that of our experience, our life-world (*Lebenswelt*), with the mathematically abstract and ideal world of the sciences. But how confident should we be in the claims of anyone in particular to know what sort of creatures we are most fundamentally, or how we are bound? I myself had the experience of growing up in a university community where my father was a don, surrounded by the constant amusements of absent-minded professors, heads firmly in the clouds, narrowly avoiding one earthly calamity after another as they grappled with yet another abstract obsession. Had they forgotten that they are creatures bound in a world of sensation? I suspect they felt no such bondage. When Plato and Aristotle held philosophical speculation to be the highest form of inquiry, they were not blind to the rigours of living in the world of experience. Indeed, it is precisely *because* the former pursuit is *chosen for its own sake*, they maintained, not that we have no choice but to undertake it, that makes it the highest form of inquiry. There is a fundamental divide here regarding what is most important, and what facts about human beings should ground our choices of stance.

What really matters to *us*? There is no one answer to that question, no one fact of the matter. "What matters" can only be assessed in the context of a project, and there are different projects, and no obvious stance-transcendent way of determining that one should be favoured to the exclusion of, or at the expense of other, rational possibilities. Human biology, for example, determines the range and extent of our sensory modalities, but it does not thereby determine what is most important to creatures like us. Our values, at least, are not prisoners of our physiology.

3 Philosophy and the will

Having considered the distinction between propositions and epistemic stances and how, in a voluntaristic setting, a form of relativism applies to the adoption of the latter, let me now proceed to the inevitable puzzle I see lurking at the heart of stance voluntarism. I will attempt to illuminate it by first situating stance relativism in the context

[5] I am not alone in this relativistic diagnosis, despite important differences in the details. See Laudan (1984, pp. 48–49) for summaries of Popper's and Reichenbach's versions, and Rescher (1985).

of philosophical investigations quite generally. Occasionally it is useful to step back and think about the nature of our projects, so as to carry them out more perspicuously and with a renewed sense of purpose. It is this sort of stepping back I have in mind with respect to philosophical projects in general, albeit focused on a particular aspect. To this end philosophy is often contrasted with the sciences, which I believe to be a useful foil, so let us consider the comparison briefly.

The contrast I have in mind is the following: it is often claimed that while the sciences progress, philosophy does not. Whatever virtues best describe the aims of scientific practice (truth, empirical adequacy, fuelling the military-industrial complex, what have you), the sciences have been marked by progress with respect to these virtues. Philosophy, on the other hand, is not a practice that admits of progress. Rival stances have been locked in dialogue since their inception, and if my description of a robust relativism governing the assessment of stances is correct, these dialogues are likely perennial. I take it, however, that the idea of a simple contrast here between progressive and non-progressive disciplines is rather too simple. A little bit more detail is required if it is to yield any insight.

The term 'progress' has two chief connotations relevant to this context. The first is that of moving onward, of leaving one thing for another, of development. The second is that of advancement to a better state or condition; not merely development, but positively directed development. Clearly these connotations are compatible with one another, since one might progress in both senses simultaneously. But generally, where philosophers of science intend the first connotation, they are simultaneously denying the second; they intend mere as opposed to directed change. Let us label this first use of the term 'progress-from', and the second 'progress-towards'. Interestingly, there is little consensus about which of these senses of progress typically applies to the sciences. The idea of progress-towards is often associated with realism and the view that scientific knowledge is moving cumulatively towards more comprehensive and/or increasingly accurate or true accounts of the world. The idea of progress-from is often associated with Kuhn's picture of the development of science across subsequent paradigms, and applies just as well to the logical empiricist picture of meaning-constitutive frameworks. On these accounts, though scientific communities can make progress-towards within a paradigm or framework, this connotation of 'progress' is not applicable (arguably) in any paradigm- or framework-transcendent sort of way.

Despite the lack of consensus regarding which sense of 'progress' applies here, there is clearly a weaker consensus to the effect that the sciences are typified by one or the other (if not both). On the other hand, it may appear that philosophy progresses in neither sense. But here I believe we stand to learn something from the distinction between propositions and stances. I submit that scepticism regarding progress in philosophy stems from a sort of conflation—a conflation of the stances that play a role in the generation of factual beliefs with the beliefs themselves. Philosophical stances that figure in *generating* beliefs, such as speculative metaphysics and empiricism, clearly do not admit of progress in the sense that dialogue between their respective proponents has not moved us in anything like the direction of an ultimate winner or loser. This is to be expected, for as we have seen, rational epistemic stances are generally subject to a robust relativism. Thus, so long as rival stances are rational, we are likely to see them perpetuated. And thus we should *expect* that there will be little or no philosophical

progress in the sense of winnowing stances, and thus in the sense of progressing from one to another, or towards any ultimate consensus. It is in these ways that those who point to a lack of progress in philosophy may well be right.

But they are only partially right. For recall that it is a mistake to identify a philosophical stance with the factual beliefs with which it may be associated at any given time. In the domain of philosophical belief *within* the confines of stances, there is clear evidence of progress-from, and there is very suggestive evidence of progress-towards as well. We have learned, for example, that certain philosophical views are problematic (Popper's account of verisimilitude does not work), and that others are promising (causal-descriptive theories of reference fare better with respect to certain test cases than either causal or descriptive theories alone). These are positive results, and this is precisely the sort of progress made by philosophy *within* the context of a stance. Just as scientists on a Kuhnian picture of normal science are already committed to the core features of a paradigm prior to engaging in scientific investigations with an eye to progress within it, philosophers investigate various forms of conditional knowledge, premised on and shaped by the stances to which they are committed.

This brings us, finally, to the mystery at the heart of stance voluntarism that I intimated at the start. I suspect that the relevant difference here between the nature of philosophical and scientific investigation may not be so much a function of the extent to which they progress, but rather a function of the ways in which consensus is managed in these domains of inquiry. The sciences are by their nature largely consensus-driven disciplines. Take a time slice at an arbitrarily chosen point in the history of the sciences, and you will most likely find that underneath the disputes and rivalries marking everyday scientific practice, there is an imperfect, loose, but otherwise impressive consensus regarding what questions are of greatest interest, what methodologies and technologies are most effective in investigating them, what new techniques show promise and which are non-starters, what would count as answers to those questions, and so on. When views concerning these issues change, as invariably they do over time, the changes tend to carry most of the scientific community with them. The same is not true of philosophy, however, where possible stances are not manifested by the community together in well-ordered sequences over time. In philosophy (granting the presence of trends and fashions, which attach to all human pursuits), *all* the plausibly rational stances we have fathomed are under investigation *all the time*. Philosophers, unlike scientists, are an unruly mob.

Without an impressive degree of synchronic consensus, the sciences as we know them would not be able to function. Such are the inter-dependencies of theoreticians and experimentalists and teachers and students and granting agencies and a whole host of other actors required for the functioning of these projects, that some broad consensus is a necessary condition—not sufficient, of course, but necessary. Here we have a plausible and analyzable motivation for adopting the relevant scientific stances of the day. Now what about philosophical stances (i.e., ones that are independent of scientific stances)—what are the motivations for their adoption? In Sect. 2, I noted that once we move beyond the merely passive adoption of stances with which we may be acculturated to an active consideration of them, we choose (ideally rational) ones that best fit our values, determined by facts about what is important to *us*. One might wonder, however, whether noting this provides much of an answer to the question just

posed. Saying that we choose philosophical stances on the basis of our values is a good start, but saying that values are determined by what is important to us is empty here, because the phrase 'what is important to us' is simply elliptical for 'what we value'. We are saying, in effect, that our values are determined by our values, and that is not particularly edifying.

Is there a deeper answer? One means of analyzing, in a more edifying way, the motivations that lead one to choose a philosophical stance would be give a deeper account of what it is about creatures such as ourselves that leads us to value certain things. Indeed, perhaps this is the only plausible means. But here we are doomed before we begin, for while the human-focused sciences—cognitive science, psychology, sociology, anthropology, etc—may have something to say about the conditions under which one might take a stance, in the sense of passive acculturation, they have nothing to say about the deeper nature of the human *will*—how or why it values some things but not others upon reflection. That is a nature so basic as to underlie the objects of investigation of the human sciences. Consider an analogy: does physics tell us about the nature of causation? There is a relatively superficial sense in which it does, since physicists are wont to describe causal processes as a matter of course. They tell us about what sorts of states or events are likely to precipitate others, in some cases in amazing detail and with fantastic degrees of accuracy. They do not and cannot, however, tell us what causation *is*, or whether in fact there is such a thing at all. These questions are simply not amenable to what van Fraassen calls 'objectifying inquiries' such as physics. (Very roughly and *inter alia*, an objectifying inquiry is one that identifies a precise domain of quantities or parameters that can be investigated systematically, experimentally or otherwise.) Similarly, the whys and wherefores of the will do not appear to be amenable to study under the microscope.[6]

And so, an investigation into the nature of stance voluntarism as it applies to rational philosophical stances seems caught, ultimately, between the Scylla of something unedifying and the Charybdis of something fundamentally mysterious. There is no insight to be gained from the former, and the latter option is disquieting; it leaves our epistemological thirst unquenched. It calls to mind Simon Blackburn's (1993, p. 103) paraphrase of Hume's dismissal of the idea of necessary connections in the world: 'nothing will do just as well as something about which nothing can be said'. The will is utterly impervious to theoretical analysis, and yet we simply cannot do without it here.

van Fraassen draws highly suggestive analogies between the exercise of the will in certain epistemic contexts and Sartre's conception of action based on emotion, but this does not seem a promising solution to the present predicament. For Sartre, 'emotion' is a technical term. It refers to a sort of function that takes us from having one set of values relevant to behaviour to another, engendering a 'transformation of the world' (Sartre 1962/1939, p. 63). Arguably, Sartre's emotions are in this way much like necessary connections: something mysterious posited to fill the gap of something we do not understand. To be fair, there is of course a phenomenology of the emotions, as the term is used more commonly in everyday parlance; we know what it feels like to

[6] van Fraassen (2002) contains an extended discussion (and rejection) of views according to which epistemology can be understood as an objectifying inquiry.

be embarrassed, contented, exasperated, and the like. So in the everyday sense of the term 'emotion', they are not mysterious in at least this respect. And in some contexts, such as that in which van Fraassen invokes Sartre in the first place—that of trying to explain how scientists make the leap from dying paradigms to new ones which must seem unintelligible from the perspective of the former—the phenomenology of emotions such as frustration and hopefulness may well constitute part of a plausible account of the function that takes scientists from one paradigm to another.

Notice, however, how ill-suited this story is to explain how or why many philosophical stances are chosen, including those serving as illustrations here: epistemic stances such as metaphysics, empiricism, realism, and constructive empiricism. Confronted with the options of adopting realism or empiricism with respect to scientific knowledge, I am drawn (as it happens) to a form of realism as a function of my values. But there is no emotional phenomenology of *that*. Neither is there any plausible story to be told here about how this particular value-fuelled choice of rational epistemic stance could be anything like a determinate function of cognitive capacities, cultural or physical environments, evolutionary histories, or any other candidate explanans constituting the proper object of an objectifying inquiry. Things like cognitive capacities and cultural environments are presumably the sorts of things that can be shared by individuals who nevertheless choose very differently between rival epistemic stances. Sadly, palaeo-anthropology has uncovered no evidence to suggest that our Pleistocene ancestors faced selection pressures likely to produce descendent populations of hominids inclined towards realism and constructive empiricism in the relevant proportions.

Perhaps we have simply arrived at one of those places in philosophical investigation where we have no further option but to follow Wittgenstein's advice and remain silent. Or perhaps slightly better, to quote him (1963, §217) in another infamous mood: 'If I have exhausted the justifications, I have reached bedrock, and my spade is turned. Then I am inclined to say, "This is simply what I do."' Or to put this sense of defeated craving for epistemological understanding more directly into the present context (Richardson and Uebel 2005, p. 77): 'We have here a vision of an epistemic will that is…wholly necessary for knowledge and wholly philosophically untheorisable.' Regarding rational epistemic stances, when it comes to understanding the ultimate wellsprings of voluntaristic choice, is there nothing more we can say, or do? That question, and the inspiring, infuriating, enticing yet stultifying mystery of the will, is the puzzle at the heart of stance voluntarism.

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