Book Symposium: Anjan Chakravartty's *Scientific Ontology*

A Thousand Flowers on the Road to Epistemic Anarchy: Comments on Chakravartty's *Scientific Ontology*

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ABSTRACT: I introduce the symposium on Anjan Chakravartty's Scientific Ontology *by summarizing the book's main claims. In my commentary, I first challenge Chakravartty's claim that naturalized metaphysics cannot be indexed to science* simpliciter. *Second, I argue that there are objective truths regarding what conduces to particular epistemic aims, and that Chakravartty is therefore too permissive regarding epistemic stances and their resultant ontologies. Third, I argue that it is unclear what stops epistemic stances from having unlimited influence. Finally, I argue that Chakravartty's epistemic stance voluntarism is inadequately motivated and lacks empirical support for its psychological content.*

RÉSUMÉ : J'inaugure ce dossier sur Scientific Ontology *d'Anjan Chakravartty en résumant ses principales thèses. Dans mon commentaire, je remets d'abord en question l'affirmation selon laquelle une métaphysique naturalisée ne peut être indexée à la science* simpliciter. *Deuxièmement, je défends l'idée qu'il existe des vérités objectives quant à ce qui contribue à des fins épistémiques particulières, et que Chakravartty est donc trop permissif à l'endroit des positions épistémiques et des ontologies qui en résultent. Troisièmement, je soutiens qu'il n'est pas aisé de voir ce qui empêche les positions épistémiques d'avoir une influence illimitée. Finalement, je défends que l'approche*

***Dialogue* 60 (2021), 1–13**

doi:10.1017/S0012217320000359

volontariste promue par Chakravartty à l'égard des positions épistémiques n'est pas adéquatement justifiée et n'offre pas de soutien empirique pour son contenu psychologique.

Keywords: scientific ontology, naturalized metaphysics, epistemology of metaphysics, epistemic stances, pluralism, voluntarism

1. *Scientific Ontology* in Summary

The claim that metaphysics should be naturalized — that is, held accountable to science — has some sympathy among philosophers (in theory, if not always in practice). However, articulating and motivating a positive programme of naturalization is no easy task. One reason is that, in order to say how metaphysics and science should relate to one another, we need to know what distinguishes them in the first place, and the history of philosophy of science shows that the project of cleanly delineating disciplinary boundaries can be intractable. The underdetermination of metaphysics by science also poses a challenge. Science does not wear its metaphysics on its sleeve and is compatible with substantively different and mutually incompatible metaphysical theories. Proponents of naturalization therefore have their work cut out for them.

Anjan Chakravartty's *Scientific Ontology: Integrating Naturalized Metaphysics and Voluntarist Epistemology* advances a picture of naturalized metaphysics that takes these challenges seriously. On Chakravartty's conception, *scientific ontology* is the metaphysical interpretation of science; it is the attempt to draw out of science a view about what exists and what the existents are like. The main claim of the book is that, when faced with the underdetermination of scientific ontology by science, we can break the underdetermination in different ways, according to different, equally rational, and importantly voluntary epistemic stances. The book comprises three parts, which I will now summarize in turn.

In Part I, 'Naturalized Metaphysics,' Chakravartty describes how naturalized metaphysical projects such as scientific ontology should be conceived, motivated, and roughly delineated. He claims that scientific ontology is *metascientific* in the sense that it involves criteria for ontological commitment that aren't necessary to or definitional of science. This means that scientific ontology is an importantly philosophical endeavour. He also argues that, since science has varying empirical credentials (think of its investigation of strings or inaccessible parts of the cosmos), naturalized metaphysics should not be indexed to science *simpliciter* but rather to degrees of scientific-empirical investigation. As for the rationale for naturalized metaphysics, Chakravartty argues that naturalized metaphysics carries lower epistemic risk than non-naturalized metaphysics. *Epistemic risk* is to be understood in terms of one's ability to pronounce confidently on the truth of some proposition or propositions and may be gauged using considerations of explanatory power and vulnerability to empirical falsification.

With respect to delineation, Chakravartty argues that there are clean lines neither between science and metaphysics, nor between scientific ontology and traditional metaphysics. Instead of a clearly delineated class of metaphysical inference, there are different magnitudes of metaphysical inference, which fall along a spectrum from small-m metaphysics to big-M metaphysics — and location on the spectrum is a matter of distance from empirical investigation. Moreover, Chakravartty claims that where to draw the line on this spectrum between acceptable and unacceptable epistemic risk is a subjective judgement call.

Part II of the book, 'Illustrations and Morals,' comprises case studies of scientific ontology, which demonstrate the interplay between underdetermination and epistemic stances. Epistemic stances are *stances* in roughly Bas van Fraassen's sense.[1] Namely, they are clusters of attitudes, commitments, and strategies.[2] They are *epistemic* in that they concern the production of knowledge. They are undergirded by epistemic values and codified in epistemic policies. As a first case study, Chakravartty examines arguments for and against *dispositional realism* — the view that dispositional properties exist. He finds that different epistemic stances push us toward different, equally viable views. Second, he examines the debate between eliminative and non-eliminative structural realists. There, he finds that explanatory challenges give rise to substantive dilemmas or choice points, where structural realists diverge from one another and posit different ontological primitives, notwithstanding a shared epistemic stance. The case studies reveal how disagreements emerge when different stances are more or less permissive with regard to ontological posits and when the same stance is compatible with multiple fine-grained ontologies.

Finally, Part III, 'Voluntarist Epistemology,' advances the book's distinctive epistemological package, which is composed of pluralism, voluntarism, and Pyrrhonian scepticism. Since we have different epistemic stances and since they lead us in different directions when facing ontological underdetermination, it is natural to worry that scientific ontology will likely never be internally consistent. In response to this worry, Chakravartty adopts two forms of pluralism, which may be characterized as pluralisms-lite, since they don't allow inconsistent theories to be unqualifiedly true but instead make knowledge 'perspectival' and inconsistency thereby avoidable. The first form of pluralism is *package pluralism*, according to which science reveals different ontological packages; the second is *behaviour pluralism*, according to which science sometimes ascribes

[1] van Fraassen, 2002.

[2] Chakravartty, 2017, 47. One notable difference is that van Fraassen thinks stances include beliefs (2002, 47–48), while Chakravartty does not. In Chakravartty's view, stances are "'upstream' from, or in some sense prior to or distinct from, the manifestation of a specific doxastic attitude toward a specific proposition" (2017, 219).

different context-dependent behaviours to the same thing. Chakravartty argues that these pluralisms stave off inconsistency because different ontological packages are not necessarily mutually inconsistent, and because there is nothing inconsistent about saying that something can behave differently in different contexts.

Next, Chakravartty defends a version of voluntarism, according to which we choose our epistemic stances. Since different epistemic stances underlie different ontological positions, and since those stances are undergirded by epistemic values, ultimately debates about scientific ontology bottom out in the dull thud of clashing values. Chakravartty also presents a minimal account of the rationality of adopting a stance that requires stances to be *pragmatically coherent* — that is, not self-defeating according to their own standards of success. Finally, Chakravartty advocates an analogue of Pyrrhonian scepticism, according to which all minimally rational stances are equally strong, nothing by way of further epistemic evaluation can be said, and suspense of judgement yields tranquility.

In sum, *Scientific Ontology* argues that there are a plurality of ontologies that can be drawn from science, and that which ones you're willing to draw depends on your underlying, voluntarily chosen epistemic stance. Just as there are a plurality of scientific ontologies, so too there are a plurality of epistemic stances. Different epistemic stances can be equally rational but are not further epistemically evaluable. While it may be tempting to despair at the limited extent to which we can adjudicate epistemic stances and, correspondingly, scientific ontologies, it is "an innocuous reflection of our all too human epistemic condition," which can inspire a greater understanding of our own values.[3]

Scientific Ontology is rich, nuanced, and stimulating. It ties together philosophy of science, metaphysics, and epistemology into a fascinating philosophical system that is, if true, extremely consequential. Many will be inclined to agree that conflicting philosophical positions can be rational options, as well as with William James' point that different philosophical temperaments underlie some persistent philosophical disagreements. However, the characterization of differing temperaments in terms of epistemic stances, the account of those stances, and the case studies showing how they underlie particular philosophical impasses is informative and insightful. The critical remarks that follow are made in an appreciative spirit, in the recognition that *Scientific Ontology* advances a valuable project; in particular, it is enormously worthwhile to say, as clearly as possible, how we can fruitfully conceive of naturalized metaphysics, which epistemic considerations figure into its rationale, and which epistemological commitments naturally accompany it. In Section 2, I will challenge Chakravartty's claim that it is incoherent to index naturalized metaphysics to science *simpliciter*. In Section 3, I will consider what to make of the

[3] Chakravartty, 2017, 251.

underdetermination of scientific ontology by science and suggest a less permissive response than Chakravartty's. In Section 4, I will consider the influence of epistemic stances, the minimal criterion of rationality, and a possible slippery slope to epistemic anarchy. Finally, in Section 5, I will argue that stance voluntarism lacks adequate motivation.

2. Putting the 'Natural' in 'Naturalized Metaphysics'

What distinguishes scientific ontology from traditional metaphysics? One obvious answer is that scientific ontology engages directly with science. However, Chakravartty takes this answer to be inadequate. He explains, "any attempt to ground the *a priori* theorizing of scientific ontology somehow straightforwardly in *a posteriori* knowledge cannot take science *simpliciter* as the relevant ground, for science as a whole is an inextricable mixture of the two."[4] Science has varying empirical credentials and is permeated with *a priori* content.[5] For that reason, Chakravartty believes it is "incoherent" to make scientific engagement the hallmark of naturalized metaphysics.[6] Instead, he thinks we had better index naturalized metaphysics to *scientific-empirical* investigation.[7]

My first worry is that Chakravartty emphasizes empirical considerations at the expense of scientific ones. On one occasion, he even puts the 'scientific' in 'scientific-empirical' in brackets, as it if were optional.[8] However, if what is doing the heavy-lifting is the empirical, then we end up with empiricist rather than naturalist metaphysics, empirical rather than scientific ontology. Yet, those of us who want to naturalize metaphysics think naturalization has something important to do with the institution of science. If so, then the scientific element of the characterization of naturalized metaphysics is not optional or secondary but essential.

My second worry is that there is nothing incoherent about thinking that a) naturalized metaphysics requires an *a posteriori* basis, and b) science provides it. It's just that b) is arguably false. If we assume a) but deny b), we will be lead to Chakravartty's conclusion that science *simpliciter* should not be the basis for naturalized metaphysics. But, as they say, one person's *modus ponens* is another's *modus tollens*. The starting place for naturalists is often respect for the institution of science (notwithstanding the difficulty of cleanly demarcating it from non-science). Such naturalists point to the remarkable and demonstrable success of science as a source of evidence, justification, and/or knowledge with regard to the underlying, descriptive nature of reality. These considerations lead to a kind of 'wholesale' naturalism (to borrow a term from the realism

[4] Chakravartty, 2017, 81.
[5] Ibid.
[6] Ibid., 76, 82.
[7] Ibid., 67.
[8] Ibid., 85.

literature[9]), which *does* recommend engagement with science *simpliciter*. If that is the view, and if science is not completely *a posteriori,* then the naturalist will have to deny that naturalized metaphysics requires a completely *a posteriori* basis.

More localized naturalisms are also possible but frequently do not single out the empirical parts of science. For instance, some accounts of naturalized metaphysics assign special weight to fundamental physics, not directly for its empirical credentials but because it has the greatest potential explanatory scope.[10] Some forms of naturalized metaphysics even privilege arguably *non-empirical* parts of science. For instance, ontic structural realism recommends belief in the mathematical content of our scientific theories. So, when we make our naturalistic prescriptions, we do not have to tack on any qualification to 'science,' and when we do, it is not necessarily 'empirical.'

In sum, Chakravartty assumes that the *a priori* theorizing of scientific ontology must be grounded in *a posteriori* knowledge and argues that, since science is not fully *a posteriori*, the naturalist prescription cannot be indexed to science *simpliciter*. However, if there is something important about indexing metaphysics to science *simpliciter*, or to parts of science independently of their empirical credentials, or to non-empirical parts of science, that must mean that the *a priori-a posteriori* distinction is not the right basis for even a rough delineation of scientific ontology from traditional metaphysics. Far from showing the incoherence of indexing naturalized metaphysics to science *simpliciter*, Chakravartty shows only how misguided it is to found a norm of naturalized metaphysics on the questionable assumption that the *a priori-a posteriori* distinction is a relevant epistemic joint.

3. A Thousand Ontological Flowers

Chakravartty rightly takes the underdetermination of metaphysics by science seriously, as well as the challenge it poses to the project of naturalized metaphysics.[11] It is important to note, however, that underdetermination poses no special problem for naturalized metaphysics. There are various forms of underdetermination.[12] Chakravartty implements a weak conception, wherein rival metaphysical theories are *equally compatible* with science.[13] Underdetermination in this weak sense is everyone's problem. That is because this kind of underdetermination crops up as soon as we introduce ampliative inference. That is to say, there are always multiple ways of departing from the evidence. So, it is not at all surprising that underdetermination crops up for naturalized metaphysics.

[9] Magnus and Callender, 2004.

[10] Ladyman et al., 2007.

[11] Chakravartty, 2017, 133.

[12] Laudan, 1990.

[13] Chakravartty, 2017, 5, 92.

Moreover, in my view, naturalized metaphysics also does comparatively well with regard to underdetermination — and that is at least part of its relative appeal. Chakravartty rightly claims that the rationale for naturalizing metaphysics is that it lowers epistemic risk. In my view, naturalized metaphysics carries lower epistemic risk precisely because it is less underdetermined than traditional metaphysics. Naturalized metaphysics is less underdetermined because it is *constrained* by science, and the scientific constraint narrows the range of theoretical options we may consider live.[14] So, comparative underdetermination can be used to explain why naturalized metaphysics is epistemically preferable to non-naturalized metaphysics.

Even if naturalized metaphysics is not alone in suffering from an underdetermination problem, and even if it suffers comparatively less than alternate forms of inquiry, there is still the question of how to respond to the underdetermination it does suffer. Chakravartty's response is permissive. Supposing the minimal standard of rationality is met, he is content to let a thousand scientific-ontological flowers bloom, since they spring from a thousand roots of otherwise epistemically incomparable stances and values. Imagine two rival scientific ontologies, generated in accordance with two rival epistemic stances. Chakravartty would have us ask only whether the underlying stances are self-defeating with respect to their own standards of success. If neither is, then the resulting views are at an impasse and all we can do is try to find Pyrrhonian calm.

But isn't there more we can do? I'm optimistic that we can find grounds to be more exacting and to say more by way of evaluative comparison. We could, for instance, ask *how well* each ontology meets its accompanying stance's standards of success and — importantly — how well each meets any *shared* standards. Even when metaphysicians differ with respect to epistemic risk tolerance, the weights they assign to different forms of evidence, or the kinds of inferences they are willing to make, it is too far of a stretch to say they inhabit *entirely* different Kuhnian paradigms (conceived of as all-encompassing packages of theories, methods, norms, standards, and so forth)! We're all epistemic agents here, with properly *epistemic* aims — that is, aims concerning intellectual achievements such as knowledge and justification. There are general things to be said about what objectively does or does not conduce to that kind of aim. For instance, assigning a high credence to the testimony of compulsive liars is a bad epistemic policy *qua epistemic policy*, not relative to any particular epistemic stance. That is, there are objective ways of assessing different epistemic policies and adjudicating the contentful disagreements they generate. All of this is to say that perhaps not all of the scientific-ontological flowers should be left to bloom.

4. The Road to Epistemic Anarchy

Scientific Ontology has a particular frame. Chakravartty's interest is in the epistemic stances underlying persistent disagreements *in scientific ontology*. Yet, I

[14] Bryant, forthcoming.

wonder whether and why we should think epistemic stances have a restricted domain of influence in terms of the views and disagreements they underlie. There is no obvious reason for thinking they are at work *only* in scientific ontology. Rather, if epistemic stances are clusters of attitudes, commitments, and strategies regarding the production of knowledge, then their import and influence goes well beyond ontology, scientific or otherwise. Not only do epistemic stances underlie debates in the insular little ontology room; they play a parallel role in other areas of philosophy — indeed, in *all* inquiries with properly epistemic aims. Call the view that epistemic stances are at work in all properly epistemic contexts the *global influence view*.

Could Chakravartty simply agree with the global influence view? If he did, the claims of the book would immediately face a self-application problem: they would themselves have to be regarded as just one possible product of one rational epistemic stance among many. Actually, that sounds plausible! Perhaps that consequence could be regarded as a feature rather than a bug, so long as self-application does not make the view self-defeating.

However, the global influence view is not open to Chakravartty, since he places something outside the influence of epistemic stances — namely, the minimal criterion of rationality. Chakravartty characterizes the pragmatic-coherence standard of rationality as "stance-neutral."[15] It is stance-neutral in the sense that it is held fixed across epistemic contexts and can be used to compare and evaluate potentially any and all epistemic stances. As such, Chakravartty must be optimistic that even differently tempered philosophers will agree to the minimal standard. Yet, the minimal requirements of rationality seem to be something about which we can reasonably disagree.[16] Differing epistemic stances might well generate some of the disagreement. For instance, those with a pragmatist epistemic stance might find a pragmatic criterion entirely appropriate; those with other epistemic stances might not. The point is that the minimal requirements of rationality seem not to have any special stance-neutral status; it is not obvious that they remain fixed across epistemic stances.

If the minimal standard of rationality is not beyond the reach of epistemic stances but vulnerable — like everything else — to their differential influence, then we have landed in Kuhnian territory. Thomas Kuhn proposed that scientific paradigms could only be evaluated and defended using their own internal epistemological standards. Here, different epistemic stances and underlying values lead different people to adopt different views, and those views can only be evaluated and defended using their respective epistemological standards. Since Kuhn seemed to suggest there is no objective basis for judging later paradigms to be better than earlier ones, some critics took him to impugn the rationality of

[15] Ibid., 243.

[16] Though we would obviously need some independent basis for characterizing the disagreement as reasonable.

science.[17] On Chakravartty's view, the only objective basis for epistemically evaluating stances is the minimal standard of rationality. As an objective basis for epistemic evaluation, that standard is … well … minimal! But, if the standard fails to be stance-neutral, then there is in fact *no* objective basis for epistemically evaluating different stances or accompanying views. The result is, I believe, epistemic anarchy.

Even granting Chakravartty the stance-neutrality of the minimal standard of rationality, one might still find his permissive attitude toward stances a bit anarchic. That is because one might think it inevitably leads to relativism and incoherence. Chakravartty attempts to head off the worry by claiming the epistemic policies that codify a stance will be of the form *believe p* or *suspend judgement in p*, not *believe p* or *believe* $\sim p$.[18] As such, different stances will not generate contradictory beliefs. However, I don't see what makes this the case other than brute stipulation. That is, I don't see a non-*ad hoc* reason for saying that an epistemic stance couldn't involve a policy of disbelief. It is true that one of Chakravartty's go-to examples of an epistemic stance, empiricism, recommends suspense of judgement in a lot of cases, but what about other possible stances? Anti-realists of various stripes appear to manifest a policy of disbelief. For that reason, Chakravartty seems not to have fully assuaged concerns about relativism and contradiction.

At any rate, let us return to the main issue. With regard to the role of epistemic stances in generating opposing viewpoints, it is hard to see why scientific ontology is at all special. That is, once we allow that epistemic stances play an important role in generating disputes in scientific ontology, it is hard to see why they wouldn't play a similar role in every other epistemic context. But, if they did, the result would be epistemic anarchy — there would be no objective basis for evaluatively comparing epistemic stances and accompanying views. Chakravartty would appear to have three options. First, embrace epistemic anarchy. Second, block the slippery slope to epistemic anarchy by explaining why the epistemic stance story applies only in the case of scientific ontology, not in any old epistemic context. Third, go part-way down the slippery slope but stop before getting to epistemic anarchy, by giving us a non-*ad hoc* reason for thinking that the minimal standard of rationality is stance-neutral.

5. Stance Voluntarism

Voluntarism is the last major component of the distinctive epistemological package that *Scientific Ontology* advances. As Chakravartty explains, "*voluntarism*: the idea that the relevant beliefs and actions are freely chosen, or voluntary, as opposed to being forced in virtue of reason alone."[19] He continues:

[17] McMullin, 1993.

[18] Chakravartty, 2017, 50.

[19] Ibid., 215.

> [T]he notion of choice suggests that the human will has an important function in bringing about belief and action, where the will is conceived as the faculty or capacity one has for believing or acting with a sense of deliberate control.[20]

There are different kinds of voluntarism, but the one that Chakravartty avows here is a voluntarism *about epistemic stances*. As Chakravartty puts it, "The idea of voluntary commitment in the context of scientific ontology *applies to stances in the first instance.*"[21] The view is, in short, that we choose our epistemic stances.

Epistemic stance voluntarism is *prima facie* implausible. First, because it doesn't fit the phenomenology — I doubt many people remember a conscious decision to adopt any particular epistemic stance. Second, because epistemic stances are rooted in values, and generally speaking we do not *choose* our values. We just *have* them, usually for complex sociological reasons. Chakravartty rightly emphasizes the sociological aspect of epistemic values, including the influence of our backgrounds, training, teachers, mentors, and peers.[22] However, once we recognize the sociological influences on our epistemic values and corresponding stances, it is hard to see much room for choice.

Yet, according to Chakravartty, there is both room and an important role for choice. He argues:

> [I]t is all too evident that these kinds of [sociological] influences underdetermine the stances that people adopt. Often, those with similar backgrounds interpret the outputs of scientific theorizing, modeling, and experimentation in different ways, which suggests that background notwithstanding, one is at liberty to choose.[23]

The thought is that since sociological influences do not get us all the way to determinate epistemic stances, choice must get us the rest of the way. However, even if sociological factors do not fully determine my epistemic stance, it does not follow that individual volition has any role in finishing the job. That is to say, even if sociological influences underdetermine our stances, it need not be choice that resolves the underdetermination. So, the underdetermination of our epistemic stances by sociological factors provides scant motivation for stance voluntarism.

Chakravartty goes on to argue that features of the context in which scientific ontology is practiced make stance voluntarism more plausible:

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[20] Ibid.

[21] Ibid., 219.

[22] Ibid., 221.

[23] Ibid.

> [I]n the self-consciously critical settings of scientific and philosophical practice, the purely passive, unconscious absorption of ambient values seems a doubtful vector for stance adoption because agents are regularly pressed to defend and consider alternative interpretations of ontology by those with conflicting stances. This inevitably leads to explicit discussions of how certain values and stances resonate with different individuals which, again, suggests a notion of choice.[24]

However, I do not believe that any notion of choice is suggested. In a reflective and critical context, where we routinely witness and engage in clashes of conflicting stances, we may be hyper-aware of our stances, as well as their personal resonance and the lesser resonance of conflicting ones, but that does not mean that we voluntarily adopt them in the first place. Passive absorption of ambient values can occur even in critical and reflective contexts like academic philosophy. That is because even critical and reflective contexts have epistemically irrelevant sociological dimensions that are likely sources of psychological influence and pressure. Think of the often adversarial nature of academic philosophy. Think of the group affiliations we form corresponding to theoretical positions and how strongly tribal they can be (scientific realists and anti-realists being one example among many). Think of our culture of prestige. The specific psychological import of these features of our sociological context would need spelling out — but the point I'm trying to make is uncontroversial: notwithstanding their reflective tendencies, philosophers, too, are human beings vulnerable to social-psychological influences. So, even in self-consciously critical settings like academic philosophy, the passive absorption of values isn't such a doubtful vector for stance adoption after all.

At any rate, epistemic stance voluntarism is an empirical thesis, which should stand or fall on empirical grounds. Its assessment is complicated by the fact that stances are coarse-grained things. Some of their constituents — such as strategies — are clearly amenable to choice; others, such as attitudes and commitments, less obviously so. If beliefs were part of epistemic stances (as they are in van Fraassen's view), then stance voluntarism would imply doxastic voluntarism, and the empirical credentials of the former would depend partly on those of the latter. However, empirical evidence has revealed brute causal mechanisms for belief acquisition, which make belief and belief-like states generally cheap, automatic, and sub-psychological, i.e., quite involuntary.[25] Moreover, doxastic voluntarism arguably requires us to have capacities we do not in fact have: to directly alter the contents of memory or to directly alter our view of the evidence.[26] Any stance voluntarism that builds in doxastic voluntarism therefore has poor empirical standing. So, it is a good thing that

[24] Ibid.

[25] Levy and Mandelbaum, 2014.

[26] Ibid.

Chakravartty's stance voluntarism does not integrate doxastic voluntarism. However, his stances do include psychological constituents, including attitudes (and perhaps also commitments, depending on what commitments are) — and the empirical aptness of voluntarism with respect to such psychological phenomena remains to be shown. That is to say, a compelling case for stance voluntarism would require empirical support for the claim that the psychological constituents of epistemic stances are amenable to voluntary choice. In sum, stance voluntarism is made plausible neither by the underdetermination of epistemic stances by sociological influences nor by the reflective, critical context of philosophy. Lacking an empirical basis for the view's psychological content, stance voluntarism is inadequately motivated.

6. Conclusion

My critical remarks have primarily concerned the details of Chakravartty's conception of naturalized metaphysics, as well as the coarse-grained features of his epistemology, including its characteristic permissivism and voluntarism. In Section 2, I argued that there is nothing incoherent about indexing naturalized metaphysics to science *simpliciter.* Moreover, I argued that since science is central to the naturalist prescription and since science is not purely *a posteriori,* then the naturalist isn't interested in a purely *a posteriori* basis for metaphysics, and the *a priori-a posteriori* distinction is not the way to roughly delineate naturalized from non-naturalized metaphysics. In Section 3, I argued that underdetermination is by no means a special problem for the naturalist. In fact, the comparatively lesser degree to which scientific ontology is underdetermined is part of its relative appeal. What's more, since there are general things to say about what objectively does or does not conduce to epistemic aims insofar as they are *epistemic*, epistemic stances can be evaluatively compared in virtue of more robust criteria than Chakravartty's minimal standard of rationality. If so, then some of the thousand scientific-ontological flowers should be pruned. In Section 4, I pointed out the slippery slope from the claim that epistemic stances underlie scientific-ontological disputes to the claim that they underlie all disputes in epistemic contexts. Such a situation would constitute epistemic anarchy, since there would be no objective basis for evaluatively comparing stances and accompanying views. Finally, in Section 5, I argued that Chakravartty's epistemic stance voluntarism is poorly motivated, since neither the underdetermination of epistemic stances by sociological influences nor the reflective context of philosophy makes the voluntary adoption of epistemic stances likely, and since the view's psychological content requires empirical support. I prefaced my critical remarks with a note of appreciation for the value of the project at hand — that is, for the value of spelling out a clear conception of naturalized metaphysics with appropriate epistemological underpinnings. I conclude by expressing my hope that my remarks here will help to further advance that project.

Acknowledgements

This research was supported by the Fundação para a ciência e a tecnologia, award #PTDC/FER-HFC/30665/2017. I thank Anjan Chakravartty for writing such a rich and challenging book in the first place, for being such a gracious interlocutor, and for ensuring that my commentary here adequately captured his intentions. I thank Kerry McKenzie for putting together the *APA Pacific Division Meeting 2019* book panel from which this symposium emerged. I also thank my fellow panelists and contributors, Stathis Psillos and Matthew Slater, as well as our audience, for an illuminating discussion.

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