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# The Contingency of Science and the Future of Philosophy

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# The Contingency of Science and the Future of Philosophy

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## Abstract

Contemporary metaphilosophical debates on the future of philosophy invariably include references to the natural sciences. This is wholly understandable given the cognitive and cultural authority of the sciences and their contributions to philosophical thought and practice. However such appeals to the sciences should be moderated by reflections on contingency of sciences. Using the work of contemporary historians and philosophers of science, I argue that an awareness of the radical contingency of science supports the claim that philosophy's future should not be construed as either dependent or necessarily related to that of the sciences. Therefore contemporary debates – about the possibility of philosophy's status as a science, say – should be tempered by an appreciation of the fact that science may cease to be a significant feature of future metaphilosophical debates. I conclude by considering the implications of this claim for assessments of the progressiveness of philosophy.

## 1. Introduction

Contemporary debates about the nature and future of philosophy invariably include references to the natural sciences. The reasons for this are obvious enough. The natural sciences have, over their relatively short history, provided fantastic cognitive and practical resources to human beings. Those same sciences have also informed and, at times, seemed to foreclose longstanding philosophical debates about knowledge, reality, and human nature. The striking successes of the natural sciences soon began to inform philosophers' reflections on the aims and purpose of their own activities. Such metaphilosophical ruminations are visible in the Enlightenment *philosophes*, positivists like Comte and his logical positivist heirs, and more recently in the broad programme of 'philosophical naturalism'.

The aim of this paper is not to rehearse the historical story, interesting as it is. A vigorous school of historians of science and of philosophy is fulfilling that task, and my discussion will refer to them where appropriate (Gaukroger 2006). Nor is the purpose of this paper to deny the many and valued contributions that the sciences have made to philosophy. Certainly few philosophers would deny that sciences have, by way of data and theories, enriched and expanded the disciplines of metaphysics, philosophy of mind and language, and so on. Moreover, new areas of inquiry, like biolinguistics, have emerged which would have been impossible without the provisions of the sciences. Recent interest in ‘experimental philosophy’ is yet another indication of the fruitful and ongoing interactions of philosophy and the sciences (Knobe and Nichols 2008).

Two more caveats should be stated. First I will not define, in detail, terms such as ‘science’ or ‘naturalism’, for the reason that my remarks upon contingency – which I introduce in a moment – would apply to even the more capacious definition of those terms. Second my discussion will not discuss the desirability (or not) of a future without science, or philosophy without naturalism. The reason is that such questions cannot be answered without close reference to the aims and explanatory interests of those future cultures which I discuss. Since no such reference can be made, any proposed answers to those questions would remain speculative at best.

## 2. Contingency and Science

With these provisos in place, my main claim can be stated. I argue that metaphilosophical debates about the relationship between science and philosophy should be informed by an issue which has become central in contemporary history and philosophy of science. That issue is *contingency*. It is important to define this term, for it has two senses, only one of which concerns me. The first sense of contingency refers to the fact that the material, social and intellectual conditions which accompanied and enabled the emergence of the modern sciences were contingent. That is, variations in those conditions would have affected the sorts of scientific practice and knowledge that emerged. Often, this is stated in the form of counterfactual speculations, for instance, the question of whether ‘other histories’ could have produced ‘other biologies’ (Radick 2005).

Over the last thirty years, historians and sociologists of science have provided ample and detailed documentation of the specific material, social and intellectual conditions which enabled, say, Newtonian physics or the molecular genetics (for representative studies, see Pickering 1984 and Cushing 1994). Contingency arises from a sensitive awareness of the fact that, had these conditions been otherwise, then it is quite possible that ‘other histories’ may have emerged. Let us call these ‘internal contingencies’. Recent philosophers of science have seized on internal contingencies as novel

opportunities to reflect upon longstanding philosophical questions; however, my interest is not with internal contingencies, despite the interesting philosophical problems they prompt (Soler 2008).

Instead, my focus is on the second sense of contingency. I will call these ‘radical contingencies’, because they relate, not to variations within the histories of the sciences, but to the very *existence* of those sciences – and, therefore, of the histories which occupy historians and sociologists interested in internal contingencies. Of course, one can only investigate and document internal contingencies in the sciences if those sciences emerged in the first place and went on to have histories that later scholars could examine. For this reason, I judge radical contingencies to be fundamental and this is, in part, why my focus will be upon the implications of the radical contingency of science for metaphilosophical debates about the future of philosophy.

It is safe to say that few philosophers have paid attention to the radical contingency of science. One honourable exception to this is Paul Feyerabend (1978: 228), who argued that ‘science as we know it today is not inescapable’, because human beings, at least in potential, ‘construct a world in which it plays no role whatever’. Another is Howard Sankey (2008: 263) who in a recent paper on contingency in science remarked that ‘[i]t is not inevitable that science will continue to be pursued by humans’. However such remarks have so far elicited little discussion amongst historians and philosophers of science. There are many possible reasons for the neglect of radical contingency, ranging from the entrenchment of the sciences themselves, or legitimate historiographical reasons (such as the epistemological issues raised by the practice of counterfactual history; for a useful discussion, see Radick 2008). The range and legitimacy of such reasons will not affect my argument.

It is useful to distinguish two different forms of radical contingency. These are *historical* and *futural*, the former concerned with the historic past, and the latter with various possible futures. My discussion will treat both, for both historical and futural contingency have implications for metaphilosophical debates about science and philosophy. The main thought is this: the emergence and entrenchment of the sciences within our history was not an inevitable feature; or at the least, we cannot provide sufficient epistemic warrant to secure the claim of science’s inevitability.

This denial of the inevitability of science should be elaborated. In the process I can rebut an obvious and wholly legitimate objection which runs as follows: given certain features of our evolutionary history, it was indeed inevitable that we should have evolved with capacities for curiosity and complex cognitive activity (owing to their survival value, say). An evolved cognitive capacity for complex epistemic activities is therefore an inevitable feature of our evolution, a distinctive feature of our ‘useful inheritance’, as Nicholas Rescher (1989) neatly puts it (see further Vollmer 2005).

However although these cognitive capacities for and predispositions to engage in complex epistemic activities is inevitable, the *specific forms* of which those activities could take remains contingency. The forms of scientific activities which emerged within the course of our history are the outcomes of interactions between our evolved cognitive capacities and an array of contingent environmental, social and historical factors (see further Sankey 2008 and Trizio 2008).

So although science may be an inevitable feature of our development, the specific forms it takes remain grounded in a variety of contingencies; for instance, there is no inevitability in the fact that during the late nineteenth and early twentieth centuries naturalism became the *idée fixe* of science and (much of) philosophy. There is, after all, no one phenomenon called science, but rather a complex array of historically variable scientific traditions whose emergence and development depends upon a constellation of interacting material, social and intellectual factors (Galison and Stump 1996; Kellert, Longino and Waters 2006). Therefore the inevitabilist could assert that science was inevitable, but that is an uncontroversial point; the real issue turns on the inevitability, or not, of certain specific scientific theories and traditions – such as particle physics or naturalism. Yet to assert the inevitability of these one must have successfully performed a process of survey and comparison – of possible alternatives, of their content and consequences, over a long period of time – which they lack the cognitive powers to perform.

Therefore science may have been an inevitable development but the specific forms of science are contingent. Compare this with language: given certain features of our cognitive and social evolution a capacity for language is evitable, but the specific content of that language is contingent upon a host of cultural and environmental factors. The distinction between the singular term science and the plural reference to sciences (or forms of scientific activity, or modes of inquiry) is a significant one; for instance, it could mark the difference between a scientific tradition receptive to teleological explanation and one which was not. Therefore one can accept the evolutionary argument that science, construed as epistemic activity, was inevitable, but this does not entail the further and more metaphilosophically significant question of what forms of science would, in fact, emerge and become entrenched.

Historians and sociologists of science can document the contingencies that enabled the emergence of our sciences; but they cannot take the further step of asserting that our sciences – naturalistic ones, say – was a necessary or inevitable feature, both of ‘our’ history and of other, possible histories. The historical contingency of science can be recognised based upon an appreciation of the various contingent conditions which accompanied it. But the further step of asserting inevitability is an illegitimate one. It is therefore possible that, had certain historical conditions been otherwise, a non-

naturalistic science could have emerged and become entrenched (one which could have sustained a more vigorous tradition of natural theology, say).

The radical futural contingency of science appeals to similar epistemic conditions. Despite a widespread and apparently powerful presumption that the sciences will, bar catastrophe, persist into the future, one cannot issue epistemic warrant for the further claim that they, in fact, will. Impossible or implausible as it may seem, the sciences may, into the future, cease to be central and valued features of human cultures. It is therefore possible that, in the coming decades or centuries, the guiding values and concerns of human beings may change, either gradually or suddenly. That is a truism as it stands, but it becomes more significant when one considers that certain of these changes have strong metaphilosophical implications. If into the future human beings begin to prioritise moral values over cognitive values, this will affect judgements about the progressiveness of science and philosophy: the sciences may seem less salient because their animating values are cognitive, whereas philosophy may find itself newly revitalised by these revived ethical sensibilities.

Such changes in the guiding values and concerns of human cultures therefore affect their definitions of progressiveness: in contemporary societies practical and cognitive values enjoy considerable prestige and this renders the sciences highly progressive. However, should the priority of practical and cognitive values change into the future, the sciences will find judgements about their progressiveness shift accordingly – perhaps to the advantage of philosophy, a point I return to in section four.

### 3. Values and the Future of Science

It is worth dwelling on this idea of radical futural contingency. Contemporary developed world societies place a considerable value upon scientific knowledge and products. Indeed, such enthusiasm is evident also in ‘developing’ societies, where, for example, one finds the application of science and technology to agriculture, environmental management, and energy production. The ubiquity of science and its products might prompt us to imagine that, into the future, the central and privileged status of science in human cultures will remain. However, that presumption can be challenged by historical and philosophical considerations. There are many examples of cultures and communities, both historical and contemporary, whose valuations of the sciences are divergent from our own. These can be gathered under two labels.

The ‘indifferentists’ include those for whom scientific practices and products invite little if any interest or significance. Some examples might include the early Daoists, many Amish communities, and those for whom the cognitive and practical imperatives manifested in the sciences lack salience. For these indifferentists, science – its theories,

technologies, and the like – simply fail to resonate with their values and projects. Two scholars of Amish culture speak for the indifferentists at large when they write that a rejection of science and technology does not necessarily reflect ‘ignorance or blind submission to tradition’ (Olshan 1994: 29), but, rather, is ‘in keeping with their own definition of what kind of life is appropriate’, the result being ‘a certain conception of life’ from which science and technology are largely absent (Ellul 1964: 29). The cognitive and practical interests manifested in the sciences may fail to excite those whose goals and projects are invested in moral and religious concerns (soteriological, for instance). The theories and technologies afforded by the sciences command no more interest for the indifferentists than, say, soteriological concerns do within secular societies.

The ‘corruptionists’ are, by contrast, far from indifferent to science. They view some or all of its practices, values, and products as active and tangible sources of moral, intellectual or spiritual corruption. The ranks of the corruptionists include Rousseau (1750/1987), who argued that the sciences reflect and encourage the vices of ‘sloth’ and ‘vanity’, or Kierkegaard (1996: 237), who warned that ‘[i]n the end all corruption will come from the natural sciences’ (see further Kidd 2011). Other corruptionists include the Gnostics and various Platonist and Neo-Platonist figures, each articulating a worry that undue practical and cognitive interest in the world threatened to distort our appreciation of the morally and ontologically demoted status of the empirical world. Plotinus (1993: §§I.6.5–6.6, II.9), for instance, urged us to remain aware that matter is of an ‘alien nature’, in contrast to the ‘purity of the soul’. Our failure to exercise due moral and epistemic caution – by engaging in scientific inquiries, say – risked our becoming ‘tainted’ by matter, as if ‘immersed in filth’. Of course Plotinus did not have modern science in mind, but it is not difficult to appreciate how the concerns he voices about the moral and spiritual risks arising from sustained engagement with the empirical world could translate into a far cooler attitude towards the sciences that that which currently prevails.

The ranks of the corruptionists therefore include all those who view the cognitive and cultural authority of the sciences as an impediment or threat to higher-order moral and religious concerns. Corruptionist critiques of science reflect a diverse and heterogeneous array of concerns, so should not be construed as anything like a shared ‘program’. Certainly there are important differences between the specific philosophical and political concerns about science and technology entertained by nineteenth century Luddites, the Unabomber, and contemporary ecofeminists. There are many ways for persons and communities to generate corruptionist criticisms and many ways that such criticisms can be expressed, such as breaking machines, domestic terrorism or more morally and intellectually mature strategies such as social activism and a renovation of older religious and poetic sensibilities. However, the various groups collected under

that label all articulate worries about they perceive as the deleterious moral and cultural implications of modern science.

The appeal to indifferentists and corruptionists is intended to make two points. Both are related to the stability of valuations of the sciences. Firstly, they demonstrate that there are conveyable ‘forms of life’ which afford different degrees of significance to the natural sciences. Even if the values and concerns of such cultures seem too remote from our own, the fact of the possibility of alternative conceptions of the significance of the sciences remains. Secondly, our awareness of indifferentist and corruptionist communities should remind us that they exist as possible future forms of our own culture. Into the future, human cultures which currently esteem the sciences may become indifferentists or corruptionists; indeed, earlier periods of our own intellectual and cultural history evidenced just such attitudes. Sudden or gradual changes in the values and concerns of contemporary cultures could provoke radical reappraisals of how and why scientific practices and products matter. Into the future, then, there is no guarantee that ours will remain a ‘scientific culture’ in any recognisable sense.

There are a wide variety of conceivable scenarios regarding what one might call a ‘post-scientific’ culture. Such a diversity of possibilities reflects the complexity and mutability of the term ‘science’. Into the future, fundamental disciplinary restructuring could transform the sciences such that, to our eyes, they represent an entirely new tradition. Or certain forms of science, such as technologically complex ‘Big Science’ could cease, prompting a reorganisation in the modes of scientific activity a culture can engage in. Or the priority assigned to the different disciplines may see practicable subjects with strong moral value, like biomedical science, being promoted almost to the exclusion of, say, mathematical physics or cosmology. More radical scenarios can also be imagined; for instance, science may lose its status as a privileged cognitive authority, perhaps existing alongside newly empowered theological or philosophical traditions. Or certain areas of the sciences may integrate with the theological traditions, creating a tradition better described as ‘natural theology’ rather than ‘natural science’. Or perhaps certain definitive features of contemporary science – such as its naturalism – are abandoned in favour of a more ambitious metaphysics. Or a final possibility may see the sciences persisting, but only as curious artefacts of an older culture, such that their cognitive authority is greatly muted.

#### 4. The Persistence of Science

These are just a few possibilities which can be generated by reflection on the radical futural contingency of science. Today, they may sound utterly implausible and be regarded with scepticism, even when they are presented as speculative possibilities. However, they are all possible, since they reflect the claim – defended earlier – that the



value and centrality of the sciences depends upon historically and culturally variable goals and projects. Changes in these goals and projects – such as a shift away from industrial and economic imperatives – will likely affect the resources and significance assigned to the sciences. Even cognitive values which are less obviously connected to social institutions and activities can be affected by the contingency of goals and projects. For example, the cognitive value of truth could return to earlier conceptions when truth and understanding are necessarily defined by theological concerns. In such a society, inquiry into the natural world could be defined by religious imperatives – a greater understanding of God’s creation, say. Within such a society, truth, and knowledge could be conceived in a way that rendered their association with scientific inquiry unsustainable, even unintelligible.

The foregoing remarks on the radical futural contingency of science were intended to make the following point. There can be no epistemic warrant for the claim that the sciences will remain central and valued features of future human cultures. A wide variety of possible scenarios support the claim that the cognitive and cultural authority of the sciences may radically change into the future. The nature and likelihood of these changes cannot be specified in advance; a radical contingentist cannot issue probabilities or timelines for these possible scenarios. The reason, of course, is that such prognostications would rely upon one’s successful performance of a survey and comparison of all possible future intellectual and cultural developments.

No human individual or community could possibly possess the privileged cognitive capacities that would enable them to perform such surveys and comparisons. The successful performance of those cognitive activities is necessary if the claim of science’s persistence into the future is to be warranted. However, as David E. Cooper (2002: 206) puts it, that warranted claim could be made ‘only [by] a creature possessed of cognitive powers far beyond our human capacities’. Cooper reiterates the complexity of those surveys and the corresponding sophistication of the cognitive capacities required:

Only a creature capable of imagining in detail a complex, centuries-long development of these alternative ‘programmes’ – of knowing their implications, problems, and of comparing them to one another and to our own entrenched scientific account – could be in a position sensibly to judge that science has the edge. But none of us even approximates to being such a creature, equipped with such magisterial powers of knowledge (Cooper, 2010: 3)

Cooper concludes that no one could make the warranted claim that science will persist as a feature of future human cultures. There have been and continue to be indifferentist and corruptionist cultures and communities and even cultures strongly shaped by science, like our own, contain indifferentist and corruptionist elements. Furthermore an

inability to conceive of a post-scientific culture is not an argument against its possibility: a little imagination and acquaintance with history can furnish one with possibilities (see Tibbets' [1976] criticism of Feyerabend for an example).

It is worth summarising the foregoing argument for the radical futural contingency of science. Once that is done, I will conclude by suggesting how it should inform metaphilosophical debates about the future relationship, if any, between science and philosophy. The argument is:

The emergence and entrenchment of the sciences within early modern European culture was a 'contingent' historical and intellectual development.

The continued establishment and extension of scientific knowledge and practices within and beyond Western cultures is also contingent; for instance, upon particular, ongoing political and economic imperatives.

Changes, dramatic or gradual, in Western cultural, intellectual, political or other factors can and will affect appraisals of the value and centrality of the sciences within modernity.

Such changes can, of course, occur, and doubtlessly will do.

Therefore:

There is no good reason to suppose that the sciences will continue to play a central, or even a peripheral, role within (some or all) future world cultures.

No guarantee can be issued that contemporary forms of science will continue to play a central and integral role in future world culture. Future developments may see minor changes in those sciences (such as the modification of theories), or more dramatic changes (such as the abandonment of naturalism in favour of revised supernaturalist science). No one could possibly be in the privileged cognitive or empirical position to make such a judgement—and to claim otherwise is, as Cooper (2002: 202f) puts it, to be guilty of 'hubris'.

This conclusion that the content and salience of the sciences may dramatically change into the future has implications for contemporary metaphilosophical debates about science and philosophy. In the next section I consider just one of them: namely, that the future may see the emergence of philosophical traditions which are judged to be progressive but from which the sciences are absent.

## 5. Science, Naturalism, and Hubris

My opening remark stressed the place of science within contemporary reflections on the nature and future of philosophy. This is evident from energetic debates about whether philosophy is or could be a science, or whether philosophical naturalism

represents the future of philosophy. Such debates are sufficiently familiar that they need little further elaboration; however, a common feature of these debates is the presumption that science will continue to play a role in metaphilosophical debate. I readily concede that that presumption is justified for the immediate future. But what if, into the distant future – measured in centuries rather than decades, say – the sciences do, in fact, cease to be central and valued features of human cultures?

Many possibilities offer themselves. I will consider just two of them. The first is that the dissolution of our ‘scientific culture’ would doubtless provide a rich topic of inquiry for philosophers (alongside historians and others). Certainly one can imagine ethicists and philosophers of science vigorously debating how and why the sciences ceased to be central and valued features of that culture. And metaphysicians, philosophers of mind and others could face lively debates about how their inquiries will proceed without input from newly disenfranchised sciences, like physics or neurophysiology. It is unlikely that broad areas of philosophy will simply ‘shut down’, since metaphysics and philosophy of mind, to take two examples, antedate the emergence of the sciences. Furthermore there are viable alternative candidates to naturalised metaphysics and philosophy of mind which maintain that although philosophy and the sciences should interact, the former should not be subordinated to the latter (see, for example, Corradini, Galvan, and Lowe 2006; Horst 2007). By subordinating philosophy to science we would, as Henri Bergson (1920: 208) warned, have ‘sacrificed philosophy without any appreciable gain to science’. Only an exaggerated estimation of the dependence of philosophy upon science could sustain the worry that the passage of science would threaten or necessitate an ‘end of philosophy’.

The second is that philosophers in a ‘post-scientific’ culture will have no cognitive and cultural authorities to respond to. These may include newly revived theological and philosophical authorities, or quite different modes of inquiry and forms of knowledge currently unimaginable by us, today. The form and nature of such authorities is, again, a matter for speculation, but it is worth reiterating that earlier generations of inquirers – including some surprisingly historically recent – did not anticipate the emergence of our scientific culture. Therefore, our inability to imagine novel forms of cognitive and cultural authority is an indication of our due humility, rather than a barrier to their impossibility.

Of course, the shift to a ‘post-scientific culture’ would perhaps render certain philosophical ‘research programmes’ untenable. Naturalism in metaphysics and the philosophy of mind, for instance, could cease to be plausible ways of conceiving of, or pursuing philosophy within a ‘post-scientific society’. A comparison could be drawn here with the gradual disappearance of providential and teleological reasoning from philosophy since the eighteenth century. Nowadays, appeals to divine purpose may seem trite, perhaps absurd, in a way that just a few hundred years ago would have been

so natural and intelligible that drawing attention to them may have seemed unnecessary and pedantic.

The changes in the aims and nature of philosophy within a post-scientific culture would therefore also have positive effects. It would enable new forms of philosophical thought and practice, based both upon reflection on the passage of the sciences and critical engagement with the tradition (or traditions) that replaces them. There is, therefore, no basis to the worry that a ‘post-scientific’ culture would be philosophically impoverished, despite the ambitious rhetoric of some contemporary philosophical naturalists. Certainly the proposal that the future of philosophy depends upon its close and increasing association with the natural sciences should be greatly moderated. Two contemporary philosophers of science, for instance, remarked that the modern sciences are ‘the great epistemic enterprise of modern civilization’ and urge that any discipline which fails to conform to its strictures therefore ‘fails to qualify as part of the enlightened pursuit of truth, and should be discontinued’ (Ladyman and Ross 2007: 61, vi, 310; see Kidd 2009). This proposal is, of course, contingent upon the continuing value and salience of scientific knowledge and practices into the future—and that is far from certain. At the least, the claim that those intellectual disciplines and practices which cannot be successfully accommodated by the sciences should be ‘discontinued’ is both disturbing and arrogantly pre-emptive. A wide variety of possible future scenarios could see the cognitive and cultural authority of the sciences change to the point where such naturalistic vainglory appears not only untenable, but also absurd.

Kant had issued warnings against such hubris in the classic essay ‘What is Enlightenment’. In that short work, Kant argued ‘[a]n age cannot bind itself and ordain its (at best very occasional) knowledge’ because, in so doing, it illegitimately committed itself to the presumption that such knowledge would remain unaffected by future developments. The ‘descendents’ of that hubristic age, continued Kant, would be ‘fully justified in rejecting those decrees as having been made in an unwarranted and malicious manner’ (Kant 1784/1995: 4). Such ordinations are unwarranted for the reasons outlined earlier regarding what Cooper calls ‘hubris’. Furthermore they are ‘malicious’ because they might deny future generations the opportunities to determine their own traditions of inquiry, in line with Kant’s emphasis upon the importance of individual rational and moral autonomy. From Kant, therefore, one should take the point that one cannot and should not presume the persistence of our own knowledge and associated traditions into the future.

## 6. Philosophical Pluralism and Progress

I have argued that reflections on the radical contingency of the science should inform metaphilosophical debates about the future of philosophy. The efficacy of the sciences

notwithstanding, certain radical contingencies accompanying the emergence of the sciences should encourage us to resist ambitious attempts to turn philosophy into a science. Put another way, the future relationship between philosophy and science should not be construed as one of gradual assimilation or convergence. I would therefore urge us to remain cautious even about such moderate naturalist claims as that ‘philosophical inquiry should be both *modelled on* the methods of the successful sciences, and, at a minimum, *consistent with* the results of those sciences’ (Leiter 2006b: 277). If the foregoing remarks are correct, then future cultures may afford no privileged authority to the sciences, such that those proposals, whether of imitation or consistency, would be groundless.

Those engaged in contemporary metaphilosophical debates should bear in mind the fact that those sciences, first, may not have emerged and, second, may not persist as features of future human cultures. To invest the future of philosophy in one radically contingent tradition – namely, the modern sciences – is an unwise policy. It is far wiser for us to keep our epistemic options open rather than pre-emptively commit ourselves to a delimited set of possibilities for the future of philosophy. Indeed, future generations may regard our contemporary metaphilosophical reflections on philosophical naturalism as an anomalous period in the history of philosophy. If this is the case, then the question of how, if at all, philosophy can be construed as progressiveness should be revisited.

Many naturalists have supposed that progress in philosophy will, if anything, consist of its ongoing integration with the accepted body of scientific knowledge or in the increasing alignment of philosophical and scientific methodology. Ladyman and Ross, for instance, explicitly state that any philosophical theories or disciplines which cannot be reconciled with a naturalistic framework should be ‘discontinued’. On those strict naturalistic terms, many areas of philosophy will seem non-progressive; for instance, the various contemporary non-naturalistic ethical and metaphysical systems. Such judgements turn on the claim that philosophical progress is defined, to a greater or lesser degree, by values drawn from or analogous to the sciences.

Many philosophers have rightly criticised such judgements because of the intolerably narrow conception of the aims and value of philosophy it requires. Wittgenstein (1980: §§ 36, 49), for example, records his hostility towards such implicit scientism when he remarks that ‘people nowadays think that scientists exist to instruct them’, thereby forgetting that ‘poets [and] musicians’ may also have ‘*something to teach them*’. And he goes on to warn that ‘the age of science and technology’ may be the ‘beginning of the end for humanity’, as ‘our disgusting, soapy water science’ drowns out all else that is good and valuable in human life: namely, richer conceptions of philosophy and human life, unencumbered by illegitimate commitments to the strictures of natural science.

My remarks about the contingency of science should indicate the importance of preserving and respective metaphilosophies which allow for conceptions of philosophical progress which do not depend upon the sciences. Although there are useful ways in which philosophers can progress by drawing upon the sciences, the progressiveness of philosophy is, ultimately, an autonomous issue. The ongoing importation of empirical knowledge into philosophy is an instance of progress, especially in disciplines like the philosophy of mind. Similarly, new scientific developments – in engineering and neuroscience – are sustaining vigorous new philosophical debates in their own right, and this is a phenomenon hardly confined to contemporary times. So philosophy can progress by engaging with the sciences; however, this does not entail that philosophy cannot progress without those sciences, or that philosophical progress is impossible in the absence of science.

To demonstrate this point, one can gesture to those venerable traditions which offer a range of alternative metaphilosophies which sponsor quite different conceptions of philosophical progress. I will consider three: the spiritual, the cosmopolitan, and the humane. Pierre Hadot (1995) has interpreted ancient Greek philosophy as a series of ‘spiritual exercises’ manifesting in a certain ‘way of life’. Kant (2004: 538) described a ‘cosmopolitan’ sense in philosophy, focusing the questions: ‘What can I know? What ought I to do? What may I hope? What is man?’ More recently, Bernard Williams (2006) and John Cottingham (2009) have elaborated a new conception of ‘humane philosophy’ which is defined in contradistinction to prevailing images of philosophy modelled on the sciences. This conception of philosophy is directed towards the ‘wide humanistic enterprise of making sense of ourselves and of our activities’ (Williams, 2006: 197). It is ‘a way of trying to reach an integrated view of the world: in our philosophical activity’, one which is ‘synthetic in its methods, synoptic in its scope, culturally and historically aware in its outlook, open to multiple resonances of meaning’ (Cottingham, 2009: 254). These three possibilities may be related, or distinct, but they make the important point that there are available conceptions of the nature, aims, and value of philosophy which allow for its progressiveness without tying it to the natural sciences.

The question of the possibility of philosophical progress turns on its relationship to the sciences. This point is well made by a figure cited earlier in this paper. Recall that I described Kierkegaard as a corruptionist because of his remark that the natural sciences were doomed to be the source of ‘all corruption’. It is time to elaborate upon this remark, whose meaning is subtler than a mere hostility towards scientism. The specific worry that Kierkegaard pushes is that the natural sciences only become ‘dangerous and pernicious’ when they ‘encroach upon the sphere of the spirit’: ‘Let it deal with plants and animals and stars in that way; but to deal with the human spirit in that way is blasphemy, which only weakens ethical and religious passion’ (quoted in Carlisle 2006: 65). Kierkegaard is, therefore, critical of the sciences only when they exceed their

proper bounds and jeopardise human moral and religious sensibilities – ‘the sphere of spirit’. The point is that progress, in philosophy and in science, can only be ensured if the neither is slave to the other: the natural sciences only become a source of ‘corruption’ when philosophy is surrendered to them.

## 7. Conclusions

Engagement with the sciences is therefore neither a necessary nor a sufficient condition for philosophical progress. Spiritual, cosmopolitan and humane philosophy can be progressive – enabling a ‘way of life’, answering Kant’s four questions, or addressing issues of vital human importance – but which are not shackled to the sciences. The philosophical traditions which those alternative metaphilosophies could sponsor would not, of course, ignore or neglect the sciences, but nor would their own integrity and progressiveness be determined by them. Certainly they indicate that there is no warrant for the philosophical naturalists’ insistence that we ‘either ... adopt and emulate the method of successful sciences, or ... operate in tandem with the sciences, as their abstract and reflective branch’ (Leiter 2006a: 236)

The foregoing remarks do not exhaust the complex metaphilosophical issues concerning the relationship between science and philosophy. However they should indicate that stronger forms of philosophical naturalism, which allege that philosophy’s future is intimately bound up with that of science, are unwarranted. Alternative conceptions of the nature and aims of philosophy are available, each of which could sponsor notions of philosophical progress that are, perhaps, more closely allied with the spiritual, cosmopolitan or humane functions which philosophy can aspire to fulfil. If this is so, then into the future philosophy could be judged as progressive, but those judgements are not necessarily intimately invested in its engagement with and investment in the sciences.

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