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Ten reasons to embrace scientism

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ABSTRACT

A strong version of scientism, such as that of Alex Rosenberg, says, roughly, that natural science reliably delivers rational belief or knowledge, whereas common sense sources of belief, such as moral intuition, memory, and introspection, do not. In this paper I discuss ten reasons that adherents of scientism have or might put forward in defence of scientism. The aim is to show which considerations could plausibly count in favour of scientism and what this implies for the way scientism ought to be formulated. I argue that only three out of these ten reasons potentially hold water and that the evidential weight is, therefore, on their shoulders. These three reasons for embracing scientism are, respectively, particular empirical arguments to the effect that there are good debunking explanations for certain common sense beliefs, that there are incoherences and biases in the doxastic outputs of certain common sense sources of belief, and that beliefs that issue from certain common sense doxastic sources are illusory. From what I argue, it follows that only a version of scientism that is significantly weaker than many versions of scientism that we find in the literature is potentially tenable. I conclude the paper by stating what such a significantly weaker version of scientism could amount to.

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"If we're going to be scientistic, then we have to attain our view of reality from what physics tells us about it. Actually, we'll have to do more than that: we'll have to embrace physics as *the whole truth about reality*. (...) We trust science as the only way to acquire knowledge."

(Alex Rosenberg)

"What, after all, have we to show for non-scientific or prescientific good judgment, or common sense, or the insights gained through personal experience? It is science or nothing."

(B.F. Skinner)¹

Introduction

This paper provides an assessment of ten reasons that might be given for embracing scientism. It discards seven reasons as providing insufficient or no support and identifies three reasons that potentially count in favour of scientism.

Scientism has recently become increasingly popular among scientists, philosophers, and popular science writers.² It can be

construed as a thesis, an attitude, or a stance. Susan Haack, for instance, defines it as a particular attitude and uses 'scientism' as a pejorative term:

Scientism is an exaggerated kind of deference towards science, an excessive readiness to accept as authoritative any claim made by the sciences, and to dismiss every kind of criticism of science or its practitioners as anti-scientific prejudice.³

In this paper, for two reasons, I treat scientism as a *thesis* rather than an attitude or a stance. First, as evidenced by the quotations and references I give in this paper, scientism as a thesis is, if not ubiquitous, certainly frequently found in the writings of scientists and philosophers. Second, it seems that every attitude, affection, or stance, at least if it is to be rational and if it is to be up for debate, can be translated into a thesis, such as the thesis that *we should have* that affection, attitude, or stance, or the thesis that it is

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¹Rosenberg, 2011, p. 20; Skinner, 1971, pp. 152–153.

² For some garden-varieties of scientism, see the overview in De Ridder, 2014.

³Haack, 2007, pp. 17–18.

⁴Thus, attitudes such as my preference of film over musical theater does *not* count as a relevant sort of attitude, since it is not meant as a general and rational attitude that I take to be normative—I do *not* think that everyone ought to prefer milk chocolate over dark chocolate. Scientism clearly *does* count as such an attitude, since the adherent of scientism takes it that scientism is a good attitude that everyone ought to adopt. At least, this is clearly what adherents of scientism such as Rosenberg and Ladyman have in mind.

permissible to have that affection, attitude, or stance. Thus, no matter how one understands 'scientism', it will always imply some scientistic thesis or other. It seems, therefore, entirely warranted to treat scientism as a thesis.

Also, in opposition to Haack, I will use the term 'scientism' *non-pejoratively*. True, the term 'scientism' is often used negatively, but it need not be. For instance, James Ladyman and Don Ross in their book *Every Thing Must Go* explicitly say that they adhere to scientism and go on to defend it in detail.⁵ Thus, to say that something is an instance of scientism is *not* thereby to take a positive or negative stance towards the claim in question.

Construed as a thesis, scientism can be interpreted, among others, as a methodological, existential, ontological, or epistemological claim. Elsewhere, I have argued that virtually all varieties of scientism imply some kind of scientistic *epistemological* thesis. The thesis is usually that the natural sciences, such as biology, chemistry, and particularly physics, provide rational belief or knowledge and do so *reliably*, whereas common sense doxastic sources — sources of belief — do not. In this article, I focus on the claim that only natural science provides *rational belief* or *knowledge*.

One might think that this view is implausibly strong. Do the humanities, such as history and philosophy, for instance, not deliver any rational belief or knowledge? Surprisingly, though, a fair number of adherents of scientism *do* indeed embrace a strong view on which only the *natural* sciences deliver rational belief and knowledge. Alex Rosenberg is quite explicit that the humanities certainly do *not* do so:

When it comes to real understanding, the humanities are nothing we have to take seriously, except as symptoms. But they are everything we need to take seriously when it comes to entertainment, enjoyment, and psychological satisfaction. Just don't treat them as knowledge or wisdom.⁸

Other adherents of scientism do not explicitly use the word 'knowledge' or the phrase 'rational belief', but make claims that are conceptually highly similar to this and that can easily be understood along these lines. According to Daniel Dennett, for instance, "when it comes to fact, and explanations of facts, science is the only game in town." Some might be willing to count, say, philosophy among the sciences, but many adherents of scientism *expressis verbis* reject this option. The renowned physicist Stephen Hawking famously declared at the 2011 Google Zeitgeist Conference that "philosophy is dead" and that "scientists have become the bearers of the torch of discovery in our quest for knowledge." 10

We find echoes of such scientistic approaches in philosophy as well, such as W.V.O. Quine's defence of the idea that epistemology needs to be naturalized. As Susan Haack explains in detail, Quine's naturalism is ambiguous between at least three mutually incompatible kinds of naturalism, but each version implies at least that many traditional epistemological questions ought to be abandoned in favour of or replaced by the sciences, where sometimes 'sciences' is understood broadly by Quine, whereas at other times he clearly

Of course, there are also academic disciplines that count neither as humanities nor as natural sciences, such as social science and economics. Some adherents of scientism are explicit that even those sciences do not deliver knowledge. According to E.O. Wilson, "[i]t may not be too much to say that sociology and the other social sciences, as well as the humanities, are the last branches of biology waiting to be included in the Modern Synthesis." His idea seems to be that *all* academic disciplines should be reduced to the natural sciences, especially to biology. Francis Crick claims that everything can be explained by physics and chemistry and Alex Rosenberg defends the view that physics is the whole truth about reality. 16

Paradigmatic cases of scientism, then, claim that only the natural sciences can deliver rational belief or knowledge. There are also slightly weaker versions of scientism, on which, say, psychology and sociobiology can deliver rational belief and knowledge. I consider these theses close enough to the paradigmatic cases to also count as versions of scientism. I will, therefore, at several junctures in the paper pay attention to them as well.

One might wonder how scientism relates to naturalism. In order to answer this question, we should note that the term 'naturalism' is used in a variety of ways. Many define 'naturalism' as the view that only natural entities exist or that only natural, as opposed to supernatural or spiritual, forces operate in the world. For example, Michael Ruse says: "What do we mean by 'naturalism'? I presume that it is something set off against 'supernaturalism', and that this latter refers to a God or gods and their intervention in this world of ours."¹⁷ This means that, even though no strict implication holds between scientism and naturalism (scientism is an epistemological principle, whereas naturalism is usually understood as an ontological thesis), virtually all varieties of scientism come with naturalism: only the natural sciences deliver knowledge or rational belief, because there is no knowledge to be had by moral intuition, revelation, or some such thing (since there is no moral or supernatural reality that corresponds to it). On this definition of 'naturalism', scientism is significantly stronger than naturalism, though-many adherents of naturalism would even consider scientism, thus understood, as naturalism gone overboard. This is because scientism also claims that only natural science provides rational belief or knowledge, whereas other adherents of naturalism, understood along these lines, can also admit other sources of rational belief and knowledge, such as introspection, memory, and various other academic disciplines, including the humanities.

On other definitions of 'naturalism', naturalism and scientism are even closer to each other. John Post, for instance, defines 'naturalism' as "the twofold view that (1) everything is composed of natural entities — those studied in the sciences (on some versions, the natural sciences) — (...) (2) acceptable methods of justification and explanation are continuous, in some sense, with those in

has only natural science in mind. 11 To give an example of the latter, in "The Nature of Natural Knowledge", Quine says: "Epistemology is best looked on, then, as an enterprise within natural science." 12 Another example from philosophy is Stephen Stich's and Patricia Churchland's claim that neuroscience tells us that there are no such things as beliefs, so that folk psychology — which is usually cashed out in terms of belief-desire pairs — is radically misguided. 13 Of course, there are also academic disciplines that count neither

⁵See Ross, Ladyman, & Spurrett, 2007. Alex Rosenberg also describes himself as an adherent of scientism. See Rosenberg, 2011, p. 6.

⁶See Stenmark, 2001.

⁷See Peels, 2018.

⁸See Rosenberg, 2011, p. 307.

⁹Interview by Sholto Byrnes in the New Statesman, April 10th, 2006.

¹⁰ See Matt Warman, "Stephen Hawking Tells Google 'Philosophy Is Dead'", *The Telegraph*, May 11th, 2011. He makes the same point in almost the same words in Hawking and Mlodinow 2010, p. 5.

¹¹ The ambiguity is clearly found in Quine, 1969 and spelled out in detail by Haack, 2009, pp. 167—189. See also Kim, 2008.

¹² Quine, 1975, p. 68.

 $^{^{13}}$ See Churchland, 1987, and Stich, 1983. For a detailed criticism, see Haack, 2009, pp. 213–238.

¹⁴ Wilson, 1975, p. 4.

¹⁵ See Crick, 1966, pp. 14, 98.

¹⁶ See Rosenberg, 2011, p. 25.

¹⁷ See Ruse, 2013, p. 383.

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