

## Remarks on Scientism

Science is extremely impressive. Not only does it give us technology, but the justification for many scientific theories is overwhelmingly good. Conversely, dogmatists are often *underwhelming*. If you're like me, they easily trigger your "bullshit detector."

All this can encourage a stance known as **scientism**—the view that if a claim has not been confirmed by science (incl. formal sciences like mathematics), then we are required by rationality to reject the claim. An immediate problem, however, is that scientism itself does not seem to be confirmed by science; it is rather a philosophical claim about "rationality."

But I propose to set aside this problem. Also, I shall be focusing on only one consequence of scientism, namely:

(\*) If science has not confirmed that  $X$  exists, then we should reject the existence of  $X$ .

So according to (\*), if science has not confirmed the existence of souls (for example), we should reject the existence of souls.

However, (\*) potentially encodes an **argument *ad ignorantium***: If physics has not confirmed the existence of a new type of microparticle (a second kind of Higgs boson), such a particle might still exist. More broadly, it is certain that science will make new discoveries in the future... But scientism might grant this; after all, it is a hallmark of science that we should be open-minded to new evidence and discoveries. Regardless, scientism might still claim that if science has not confirmed that  $x$  exists, then **Occam's Razor** indicates that we should go on the assumption that  $X$  does not exist. In the absence of evidence of a new microparticle, science should proceed as if there is no such particle.

Seems reasonable. However, this is different from what (\*) says. The import of Occam's Razor looks more **methodological**—it concerns how we should conduct scientific investigation, rather than what we should believe or reject. The rationale behind Occam's Razor seems to be this: Given the current state of evidence, it needlessly complicates things to say that (e.g.) there might be a new particle that affects our experiments in microphysics. So physics should **proceed on the assumption** that there is no such particle, relative to the current state of evidence. But this is not to *deny* such a particle outright—physics is instead *ignoring the possibility* of such a particle, at least for now, so to keep its present operations relatively simple.

The previous paragraph is controversial. However, if you find it compelling, then (\*) would seem incorrect: There may be a complete lack of evidence—and yet it would be presumptuous to deny a new microparticle. So in some cases, "**absence of evidence is not evidence of absence.**"

**BUT:** Life is more complicated than this slogan indicates. Sometimes absence of evidence *is* evidence of absence. For example, there has been no evidence of the dodo bird for a few hundred years. Given the lack of evidence, we *should* conclude that they are extinct (absent).

The difference, however, is that dodos certainly *would* leave evidence of their presence if they were not extinct. This is an **additional premise** when an absence of evidence drives the conclusion that dodos are absent. But that, in turn, suggests that (\*) is *close* to being true—it may just need to be tweaked somewhat. Let's try this instead:

(†) If science has not confirmed that  $X$  exists—and science *would* have confirmed it by now if  $X$  exists—then we should reject the existence of  $X$ .

Thus, going by (†), we should deny that dodos exist. Yet since new microparticles are very hard to detect, we should not necessarily reject their existence. Physics might just need more years of research and development before their discovery is possible.

In fact, I think that (†) is correct. But again, it is not scientism. Consider **souls** once more. Let's assume for discussion's sake that there is no solid evidence for their existence. Then, in the absence of evidence, should we treat souls like the dodo or like a new microparticle? Well, if we are guided by (†), the key question here is: Would there be scientific evidence of souls if they existed? Would science have confirmed their existence by now?

Going by most descriptions, a soul is something **undetectable** by the usual observational means. A soul is invisible, makes no sound, has no mass, etc. Given that, it may be unclear what we even *mean* by the word 'soul'. However, assuming the term 'soul' is not gibberish, it seems clear that souls would be *at least* as hard to detect as new microparticles. So there is no reason to expect that we would have scientific evidence for them yet, if they existed. In which case, (†) would not rule them out: Despite the absence of evidence, it would not follow from (†) that we should reject their existence.

This of course does not mean we should affirm their existence either. The most rational attitude may be to **suspend judgment**, to have no opinion either way. Although, given the earlier methodological point, it is still best for science to proceed on the assumption that souls do not exist ("methodological atheism"). But that does not mean denying their existence outright.

I expect that this will leave defenders of (\*) unhappy. They might counter my argument as follows. "Souls are supposed to be **nonphysical**. But there is zero evidence that nonphysical things exist! So we should reject the existence of souls after all." Yet this reply is ultimately **question-begging**. We would not expect science to have confirmed the existence of nonphysical things by now, if they existed. For nonphysical things would also be undetectable by the usual observational means. So it does not follow that we should reject them, unless the opponent begs the question by jettisoning (†) in favor of (\*).

This may prompt a follow-up objection: "The hypothesis that nonphysical things exist is **unfalsifiable**. So we should avoid such a hypothesis." I would concur if "avoid" means that science should leave aside such a hypothesis and proceed as if everything is physical. But I would disagree if it means that as scientists we must positively reject nonphysical things.<sup>1</sup> After all, **unfalsifiable does not mean false**; rather, an unfalsifiable hypothesis is one we cannot test scientifically. This means it would be scientifically unjustified to believe such a hypothesis, certainly. But it is a *non-sequitur* to conclude that it is false.

There might be further objections to consider. So if you are not yet convinced that (†) is better than (\*), you may be right to feel that way! Regardless, I hope to have provided you some introduction to issues surrounding scientism.

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<sup>1</sup> There may be good *philosophical* arguments against souls however. Or you may think there are religious reasons to believe in souls. But either way, this is already to depart from scientism.