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Good Science is Communist: A Reply to Bright and Heesen

Matthew J. Brown, Southern Illinois University, matt.brown@siu.edu

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Liam Kofi Bright and Remco Heesen (2023) raise a familiar and deeply troubling problem: commercial research is widespread in contemporary science, but epistemically problematic in various ways. Commercial research violates various core norms of science and has as one of its primary aims forwarding the financial interests of the private companies that fund it. As such, it is often biased, misleading, methodologically problematic, selective, and tending to create unwarranted public outcomes, such as approval of drugs that do not meet standards of safety or efficacy or stalling public action on key issues (250-51).

The Differences in Commercial and Academic Research

Bright and Heesen pursue a radical, possibly the most radical, solution to this problem: they argue that, not only is commercial research problematic, it is so different from academic research that it is *not even science* according to an independently plausible demarcation criterion for science. The criterion they defend for this purpose is the Mertonian norm of *communism*. “Communism says that one must make one’s work available to others for free, not try to maintain proprietary rights to it, and treat it as always properly open to the evaluation of the scientific community” (254). Secrecy, use of intellectual property rights to limit further research, and failure to acknowledge critical evaluations by other scientists are all violations of this norm.

The success of their argument depends in part, then, on the independent plausibility of the demarcation criterion proposed. Their defense of this criterion has a negative and a positive component. The negative component is their critique of the deflationary view that “‘science’ is a success term” (252), that is, that “science” is just an honorific for particularly laudable epistemic achievements and practices. The positive part is their defense of the norm of *communism* as a non-epistemic criterion for distinguishing science from pseudoscience. The two parts of the argument are linked, in that they take the failure of the deflationary response to the demarcation problem to have two lessons for a successful demarcation criterion: it must be possible for something to be scientific yet erroneous (such as null results, superseded theories), and it should allow that there are various successful mundane epistemic achievements that are not properly scientific (basic perceptual beliefs). They thus argue that we should seek a demarcation criterion that consists of non-epistemic social norms.

Here I think they make a mistake; Bright and Heesen at times conflate success-promoting norms and practices with epistemic success itself or the criteria by which we judge epistemic success. Science is (in part) an epistemic enterprise. It would be surprising if its distinguishing norms and practices did not *in some way* promote epistemic success. It is not that conformity to the norms and practices of science *guarantees* or *constitutes* epistemic success. The norms and practices of science are fallible, indeed, and any criterion that requires such a guarantee would be a problematic solution to the demarcation problem. But it is equally problematic, I think, to suppose we could give a demarcation criterion for science as an epistemically *neutral* practice, if any demarcation criterion is workable. This has consequences for the way that Bright and Heesen pick out *communism* from among the Mertonian CUDOS norms (communism, universalism, disinterestedness, and organized

skepticism). Nothing about universalism, disinterestedness, or organized skepticism guarantees epistemic success, nor does conforming to those norms somehow *constitute* success. One might achieve epistemic success while engaged in motivated reasoning, and one might be the paragon of disinterestedness but have the bad luck of epistemic failure. If we distinguish rather than elide success-promoting norms and practices from those that guarantee or constitute success, we see that these norms, and potentially various other epistemic norms and practices, are also plausible candidates for demarcation criteria.

On Demarcation Criteria

While it is interesting to explore non-epistemic demarcation criteria, the argument for doing so is thus problematic. That said, Bright and Heesen carefully qualify their view. They argue that the aim is not to give a “once-and-for-all answer to the demarcation problem,” but instead one that is useful for their particular goals of addressing the problem of commercial research (p. 250). They also point out that communism is particularly well-suited to their aim of critiquing commercial research (245).¹ Bright and Heesen also acknowledge that the other CUDOS norms, or other non-CUDOS criteria, might also be effective criteria for their or other purposes. Nevertheless, they hold that the communism norm has the benefit of acknowledging that science is a “shared socio-cultural activity,” in that not following the norm, one fails to treat one’s research as part of that sort of shared activity.

Despite these misgivings about the independent plausibility of the communism norm as a demarcation criterion, we can nevertheless entertain it as a candidate and judge their argument more pragmatically, according to where it leads us. (Bright and Heesen invite this style of evaluation: “the proof is in the pudding” (255).)

Here I think that their view has several benefits. It highlights the way in which companies pursue research that exploits the status and institutions of *science* while not fully participating in the cooperative community practices that make science work. It shows us the way in which the profit motive tends to promote secrecy and selective release of information that can be misleading. It gives us a way of evaluating those practices critically without simply pointing at the epistemic detriments they lead to. And it also suggests a way of addressing the problems of commercial research: it should become more communist (in the Mertonian sense). What’s more, it provides support to the Open Science movement, as the best way of fulfilling the constitutive norm of science.

However, I wonder whether a more straightforward response to the commercialization of research permits as effective a criticism of it, while being consistent with more deflationary, pessimistic, or pluralistic approaches to demarcation.

The Aims and Practices of Commercial Research

Another reasonable approach, it seems to me, is simply to point out the variety of ways in which the aims and practices of commercial research in fact lead to unreliable, epistemically deficient research. Whether or not we apply the label “science” to such research is somewhat

¹ I’m a little unclear whether this fits with their claim that the communism criterion is “independently plausible.”

besides the point. We have good reason to think that we should not rely on research funded and carried out by private, commercial entities.

In §2, Bright and Heesen briefly review the various problems with industry-funded research: secrecy, selective publication of favorable results, the attempt to silence unfavorable research even when publicly funded, unreliable methods chosen to deliver predetermined results, data fabrication and falsification, rhetorically spinning results to seem more favorable, funding researchers biased towards desired results, manipulating classifications and concepts, and manipulating the regulatory use of research results, among others. Where it serves corporate self-interest (the profit motive), and where it is possible to get away with it, we should expect these shady practices to continue, with the aim of misleading or confusing the public and decision-makers to generate the actions (or inaction) that best serves their private interests.

The case against commercial research can be strengthened. Large-scale studies of commercially-funded research show remarkable bias. Consider the pharmaceutical research reviewed by Jim Brown (2008a; 2008b; 2016): various studies showed that the published result was favorable to the sponsor's drug between 95-100% of the time! By comparison, one study showed that independently funded research was unfavorable to a new drug 38% of the time (Friedberg et al. 1999). Another article looked at studies calcium-channel antagonists and classified them as favorable, neutral, or unfavorable to the drugs; they found that 96% of authors of favorable articles had financial ties to manufacturers, while only 60% of authors of neutral articles and 37% of authors of unfavorable articles had such ties (Stelfox et al. 1998). The scale of the problem is undeniable. On the basis of a wide variety of such evidence, Jacob Stengenga (2018) has argued compellingly that research on medical interventions systematically overestimates their effectiveness and underestimates their harms. Nearly all of this research is directly or indirectly commercial (Resnik 2007). Similar issues have been found wherever there is a private financial interest in the results of research.

Scientific methodology evolves over time in response to patterns of empirical successes and failures of research (Dewey 1938; James Robert Brown 2008b). The way we learn about and improve the aims, norms, practices, and techniques of science depends at least in part on the track record of research guided by them. What we have learned from decades of increasing commercialization of research is that it has a particularly poor track record of biased research and various epistemic harms. This should be sufficient, I think, for the reform if not the outright rejection of commercial research. One need not even identify specific practices and norms of commercial research to critique. The track record is so egregiously poor, it seems to me justifiable to reject commercial research *tout court*.

It is worth remembering some of the reasons that folks like Laudan and Feyerabend have argued that we should give up on the project of demarcating science from pseudoscience. First, the great diversity of activities that constitute modern science evade any attempt to identify a shared essence. Second, demarcation criteria encourage an epistemically vicious attitude of close-mindedness, arrogance, or intellectual hubris (see Kidd 2017c, 2016, 2017b, 2017a). It seems to me that the seriousness of these objections to the demarcation project is not faced by Bright and Heesen. After all, one need not accept the deflationary account of "science" as a success term that they critique; one can, instead, simply be pluralistic or anti-

essentialist about the nature of “science,” and so hold that there is nothing really to demarcate.

Even in the sense in which commercial research counts as pseudoscience on Bright and Heesen’s account, this does not give us a strong enough justification for rejecting it. Suppose commercial research violates communism in support of the profit motive. Yet suppose further that this science were pursued in a hyper-Hayekian wonderland, where pursuit of the profit motive always led to the best social outcomes. We should expect the epistemic and practical consequences of commercial research to be as good as if not superior to science in such a counterfactual context. This suggests it is the unreliability, rather than the uncommunist behavior, of commercial research that should drive our rejection of it.²

It is clear that capitalism ruins science, at least when the profit motive becomes a guiding aim of scientific research. It is also likely that becoming more communist will remove a serious obstacle to good science. But criteria for demarcation of science are neither necessary nor sufficient to reach these conclusions.

Understanding Communism

A final remaining question is whether the critical argument herein can possibly be restricted to science as such; in other words, are the Mertonian and political senses of “communism” separable? Can science be made more communist in the context of global capitalism? Bright and Heesen at least suggest that it might not be, insofar as they briefly suggest that the “practical” way to make this happen might involve nationalizing both scientific research and the companies that produce it. This is reminiscent of Jim Brown’s solution to the problems of commercial medical research: “Socialize research. Eliminate intellectual property rights in medicine. Make all funding public (including government and independent foundations and charities)” (James Robert Brown 2008a, 763). It is hard to imagine how these radical solutions can be pursued without more widespread and radical sociopolitical changer. It is also doubtful, in my view, that anything less will significantly improve the situation.

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² This is unlikely in the real work, I would argue, because communism, like all the CUDOS norms, is (defeasibly) success-promoting in a way that troubles Bright and Heesen’s argument.

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