

Reasons versus causes in Arocha's scientific realism

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Abstract

Arocha's scientific realism (2021) puts at the center of psychology the individual and their variability in behavior: the individual appears to be irreducible to what emerges from the analysis of aggregate data. According to this position, psychology's aim is to uncover the mechanisms underlying the observable world. This entails adopting the cause-based approach of the natural sciences. Arocha's article also refers to final causes and intentions and thus to the reason-based approach of the human sciences in contrast to that of the natural sciences. Thus, it is not clear whether the article aims to reduce the final causes to mechanical causes or supports the irreducibility of the former. Starting from these remarks, this comment will argue that the reason-based approach is preferable to the cause-based approach in order to have a scientific psychology. Adopting the reason-based approach also avoids the appeal to aggregate data by focusing upon the single case.

Keywords

causes, history, physics, reasons, scientific psychology

The target article (Arocha, 2021) is noteworthy thanks to its critical outlook on psychological research practice and its foundational claims, that is, those philosophical assumptions on which it is based. It proposes a framework for research practice that is an alternative to positivism (and empiricism and operationalism) and that is able to focus on *variability in behavior*, which appears to be strictly tied to the individual's intentions and reasons and thus to the notion of final cause. Because the article proposes a general theoretical framework rather than critically discussing philosophical issues, it does not overly focus on clarifying what it precisely means by "final cause" and "cause." This point deserves attention because it is connected to the definition of the nature of psychology. That is, is psychology a natural or a human science? Is psychology a discipline following the so-called Galilean tradition (based on the causal explanation and search for the laws and mechanisms of mind and behavior) or the so-called Aristotelian tradition (based on

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the teleological explanation and aiming to understand the reasons why a certain agent acts or intends to act in a certain manner and in a specific context; on this point, see D'Oro, 2012; von Wright, 1971)? Both traditions provide us with an explanation of human behavior, but in very different manners: the Galilean tradition appeals to physical or material forces and strives for generalization, whereas the Aristotelian tradition appeals to what a single agent takes to be a rational way of acting following their intentions and reasons (Feser, 2005, p. 145; Lennon, 1994, pp. 531). Arocha's (2021) explicit appeal to the central role of final causes (i.e., intentions) in the observation-oriented modeling, its attention to the occurrence of patterns of behavior in an *individual* participant to an experiment and, above all, its stress on behavioral variability, all indicate an endorsement for the Aristotelian tradition. In fact, because variability refers to the intentions and reasons of the single individual only and thus to something undetectable through the assessment of aggregate data, it seems to be irreducible to the realm of material or physical causes. However, quite surprisingly, the scientific realism depicted in the first half of Arocha's (2021) paper is strongly rooted in the Galilean tradition, not that of logical positivism but rather that of Mario Bunge's (1996) philosophical system.¹ It must be stressed that such a system (which appears to be fully endorsed by Arocha) classifies teleological explanations (i.e., those explanations appealing to intentions and reasons) among pseudoexplanations. This is because such a system assumes that "genuine explanation involves reference to some concrete (sometimes not directly observable) mechanism" (Bunge & Ardila, 1987, p. 278). Here, "concrete mechanism" refers to physical forces, more precisely to physiological mechanisms, considered to be the true causes of our behavior. This approach leaves no room for causes apart from physical, material, or concrete ones. The appeal to final causes, intentions, or reasons in an explanation is legitimated only if these terms refer (i.e., are reduced or potentially reducible) to brain processes (Bunge & Ardila, 1987, pp. 215–218) or, more generally, to something physical or material.

Because of the incompatibility of the notion of explanation offered by the Galilean and the Aristotelian traditions, I argue that, in order to be coherent, the proposal of the target article (Arocha, 2021) should follow one of the following routes: (a) provide and defend an account that shows that reasons are nothing but causes or (b) accept that reasons are not causes.


The first route maintains both the philosophical claims of scientific realism that are proposed in the target article (and, in particular, its aim of identifying the laws and mechanisms of mind and behavior) and the appeal to intentions and reasons. However, at least at the moment, no philosophical account can satisfactorily demonstrate that reasons are causes (on this point, see Feser, 2005; Lennon, 1994). Bunge's strategy here is to be confident in the development of neuroscience (Bunge & Ardila, 1987, pp. 30–31). This is a risky proposition due to the present crisis in this field (on this point see Button et al., 2013; Eklund et al., 2016): neuroscience cannot provide the reductionistic framework invoked by Bunge and there are many doubts about its ability to do so in the future. It is highly plausible that the marriage between psychology and neuroscience is not to take place. It is a reckless argument, according to which "the explanation of behavioral and mental processes . . . calls for conjecturing and uncovering the corresponding neural . . . mechanisms" (Bunge & Ardila, 1987, p. 283).

By contrast, the second route involves abandoning attempts to seek laws and mechanisms of mind and behavior because people do not act according to them, but according to a normative claim for which an agent takes a rational course of action given their intentions and reasons. A clear consequence of this position is that psychology should be classified not among the natural sciences (or in the Galilean tradition), but among the human sciences (or in the Aristotelian tradition). This sidesteps one of the main hindrances of the investigation of behavioral variability: the appeal to aggregate data or means calculated on samples of experimental participants. This is because the human sciences and the Aristotelian tradition are based on an ideographic rather than a nomothetic approach, that is, “the thorough, intensive study of a single person or case in order to obtain an in-depth understanding of that person or case, as contrasted with a study of the universal aspects of groups of people or cases” (American Psychological Association, 2015, p. 521). This does not mean that science should be abandoned in any way, rather, it points to the need to accept that it is the object under inquiry that determines the choice of the methods of investigation, not vice versa. Indeed, to improve, psychology should look to history, not physics (as do both logical positivism and Bunge), as the “methodological ideal.” In conclusion, in order to promote that conceptual refinement invoked at the end of Arocha’s (2021) article, the possibility that reasons cannot be causes and thus that psychology cannot be part of the natural sciences, should be taken seriously. Does this mean that scientific psychology should be renounced? This can be answered with another question: can it be said that physics is *more scientific* than history?

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Note

1. In spite of Bunge’s spirited attempts to distinguish the two positions (see Bunge, 1996, pp. 316–317), they share at least two main points: the appeal to a physicalistic or materialistic ontology and the ideal of the unity of method for all sciences.

References

- American Psychological Association. (2015). Idiographic. In G. R. VandenBos (Ed.), *APA dictionary of psychology* (2nd ed., p. 521).
- Arocha, J. F. (2021). Scientific realism and the issue of variability in behavior. *Theory & Psychology, 31*(3), 375–398. <https://doi.org/10.1177/0959354320935972>
- Bunge, M. (1996). *Finding philosophy in social science*. Yale University Press.
- Bunge, M., & Ardila, R. (1987). *Philosophy of psychology*. Springer-Verlag.
- Button, K. S., Ioannidis, J. P. A., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: Why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience, 14*(5), 365–376. <https://doi.org/10.1038/nrn3475>

- D'Oro, G. (2012). Reasons and causes: The philosophical battle and the meta-philosophical war. *Australasian Journal of Philosophy*, 90(2), 207–221. <https://doi.org/10.1080/00048402.2011.583930>
- Eklund, A., Nichols, T. E., & Knutsson, H. (2016). Cluster failure: Why fMRI inferences for spatial extent have inflated false-positive rates. *Proceedings of the National Academy of Science of the United States of America*, 113(28), 7900–7905. <https://doi.org/10.1073/pnas.1602413113>
- Feser, E. (2005). *Philosophy of mind: A beginner's guide*. Oneworld Publications.
- Lennon, K. (1994). Reasons and causes. In S. Guttenplan (Ed.), *A companion to the philosophy of mind* (pp. 531–535). Blackwell.
- von Wright, G. H. (1971). *Explanation and understanding*. Routledge & Kegan Paul.

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