

# A Science-Based Critique of Epistemological Naturalism in Quine's Tradition

Reto Gubelmann

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Based Critique  
of Epistemological  
Naturalism in Quine's  
Tradition**

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*Für Nathalie*

# Preface

In this book, I venture a critical assessment of epistemological naturalism. Proponents of this position hold that there is no knowledge outside of science, since the empirical-scientific method (or methods) of justifying claims or theories is without alternative. Therefore, if epistemology is to deliver knowledge, it has to itself become immanent to science.

Often, critics of epistemological naturalism argue that the doctrine cannot accommodate some important aspect of human existence, say altruistic behavior. One weakness of this approach is that epistemological naturalists can always adopt an eliminativist or reductivist attitude with regard to the phenomenon in question: naturalists can argue that altruism either does not exist, or that it can be reduced to biological functions such as the reproductive success of groups.

This book is different. Rather than focusing on phenomena that are traditionally conceived to be external to empirical science, it focuses on empirical science itself. With regard to this phenomenon, epistemological naturalists cannot adopt an eliminativist position, and adopting a reductivist one comes at a considerable cost.

Furthermore, I am trying to meet my naturalistic counterpart on her own ground not only with regard to the subject matter (empirical

science), but also with regard to the epistemic way in which I approach this subject matter: I try to support my central claims and arguments with detailed discussions of first-order scientific data. When arguing that it is an open question whether empirical science is able to explain how our access to empirical reality supports our scientific theorizing, I am making extensive use of first-order scientific results and experiments (such as habituation and preferential looking experiments). Even when my claim is squarely metaphilosophical, such as when I am urging that the scientific realism debate belongs to philosophy and not to science, I am making my case from within science, arguing that the debate transcends the *bona fide* epistemic practices of the sciences, and I am supporting my case with detailed analyses of actual discussions in the history of natural science.

When beginning the research for this study, one of my basic (but rather vague) working hypotheses was that the richness and diversity of actual scientific research militates against the austere and monolithic nature of epistemological naturalism. I think that my discussion of contemporary perceptual psychology in Sect. 4.2 and of Perrin's experiments to establish the reality of atoms in Chapter 9 support more specific versions of this general working hypothesis.

Hence, this book's contribution to the ongoing debate about epistemological naturalism—and about the metaphilosophy of epistemology in general—consists in arguing that there are grounds within science to question epistemological naturalism. By reviewing insights from linguistics, psychology as well as from the history of natural science, I argue that science itself points beyond itself to epistemic practices that are clearly distinct from empirical science.

Part of the research on which this book is based has been supported by The University of Zurich's Candoc grant number FK-13-068 as well as The Swiss National Science Foundation's doc.Mobility grant number P1ZHP1-161979.

Parts of Chapters 2, 3, and 7 draw on and elaborate ideas previously published in "From Shared Stimuli to Preestablished Harmony: The Development of Quine's Thinking on Intersubjectivity and Objective Validity", *HOPOS*, 9, DOI: <https://doi.org/10.1086/703253>. Figure 4.2 is reproduced with permission from Yang, Jiale, So Kanazawa,

Masami K. Yamaguchi, and Ichiro Kuriki (2013). “Investigation of color constancy in 4.5-month-old infants under a strict control of luminance contrast for individual participants”. In: *Journal of Experimental Child Psychology* 115.1, p. 130.

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