

# Reviews

## **Replicability in Research: The Crisis of Positivist Ideology in the Social Sciences**

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RENÉ VAN DER VEER, MARINUS VAN IJZENDOORN AND JAAN VALSINER (EDS.), *Reconstructing the Mind: Replicability in Research on Human Development*. Norwood, NJ: Ablex, 1994, 294 pp. ISBN 0-89391-871-7 (hbk).

In the social sciences, there is an enormous gap between the methodological emphasis on replicability as assurance of the quality of research and the lack of replication studies. This discrepancy between the ideology and the practice of research in the social sciences calls for close analysis of both the methodological ideology and the practice. Why is replicability in research considered to be important and necessary in the social sciences? What is an alternative to replicability that can assure the credibility of research findings? Why is it difficult to replicate studies in social science? Why, despite the difficulties, have some studies been replicated? These and other related questions are discussed in the book, in articles written by psychologists, anthropologists, educators and methodologists from North America and Europe.

Replicability is closely related to positivism's promise of the universal method for discovering truth. Many authors in the book mention that the methodological claim for replicability in social research historically and ideologically came from the natural sciences. At the end of the 19th century and the beginning of the 20th century, efforts to find and formulate the criterion of good research and good science were flooding the philosophy and methodology of the natural sciences, in response to an increasing awareness in the scientific community that a studied phenomenon is not fully independent from the researcher and that there are different ways to describe it. Philosophical and methodological positivism was an attempt to address the growing diversity of scientific paradigms in the natural sciences (Kuhn, 1970). Positivism promised to reduce the diversity of paradigms in the natural sciences, by defining the universal principle that could provide the competing paradigms with a common denominator.

Replicability in research, along with other ideas like the principle of falsification, constitutes the core of the positivist attempt to construct the universal and self-sufficient method of discovery of truth in science. As discussed in the book, the replicability principle is based on the assumptions that (1) the researcher and the studied phenomenon can be separated; (2) the phenomenon has a stable and unchangeable character in the world; and (3), like the phenomenon, the researcher can be duplicated and also has a stable and unchangeable character. In the social sciences there is increasing awareness that these assumptions are problematic.

For instance, Kloos (chapter 2), using examples of anthropological fieldwork

(e.g. Mead's and Evans-Pritchard's controversy over adolescence in Samoa), demonstrates that what anthropologists 'see' in studied communities is not independent of specific historical disputes and discussions in the academic communities they come from. Moreover, anthropological studies themselves contribute to changes in the studied indigenous communities. In the general introduction to the book, and in the epilogue, the editors van der Veer, van IJzendoorn and Valsiner argue that the nature of the science of human development contradicts the positivistic assumption of stability and unchangeability in the studied world.

Furthermore, methodological and conceptual aspects of research are not as separable as positivism assumes. Danziger and Shermer's historical essay on the issue of replication in psychology (chapter 1) reveals that what is considered to be replicated, and what can be modified in a replicating study without jeopardizing the validity of the original research, has been subject to constant historical change and negotiation. Wundt's studies of psychophysiological reactions, Bühler's focus on introspection, Baldwin's interest in phenomena outside of the lab and Galton's statistical analysis of individual differences all defined their own criteria of what is essential and non-essential (i.e. what could be varied without threat to validity) in their research. Folds-Bennett's analysis of recent replication studies (chapter 10), including those of the famous Istomina's research which examined the impact of meaningfulness of activity on memory, demonstrates that without deep conceptual understanding of the original study valid methodological analysis is impossible. Only through careful analysis of Istomina's conceptual framework, based on the socio-historical theory of Vygotsky and his colleagues about what makes activity more or less meaningful for children, can one define Istomina's methodology (such as how well she standardized her experimental procedure).

All the authors in the book agree that the strict positivistic methodological demand of research replicability, requiring that all studies, down to the smallest details, be repeated, is impossible in social sciences. However, they undertake different approaches toward the problem. Some of the authors try to modify the positivistic requirements to adjust it to the modern state of the social sciences. For example, there are attempts in the book to present meta-analysis as a universal procedure for deriving the objective truth from empirical research. Other authors seem not to believe that the methodological claim for replicability can be saved in any form. These authors develop strong critiques of replicability as a universal method of defining the truth—from historical, contextual, developmental and socio-cultural positions. Finally, some authors discuss alternatives to positivist methodology based on replicability, such as those offered by constructivism and pragmatism.

There are attempts in the book to save the notion of universal methodology. In part II, Fiske (chapter 5), Lytton (chapter 6) and Siegfried (chapter 7), after spending some space on a critique of the classic positivistic notion of replicability, try to develop their own methodological principles that can universally guide the social sciences. They see the necessity for a universal methodology for the social sciences, because it protects the field from sloppy research, provides social control for the credibility of findings, helps to resolve theoretical controversies and helps to guide policy-makers. However, each concrete attempt to build a new universal, self-sufficient methodology for research (even based on a meta-analysis of multiple methods) faces direct or indirect critique from other authors in the book.

The severe critique of positivistic claims for universal methodology is based on well-supported observations that many conceptual paradigms of the modern social sciences are inherently opposed to the core notions of philosophical and methodological positivism: universality, stability, the monolithic character of the world and the separation of subject and object. However, the rejection of universal, interpretation-free methodology of science might lead to the conclusion that scientific paradigms have no grounding at all. Several authors—Danziger and Shermer (chapter 1), Kloos (chapter 2), van IJzendoorn (chapter 3), Miedema and Biesta (chapter 4), Folds-Bennett (chapter 10), as well as the editors—clearly try to avoid this radical relativism.

Miedema and Biesta (chapter 4) make a serious attempt to define a non-positivistic methodology in general, and a specific role for replicability. They discuss three big current paradigms in the social sciences: positivism, constructivism and pragmatism. Unlike positivism, which considers replicability a tool for defining the truth, constructivism sees replicability as a process of negotiation among diverse scientific paradigms and theories. However, as the authors point out, where this negotiation is grounded remains unclear in constructivism. Pragmatism views science as a practice among other practices of the historically developing human world, rather than as a closed, self-sufficient, universal activity without history. From this perspective, the issue of replicability can be understood only from analysis of the socio-historical development of the social sciences as they are embedded in other socio-cultural practices and institutions. Unfortunately, there is no concrete attempt in the book to undertake such an analysis of how the social sciences contribute to social and historical processes in society, and how a society as a whole contributes to defining directions in social sciences.

The book will definitely attract a broad audience from the scientific community. It makes a valuable contribution to philosophy, history and the methodology of social sciences, as well as to the field of developmental psychology.

#### Reference

Kuhn, T.S. (1970). *The structure of scientific revolutions*. Chicago, IL: University of Chicago Press.

**Eugene Matusov**

UNIVERSITY OF CALIFORNIA AT SANTA CRUZ

### **Two and a Half Cheers for Combining Philosophy and Development**

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GARETH B. MATTHEWS, *The Philosophy of Childhood*. Cambridge, MA: Harvard University Press, 1994. 136 pp. ISBN 0-674-66480-9 (hbk).

This is a book I want to love. As a developmental scientist who has suggested that psychology needs to give more active consideration to matters philosophical, I should be thrilled to find a book that combines two of my academic loves,