

Philippe van Basshuysen

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Book review: Paul Erickson: *The World the Game Theorists Made*. The University of Chicago Press, Chicago, 2015. 390 pp. ISBN 978-0-226-09703-9 (cloth), 978-0-226-09717-6 (paper), 978-0-226-09720-6 (e-book), DOI: 10.7208/Chicago/9780226097206.001.0001.¹

The World the Game Theorists Made is a carefully-researched history of game theory, and an ambitious project: Erickson's aim is to provide a unifying narrative of more than 50 years of game theory following the publication of von Neumann & Morgenstern's (1944) *Theory of Games and Economic Behavior*. The second chapter (after an introductory overview) contains the genesis and a synopsis of this seminal work, and the following five chapters the subsequent development of game theory, its main players, and its embedding not only in the history of science but also in the cultural environment moulded mainly by Cold War-America. As such, it is the most extensive history of game theory and game theoretical thinking available to date, and goes beyond the often found and mutually disconnected accounts of the long history of probability and games of chance, of the role game theory played in the Cold War era, or of how evolutionary theory entered the stage in the development of a theory of social interaction without rationality. Erickson's book has all of this, and gives credible explanations of the links between the different fields and concerns game theorists were drawn to deal with.

The unifying narrative Erickson offers is that game theory's enduring success is to be explained through the fact that it provides (quite heterogeneous) mathematical tools flexible enough to figure in a wide range of social scientific themes and models and which, although quite heterogeneous, nevertheless "knit them together into a common conversation" (p. 14). Moreover, whereas the formal core was essentially preserved, its semantics was subject to various shifts following the focus of the theory. Perhaps the most prominent example of such a reinterpretation is the evolutionary perspective on equilibrium selection.

This narrative is able to explain why the history of game theory is full of promises and setbacks from its beginning. For example, Erickson observes that von Neumann and Morgenstern's opus did not have an obvious audience: too applied for mathematicians, and too mathematical for economists, it nevertheless contained the appealing promise that a unifying explanation of the social sciences can eventually be found in the mathematics of the strategic interaction of rational agents. This promise was enthusiastically adopted in evolving Cold War-America and its numerous military-sponsored research programmes.

What is more, according to Erickson, the development and success story of game theory was partly *caused* by the political will of early Cold War-America, where a great part of the basic research in game theory was demanded and paid for by military and semi-governmentally funded organisations such as the RAND corporation – whereas classical research in academic institutions was sparse, mainly because the game theorists' work did not fit well in the academic division of labour. The very

¹ Reviewed by: Philippe van Basshuysen, *London School of Economics and Political Science*, London, UK.

core of game theory (e.g. the interpretation of rationality; its common notation and language) was established through basic research thus financed. Erickson's explanation of how Cold War demand and funding shaped the theory may give the reader pause. It seems this concerns less *the world the game theorists made*, and more *what the world made of game theory*.

And this leads us to the downside of this important and commendable book. The reader can't help getting the impression that Erickson considers the emergence and survival of game theory essentially as a *historical accident* (admittedly, Erickson wouldn't express it this grossly), made possible through Cold War zeitgeist. This comes together with an uncritical US-centrism. The "other side of the curtain" is not even mentioned except as the unspecified opponent in the zero-sum game of Cold War (nor are now important centres outside the US mentioned, such as the *Center for the Study of Rationality* at Hebrew University); and the possibility that there was independent research going on among USSR scholars does not figure in the book. But think of results such as the now famous *Bondareva-Shapley theorem* for the non-emptiness of the core, of which Lloyd Shapley himself said it was a "simple derivation of a theorem of Bondareva" (*On Balanced Sets and Cores* (1967), p. 453). So there seems to have even been *exchange* between American and Russian game theorists, and evidence abounds confirming this, such as the 1968 compilation of English translations *Selected Russian Papers on Game Theory 1959-1965*, with a preface by Oscar Morgenstern (!). In it, Morgenstern writes: "Game theorists are aware of considerable interest in game theory that has developed in the Soviet Union over the last years. ... [The following papers] will immediately prove the high quality of work done in the Soviet Union and they should stimulate further publication of translations" (p. i).

Erickson's complete silence in his new book seems to be a development of the attitude taken in another book he co-authored, the 2013 *How reason almost lost its mind: the strange career of cold war rationality*. Here the authors explicitly restrict the analysis to the US and treat the USSR "only as the imagined player across the chessboard, as it did for the American participants in the Cold War rationality debates" (pp. 20-21). So they at least mention the other side of the Iron Curtain when they talk about the reception of game theory, albeit in a disregarding manner; for example, "... the Soviet response [to *Theory of Games and Economic Behavior*] was belated, circumscribed, and comparatively tepid" (p. 18).

Given this, it may be conjectured that Erickson did not feel the need to even mention game theory in the USSR in his new book any more. But once it is granted that there were other centres of interest and research in game theory, the picture Erickson gives might need revision. In particular, the thesis that the evolution of game theory was a historical accident may lose its plausibility: the development of the theory might have been more stable than Erickson claims it is. This would be an interesting question to consider.

To conclude, Erickson does not entirely deliver on the promise to provide an integrated history of game theory and game theoretical thinking. As an extensive monograph of the rich history of game theory *in North America*, I consider this to be an important work recommended to anyone interested in the evolution of game theory and its entanglements with the postwar political establishment, its mutual influence with the social sciences, and its major players.