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Ash Zareian

University of Texas Rio Grande Valley

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Keywords

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Book Review

Arch Woodside, *The Complexity Turn* (2017)

Introduction

The philosophical rule of Occam's razor holds that of any given set of explanations for a phenomenon, the simplest one is most likely the correct one. The rule does not claim that the *simplest answer* is always the correct one. It urges us to consider the one that requires the *fewest* assumptions. The book reviewed here, *The Complexity Turn*, nudges us to recognize that the world has changed – and is changing – since the idea of Occam's razor appeared eight centuries ago.

The Complexity of Causality

Symmetrical testing has been taken for granted in scholars' understanding of causal relationships and in models depicting predictability. In hindsight, the assumptions of symmetry have ignored key theoretical issues with the methods and practices that inform and enrich bodies of empirical research, practice, and theory. The dominant logic used in business and the social science research favors the use of combinations of exploratory factor analysis (EFA) and multiple regression analysis (MRA) over other research methods such as ethnography or phenomenology. Since symmetrical relationships rarely exist in nature, calls for asymmetrical testing have been around for fifty years now (Bass et. al 1968); the evidence of use of asymmetric testing, however, is sparse.

Edited and authored largely by Arch G. Woodside, *The Complexity Turn: Cultural, Management, and Marketing Applications*, published in 2017 by Springer, is a book with great aspirations (Woodside 2017). It declares in the preface: "Yes, the complexity turn enables seeing both the forest and individual trees in the forest. A startling stance and promise!". Then, in the rest of the book, along with other contributors who join in for some of the chapters, Woodside attempts to illustrate how this promise can be accomplished.

In the book, extensively established and respected statistical terminology and research methods – utilized in both research literature and in research-based practice – are challenged by Woodside and his co-authors within six chapters, including the significant preface already alluded to. For instance, processes such as item construction, the conversion of beliefs and subjective personal introspection (SPI) to numeric values, and symmetric testing receive heavy criticism. The book

reiterates a multitude of already-available clear arguments for deciphering salient theoretical issues inherent in these vetted procedures. It revisits and formalizes these arguments, to incite change in the paradigm of research. Woodside is not necessarily calling for the overthrow of Structural Equations Modeling (SEM) or MRA; rather, the book states that such statistical procedures are often done incorrectly, and should not be the only choices for doing research.

Building on fuzzy set theory, the aim is to synthesize truth tables and Boolean algebra, in a procedure called fuzzy set qualitative comparative analysis (fsQCA). The procedure turns away from dichotomies and toward multichotomies, consisting of both qualitative and quantitative components. The book recommends replacing hypotheses with tenets. Rather than revering correlation analysis, which is a part of the symmetrical dominant logic, it proposes the alternative of fuzzy memberships — a fully nonmember (0.00) to a full member (1.00), and with configurations that load somewhere in between ($0.00 < x < 1.00$). This new technique derives from Ragin (2000), and has been influential for two decades. Asymmetrical testing or fuzzy set qualitative comparative analysis (fsQCA) provides a more comprehensive approach compared to traditional symmetric testing, because of its presence of absence, or what is deemed the inclusion of negation variables in tandem with Boolean algebra, listed in a table of recipes indicating possible predictions.

Woodside and his colleagues' concerns coincide with other business scholars, such as Rindfleisch et. al (2008), who wrote about issues of common method variance (CMV) in marketing. CMV is a significant problem in building theoretical models. The resulting models are myopic in the sense that the segmentation of survey respondents is largely homogeneous, resulting in lopsided data.

The Complexity Turn is concerned with its main premise of complexity theory, and the significance of complexity theory in emphasizing how multiple outcomes or causal relationships occur not through one linear relationship that is indicative of best fit, but an indefinite number of routes between variables that could be variously configured. This is known as equifinality, which constitutes the bulk of asymmetrical testing techniques. This alternative is proposed in opposition toward unifinality, a constituted proponent of symmetrical testing.

Woodside mentions that one possibility as to why complexity theory is not being adopted widely, or is being discarded too prematurely, is that other scholars across disciplines in business and the social sciences do not endorse it as strongly as they endorse popular symmetrical methods. One reason for this, however, may be due to the adopted terminology that

is proposed as an alternative to the current dominant logic. Terms such as “recipe” – as opposed to accepted but drier term “configurations” – could constitute a barrier. A term like recipe, with its conceptual preoccupation with food, might not be taken seriously because of the reverence of the dry common language scholars share in their respective communities. The book has, at places, some grammatical errors in the text and models (i.e., missing words and mislabels within models), but these can be fixed with an editorial makeover, in a subsequent edition. Overall, the book’s thrust is theoretically sound relative to its proposed applications in the disciplines of social sciences and business disciplines.

For asymmetrical testing to become the mainstream dominant logic, conferences, seminars, and, eventually, classes on such methods must be held, the world over. As of 2017, Arch Woodside has started to offer instructions of this type at the International Business and Economy conference. There was a brief string of publications on fsQCA in 2012 at the North American Fuzzy Information Processing Society (NAFIPS). To have wider impact, the paradigm of adopting asymmetrical testing must be accepted by high-output publishing authors in top journals, who must publish articles about the benefits of using fsQCA, similar in manner to the way Richard Bagozzi and Youjae Yi have been publishing about the benefits of using SEM since the turn of the century (see, e.g., Bagozzi and Yi 2012).

While this book proposes that the social sciences such as psychology, sociology, and business disciplines such as marketing and management, should choose asymmetrical testing over symmetrical testing, how could asymmetrical testing serve the natural sciences? In cancer research, for example, applying asymmetrical approach could illustrate that the plethora of routes via which cancer occurs are not random (as the current wisdom seems to hold), but that the recipes for humans testing positive for cancer are numerous. A supercomputer might be necessary to categorize the potentially endless list of recipes that outline the conditions under which cancer can be predicted.

The complexity framework is, at first glance, the antithesis to Occam’s razor. In the complex world of social and business processes, the simplest solution does not mean it is the best or most probable solution. Woodside and his fellow authors’ acknowledgement of multiple realities and the level of uncertainty – constituted by varied chain of events or configurations that lead to the same outcome – urges us to transcend simplicity. This is what should be appreciated most in this book. What Woodside and associates nudge us toward is a turning point, via an apt title for the book, viz., *The Complexity Turn*.

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