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Theory Evaluation, Entrepreneurial Processes, and Performativity

Management scholars have long debated the definition and evaluation of theory. Recently, Arend, Sarooghi, and Burkemper (2015) proposed the 3E theory-assessment framework based on positivist, normal science ontology and epistemology (Burrell & Morgan, 1979; Kuhn, 1970). The framework considers the extent to which a proposed theory (a) is based on *experience* (builds on existing literature and valid observation), (b) can *explain* (is comprehensive and parsimonious; has clear laws of interaction, specified boundaries, stable system states, and properly formulated propositions; has an explicit causal logic), and (c) has been *established* (is empirically testable and diffused in the literature; see Arend et al., Table 1).

Using this framework to assess effectuation (Sarasvathy, 2001, 2008), Arend et al. note, "The *process* [of effectuation] begins when an entrepreneur confronts the uncertain and resource-restricted context and decides whether to engage in the effectual process; if the entrepreneur engages, the

process ends when a new market artifact—for example, a successful business—is created" (2015: 631, emphasis added). Emphasizing effectuation as a process, Arend et al. write, "The core *process* . . . starts when a *threshold* is met where the entrepreneur's available means are expected to produce effects that are aligned with initial aspirations" (2015: 631, emphasis added).

These observations beg the question, "Is it reasonable to evaluate process explanations such as effectuation using criteria that assume a world of efficient causation and linear variance?" To address this question, our comment covers the following points. First, we review efforts by scholars within the management discipline to clarify what theory is and how to evaluate it. Second, we introduce process explanations and consider whether the 3E framework is capable of evaluating such contributions. Third, we consider recent explanations of entrepreneurial processes premised on performativity. Our overall assessment is that the 3E framework is ill-suited for evaluating process explanations in general and contributions based on performativity in particular. But, in that case, what options do we have? We address this question in the last section of this dialogue.

WHAT IS THEORY?

As is now widely acknowledged, there are many ways to theorize (Delbridge & Fiss, 2013). If this is the case, there cannot be one framework, such as the 3E framework, that determines what counts as theory, a point management scholars have wrestled with over the decades. Consider the 1989 *AMR* special issue on what theory is and its utility within the management field. In this special issue Eisenhardt (1989) proposed an explicitly positivistic approach to qualitative research, whereas Tsoukas (1989) examined the external validity of "idiographic" research. In another article Weick (1989) advocated for "disciplined imagination." Reflecting the controversial nature of the topic, the issue also generated debate, such as the one between Eisenhardt and Dyer and Wilkins, with the latter advocating for "better stories, not better constructs" (1991: 613).

In the years following this special issue, management scholars have engaged in considerable debate on the relative merits of such theoretical diversity (e.g., Pfeffer, 1993; Van Maanen, 1995). Despite efforts to the contrary, "theory" has come to be recognized as a big tent, a point reaffirmed in

a 1995 special forum on theory published in *Administrative Science Quarterly*. While conceding there was "little agreement about what constitutes strong versus weak theory in the social sciences," Sutton and Staw urged journals "to be more receptive to papers that test part rather than all of a theory and use illustrative rather than definitive data" (1995: 371). In response, DiMaggio noted that "there is more than one kind of good theory," drawing particular attention to "theory as enlightenment" and "theory as narrative" (1995: 391).

DiMaggio also offered a hypothesis: "The reception of a theory is shaped by the extent to which a theory resonates with the cultural presuppositions of the time and of the scientific audience that consumes it" (1995: 394). Indeed, reflecting the cultural presuppositions of the time, DiMaggio noted that scholars who deviated from Sutton and Staw's guidelines did so at their own risk, a sentiment also echoed by Weick (1995). And yet these contributors speculated that without such deviations we likely would have missed contributions from scholars as diverse as Chester Barnard, Charles Darwin, Sigmund Freud, Karl Marx, and Georg Simmel.

In the decades since these debates, the field of management has seen the rise of studies based on theoretical positions that depart from the positivist, normal science assumptions undergirding the 3E framework (e.g., see the *AMR* theory development forums in 1999 and 2011). Qualitative studies that take an interpretivist approach (Burrell & Morgan, 1979) are now commonplace (Cornelissen, in press), as are process studies of diverse phenomena (Langley, Smallman, Tsoukas, & Van de Ven, 2013). More recently, fuzzy set theorization is gaining currency as yet another way of overcoming the problematic assumptions of the general linear model (Ragin, 2008).

Such diversity of approaches is especially evident within entrepreneurship studies. Examples include cultural entrepreneurship (Lounsbury & Glynn, 2001), technology entrepreneurship (Garud & Karnøe, 2003), storytelling (Gartner, 2007; Martens, Jennings, & Jennings, 2007; O'Connor, 2002), bricolage (Baker & Nelson, 2005), dynamic creation (Chiles, Tuggle, McMullen, Bierman, & Greening, 2010), entrepreneurial sensemaking (Cornelissen & Clarke, 2010), and complexity theory (Lichtenstein, 2011), to name just a few (for more detailed reviews see Garud, Gehman, & Giuliani, 2014, and Hjorth, Holt, & Steyaert, 2015). Were scholars to apply the 3E framework to evaluate these contributions, many

of the insights offered by these studies would be delegitimized, if not wholly defaced. And future studies built on still different assumptions would face even higher publication hurdles, an issue we return to later in this dialogue.

WHAT IS PROCESS?

Mohr's (1982) distinction between variance and process theories is a useful starting point to address this question. In variance theory "the precursor (X) is a necessary and sufficient condition for the outcome (Y). In other terms, if X, then Y, and if not-X, then not-Y" (Mohr, 1982: 37). Such theorization deals with "variables" and "efficient causes." One example offered by Mohr (1982: 41) is accounting for variations in the time at which different individuals or organizations adopt innovations.

By comparison, in process theory a precursor (X) may be necessary but by itself not sufficient to generate an outcome. Such theories deal with "discrete states" and "events," where "the process at issue is a probabilistic conjunction of two or more specified phenomena" (Mohr, 1982: 47). An example is the garbage can model of organizational choice, where "under certain constraints of access, and with higher probabilities attached to choices closer to than further from solution, problems and participants transfer iteratively and at random from one choice to another" (Mohr, 1982: 50).

It may be evident that the notion of "explanation" inherent in Mohr's views on process is very different from the one in variance theory. To emphasize this point, Mohr noted:

> There is a tendency to overemphasize prediction of outputs as a means of verifying and exploring what are really process-type theories in social science, probably because of the prevailing variance-theory orientation. Often, that is not what process theories do best, particularly with respect to a given trial (1982: 54).

For the purposes of this commentary, it is debatable whether such process theorization will pass the 3E test that Arend et al. proposed based on Dubin's views: "The scientist's problem of interaction among units is one of accounting for variance [or sequential outcome][1] in one unit by specifying a systematic linkage of this unit with at least one other" (Dubin, 1969: 90, as quoted in Arend et al., 2015: 636).

The mismatch that occurs in applying the 3E framework to evaluate process contributions becomes all the clearer when we consider "strong" views on process. Whereas the "weak" view reduces process to the actions of things, the "'strong' view deems actions and things to be instantiations of process-complexes" (Chia & Langley, 2004: 1487). One such view on process is premised on performativity, which "shifts the focus from questions of correspondence between descriptions and reality (e.g., do they mirror nature or culture?) to matters of practices/doings/actions" (Barad, 2003: 802). According to this view, which is based on Niels Bohr's work, "the primary epistemological unit is not independent objects with inherent boundaries and properties but rather *phenomena*" (Barad, 2003: 815) that are continually constituted by sociomaterial entanglements rather than independent objects with given boundaries and properties.[2]

Clearly, such an approach is at odds with an understanding of "theory" that values "how easily the units are measured, by how well the bounds can be met, by how translatable the propositions are, and so on" (Arend et al., 2015: 637). From a performative perspective and contrary to the requirements of the 3E framework, the key issues in need of explanation are not the actions that unfold within stable states, as Arend et al. claim, but, rather, the ongoing "(re) configurations of the world through which local determinations of boundaries, and meanings are differentially enacted" (Barad, 2003: 821; see Gehman, Treviño, & Garud, 2013, for an instantiation). Consequently, as Tsoukas and Chia noted, "Change must be approached from within—not as an 'abstract concept,' but as a performance enacted in time" (2002: 572).

WHAT ABOUT ENTREPRENEURIAL JOURNEYS?

Entrepreneurial journeys, too, are performative. Entrepreneurial identities are constituted in and through emerging networks (Wry, Lounsbury, & Glynn, 2011). Business models and plans at any moment are constituted by entrepreneurs' relational-temporal aspirations and memories (Doganova & Eyquem-Renault, 2009; Garud, Schildt, & Lant, 2014). Such plans and models are

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[1] Arend et al. inserted "[or sequential outcome]" in Dubin's original definition.

[2] There is significant scholarly work on performativity that we cannot fully explicate here. For interested readers, we draw attention to work by J. L. Austin, Judith Butler, Michel Callon, Bruno Latour, and Jacques Derrida, among others.

neither right nor wrong but, instead, attempts by entrepreneurs to generate a recognizable identity and legitimacy for their ventures (Garud, Schildt, & Lant, 2014). Indeed, plans and models serve as triggers for action as entrepreneurs continue to "contextualize" their ventures (Garud, Gehman, & Giuliani, 2014). At the same time, the unexpected is to be expected (Weick & Sutcliffe, 2001), which means that entrepreneurs should anticipate overflows of their business models that will, of necessity, have to change when performed.

So, how should contributions from such a performative approach be evaluated? Clearly, applying an evaluation framework based on representationalism (i.e., belief in the power of words to mirror preexisting phenomena) is problematic (Barad, 2003). Theoretical statements understood as performative utterances are not descriptions of the world and, thus, cannot be either true or false (Austin, 1962). Rather, theories are active interventions and so must be evaluated in their capacities to constitute the worlds that they purport to regulate or evaluate. If we were to go back to the language of X and Y, then we cannot say "If X, then Y," *since both X and Y are mutually constituted in the very sayings and doings of managers and scholars*. For instance, MacKenzie and Millo showed how the Black-Scholes option pricing model "succeeded empirically not because it discovered preexisting price patterns but because markets changed in ways that made its assumptions more accurate and because the theory was used in arbitrage" (2003: 107). Similarly, Cabantous and Gond conceptualized rational decision making, rather than natural or given, as the result of "performative praxis . . . a set of activities that contributes to turning rational choice theory into social reality" (2011: 573).

WHERE SHOULD WE GO FROM HERE?

Given that our discipline places significant emphasis on "contributions to theory" as a ticket to entry into mainstream journals, it is not surprising that management scholars will continue debating the meaning of theory and the criteria for its evaluation. What is exciting about the discipline is that scholars draw from diverse assumptions. Consequently, putative evaluations of the usefulness and validity of contributions from one "thought style" (Fleck, 1979) cannot be driven by an evaluative framework designed for another.

But, in that case, what should we do with contributions that do not subscribe to a positivistic,

normal science paradigm? Should they be transformed and reshaped to resemble "theory," as proposed by Arend et al.? If so, few might survive such Procrustean transformation. Or, perhaps, should they not be labeled as theory at all, another strategy proposed by Arend et al.? If so, these contributions will not have the same status as others that supposedly fit the claims of being "theoretical."

As is evident, our response to these questions is an emphatic "no." The exclusive use of the 3E framework to construct and evaluate scholarly contributions would progressively screen out process observations on complex phenomena. Over time, such efforts would channel future theoretical contributions, whether qualitative or quantitative, in the direction of variance models. This restriction is all the more problematic to the extent that management scholars are interested in addressing "grand challenges" (George, 2014) such as poverty alleviation, climate change, and water scarcity, since these are intrinsically complex, uncertain, and evaluative (Ferraro, Etzion, & Gehman, 2015). By design, such "theories" must be performative, given that they are intended to intervene in the world.

In closing, we question whether the 3E framework is "applicable to any general business theory" (2015: 630), as Arend et al. claim. It appears ill-suited for evaluating process observations on complex phenomena, including entrepreneurial processes. If applicable at all, the 3E framework's applicability is limited to those observations that conform to assumptions of general linear reality (Abbott, 1988). Beyond these boundaries, we consider the framework quite ineffectual.

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Effectuation, Not Being Pragmatic or Process Theorizing, Remains Ineffectual: Responding to the Commentaries

We appreciate the opportunity to respond to the provocative Dialogue pieces of Read, Sarasvathy, Dew, and Wiltbank (2016; henceforth, "RSDW"); Reuber, Fischer, and Coviello (2016; henceforth, "RFC"); Gupta, Chiles, and McMullen (2016; henceforth, "GCM"); and Garud and Gehman (2016; henceforth, "GG"), each of which makes several claims in defense of effectuation, as well as describes several ways forward in entrepreneurship- and process-related theorizing. We respond in a manner consistent with the traditional perspective in management theorizing that "good theory is practical" (Lewin, 1945), where "theory is theory" (Simon, 1967; Van de Ven, 1989) based on our discipline's collective commitment to knowledge production (Suddaby, 2014). In fact, we respond in the tradition of *scientific* theory—its building, its critique, and its defense. Leveraging the logic behind that tradition, we thus *refute every point* contained in RSDW's, RFC's, GCM's, and GG's commentaries and attempt to build on what is common to all theory while celebrating what is valuable in the diversity of theorizing (i.e., in the ways we produce theory).

The 3E framework applies to all proposed theories that claim to be scientific, including those based in pragmatism and those based on a process. The evaluation of effectuation in Arend, Sarooghi, and Burkemper (2015, henceforth, "ASB") is fair, objective, scientific, and comprehensive; most definitely considers the practical implications, human actions, and dynamic system states of its targets; and accommodates the features of process

research. None of the four Dialogue commentaries on ASB offers any actual evidence otherwise but, instead, relies on false implications. We respond to each commentary, separately and in relevant groupings, below.

In response to the points made by RSDW, we reply as follows: The six assumptions in ASB emerge from RSDW's papers (often quoted in ASB), *not* from the 3E framework, and, thus, simply remain true.[1] The ASB description of effectuation, including its logic, assumptions, paths, and states, all emerge from RSDW's papers and are accurately construed; for example, contingencies do affect the process, and are not depicted as paths. The effectuation research reviewed in ASB is fair, accurate, complete, standard (e.g., in the tradition of Short, Ketchen, Shook, & Ireland, 2010, and others), and covers as wide a spectrum as the standard and explicit constraint imposed allowed (i.e., based on the *Financial Times* forty-five listed journal articles). We believe if a proposed theory is to be established, it needs to appear in the top-tier outlets, which effectuation has yet to do in any significant manner.[2] The five major directions ASB prescribe for improving effectuation are new, based on prioritization emerging from ASB's critique, and surprisingly appear to be repeated by

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[1] We note several inconsistencies with RSDW's counterpoints—for example, Sarasvathy (2001) refuted her own Proposition 1 and supported ASB's assumption #6 in her Propositions 2 and 3, explicitly linking effectuation with success, and we further note that it was expert—read *successful*—entrepreneurs who were supposed to be the basis for effectuation theory. Also, note that not only does that approach appear to sample on the dependent variable, but it also appears to lead to the same false optimism described in Hirschman's (1967) "Benevolent Hiding Hand." ASB's assumption #1 is not about a priori personality traits; rather, it concerns the abilities that RSDW state their entrepreneurs possessed, although such abilities appear only ex post (which poses another problem for effectuation theory, but not for the 3E framework).

[2] Regarding ASB's Table 2 and 2b, these are available upon request from the authors, as mentioned and described in footnotes 8 and 9 of ASB, and were reviewed by this journal prior to being edited out for space considerations. They depict a true, objective, and standard measure of the impact of effectuation on academia, with "the impact on top-tier journals" being a well-established measure in the literature. The tables contain not twenty-six but twenty-nine works. Further, we question why RSDW only use "wider" literature sources, like Google Scholar, when it suits their purposes (e.g., they ignored the 7000+ hits on "sweat equity" when they implied that this is a "black box" while detailing their seventh direction). Finally, we question why RSDW wish to mislabel us, or the 3E framework, under "positivism" when alternatives, like critical realism, clearly apply (Adler, Forbes, & Willmott, 2007).