

## **Contesting Effectuation Theory: Why It Does Not *Explain* New Venture Creation**

John Kitching

Small Business Research Centre, Kingston University, UK.

Email: [j.kitching@kingston.ac.uk](mailto:j.kitching@kingston.ac.uk)

Julia Rouse

Sylvia Pankhurst Gender Research Centre, Manchester Metropolitan University, UK.

Email: [J.Rouse@mmu.ac.uk](mailto:J.Rouse@mmu.ac.uk)

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**Abstract:** We evaluate whether the theory of effectuation provides – or *could* provide – a powerful causal explanation of the process of new venture creation. We do this by conducting an analysis of the principal concepts introduced by effectuation theory. Effectuation theory has become a highly influential cognitive science-based approach to understanding how nascent entrepreneurs start businesses under conditions of uncertainty. But by reducing the process of venture creation to a decision-making logic, effectuation theory pays insufficient regard to the substantial, pervasive and enduring influence of social-structural and cultural contexts on venture creation. Powerful explanations should conceive of venture creation as a sociohistorical process emergent from the interaction of structural, cultural and agential causal powers and must be able to theorise, fallibly, how nascent entrepreneurs form particular firms in particular times and places. We conclude that effectuation's contribution to entrepreneurship scholarship is more limited than its advocates claim because it can offer only an under-socialised, ahistorical account of venture creation. Failure to theorise adequately the influence of structural and cultural contexts on venture creation implicitly grants nascent entrepreneurs excessive powers of agency.

**Key Words:** agency, critical realism, culture, effectuation, social structure, venture creation

## Introduction

We evaluate whether the theory of effectuation provides – or *could* provide - a powerful causal explanation of the process of new venture creation. We do this by conducting an analysis of the principal concepts introduced by effectuation theory. Effectuation theory offers a cognitive science-based approach to understanding how entrepreneurs start businesses under conditions of uncertainty (Sarasvathy 2001a, 2008).<sup>1</sup> In a series of publications, the founder of the approach, Sarasvathy, and her principal co-authors, Dew, Read and Wiltbank, argue that effectuation is a form of entrepreneurial expertise (Read and Sarasvathy 2005; Read et al. 2009a), a decision-making logic that constitutes a clear basis for action in the world (e.g. Sarasvathy and Dew 2005a; Dew et al. 2008). We choose to focus on the theory of effectuation for three reasons. First, effectuation theory has become a highly influential account of new venture creation in recent years as conceptual and applied studies have proliferated; Alsos et al. (2019) identify 618 works related to effectuation published between 1998 and 2016. Second, effectuation theory, in our view, suffers from a flawed assumption common to much entrepreneurship research: that of the under-socialised ‘heroic’ entrepreneur as the instigator of new business ventures (e.g. Armstrong 2005; Drakopolou Dodd and Anderson 2007; Johnsen and Sørensen 2017). Our critical examination of effectuation theory therefore constitutes a critique of a wide range of work founded on the assumption that entrepreneurs possess excessive powers of agency. A third reason is that, despite the widespread diffusion of effectuation ideas (Grégoire and Cherchem 2019), they have been subject to limited critical scrutiny.

Arend et al. (2015, 2016) have perhaps been the most vocal critics of effectuation, claiming that it is under-developed as a new theory of entrepreneurship. They maintain that

effectuation emphasises description rather than explanation, fails to build on prior research and lacks a clear specification of context. We agree with this assessment but go further by arguing that effectuation theory does not, and *cannot*, explain venture creation fully because it *under-theorises* the influence of context. The importance of contextualisation for explaining entrepreneurial action is now well recognised (Welter 2011; Zahra et al. 2014; Welter and Gartner 2016; Baker and Welter 2018). Venture creation is necessarily both an agent- *and* a context-dependent process (Gartner 1985; Davidsson 2006; Kessler and Frank 2009). Entrepreneurs necessarily start businesses in particular sociohistorical contexts that make start-up possible. Powerful theory must explain the effects of social context on entrepreneurs' perceptions and actions as the venture-creation process unfolds (Edelman and Yli-Renko 2010). Effectuation theory, however, lacks a robust conception of social context. We seek to contribute to recent debates on contextualisation by foregrounding issues of social ontology and by distinguishing, and elaborating, two dimensions of social context - structure and culture - in critiquing effectuation theory. This requires reflection on issues of social ontology and conceptualisation of structural and cultural influences on processes of venture creation.

All research, including reviews of secondary sources, is informed by particular ontological commitments (Bhaskar 1979; Archer 1995); such assumptions are non-optional (Fleetwood 2005). There is no way to think or talk about social reality without committing oneself, metaphysically (Groff 2016). Whether researchers state their assumptions explicitly, or leave them implicit, they influence research practice profoundly, shaping conceptions of the social objects<sup>2</sup> studied – here, venture creation - the methods used to study them, and modes of data analysis. Failure to make ontological commitments explicit only leads to their

reintroduction, without proper acknowledgment and justification, in analysis, interpretation and explanation.

Our evaluation of effectuation theory is informed by critical realist philosophy of science (Bhaskar 1979; Sayer 1992, 2000; Collier 1994; Archer 1995; Lawson 1997; Groff 2004; Fleetwood 2005; Elder-Vass 2010a; Porpora 2015). Critical realism entails specific ontological assumptions about the nature of the social world, licensing social scientific theories that are consistent with them, while, at the same time, facilitating criticism of theories that are inconsistent (Bhaskar 1978). Critical realism supports explanations of venture creation organised around a structure/agency framework (Bhaskar 1979; Sayer 1992; Lawson 1997). We distinguish culture from social structure in order to propose a structure/culture/agency framework (Archer 1995, 2013; Elder-Vass 2012). To capture the interaction of structure, culture and agency through time, researchers must develop sociohistorical explanations of new venture creation that explain the formation of particular firms in relation to emergent social and temporal contexts.

Our examination of effectuation theory is explicitly conceptual. We interrogate the aims and core concepts of effectuation theory and identify both omissions and flaws. This enables us to point the way towards superior explanations of the venture creation process. Concepts demarcate the parameters for empirical studies conducted under the effectuation banner by directing research attention towards particular issues while marginalising or omitting others. We question, as others have done (Grégoire and Cherchem 2019), whether effectuation theory can explain fully why entrepreneurs act as they do. We do not offer a comprehensive review of applied effectuation research; nor do we seek to replace effectuation with a new

theory of venture creation. Rather, we see our work as laying a platform for new theories that address the conceptual deficiencies of effectuation theory. Specifically, we argue that effectuation theory fails to theorise adequately the influence of social context on venture creation and, using the lens of critical realism, propose a framework of structural and cultural influences that, we believe, rigorous explanations of new venture creation require.

The paper is organised as follows. The next two sections set out our critical realist standpoint in detail, committing us to a social world possessing particular properties and powers, and proposing particular conceptions of social structure and culture. We then present Archer's (1995) morphogenetic framework connecting structure, culture and agency, demonstrating how this supports theorising of new venture creation as an emergent sociohistorical process. The next section sets out our methodological approach, justifying the focus on the core effectuation concepts. We then set out the theory of effectuation. The following two sections discuss the aims and pragmatist philosophical commitments claimed to underpin effectuation theory. Clarifying aims is necessary to rebut arguments that we misunderstand the purpose of the theory and consequently that our criticisms miss their target. We find effectuation theory's aims ambiguous, a confusing combination of design, description, explanation and, implicitly, prescription. Next we demonstrate that effectuation theory incorporates contradictory ontological assumptions. This is a consequence of the failure to be explicit about them. We then address the central question of whether effectuation theory is able to *explain* particular cases of venture creation and contrast the accounts provided by *non-effectuation* studies; we find that non-effectuation studies often provide deeper insights into structural and cultural influences on venture creation. We conclude that effectuation's failure to theorise the influence of social context on venture creation adequately means that it can

offer only an under-socialised, ahistorical account that implicitly grants nascent entrepreneurs excessive powers of agency.

### **Introducing critical realism: ontology, theory, causal explanation**

Bhaskar's (1979) conception of a stratified social ontology ('depth realism') has underpinned the theoretical and applied work informed by critical realism (e.g. López and Potter 2001; Cruickshank 2003; Edwards et al. 2014). This ontological standpoint proposes a structure/agency framework to support social science theorising, one that distinguishes the powers of human agents from the powers of the social contexts within which they act (Bhaskar 1979). Bhaskar distinguishes three distinct strata in the social world.<sup>3</sup> One is the empirical level, referring to agents' experience: beliefs, perceptions and intentions. The second is the actual level, referring to the social events, actions, practices and processes that actually occur. The third is the real (or deep)<sup>4</sup> level, referring to the emergent causal powers and generative mechanisms that produce events such as venture creation (actual level) and entrepreneurs' experience of those events (empirical level). Drawing on Bhaskar, we conceptualise the deep level in terms of social-structural and cultural powers that impact agents by shaping the situations they confront, facilitating or frustrating the formulation and pursuit of agential projects (Archer 1995). Causal powers and mechanisms are not directly visible and are identifiable only by their *effects* on events (Sayer 1992; Danermark et al. 2001). Structural and cultural powers only exert their effects through the actions of human agents; people are the efficient causes of social events, mediating the effects of structure and culture (Bhaskar 1979).

Social structures are the durable patterns of social relations, the relationally emergent products of human interaction that generate the material circumstances, positions and relations within which agents must act, and which are reproduced and transformed historically over time (Bhaskar 1979; Porpora 1989; Lawson 1997; Fleetwood 2008; Smith 2010). Structure refers to the necessary relations of causal interdependence connecting particular social positions (Sayer 1992), for instance, market buyer and seller, creditor and debtor, landlord and tenant, employer and employee. Social structures possess causal powers autonomous from the agents who currently occupy particular positions within those structures. As a consequence of their structural positioning, agents become the bearers of specific causal powers to be able to do certain things, for instance, having access to particular resources, or of liabilities to suffer certain things. Social structures vary in terms of scale, the powers and liabilities to which they give rise, whether they are emergent from other structures and whether agents can opt in or out of them, or of their consequences.

Structures include those agents are born into, such as socioeconomic class, gender and race/ethnicity, and those agents join in later life, such as organisations (Edwards et al. 2014), markets (Elder-Vass 2009) and households (Carter et al. 2016; Meliou and Edwards 2018); we stress these are only *examples* of social structures, many others may also be important. Social structural positions enable agents to pursue particular projects, or constrain them from doing so (e.g. Vincent et al. 2014). Material relations of resource inequality, autonomy and dependence enable and constrain activities (Porpora 1993). Positionality dynamically affects life chances, access to resources and the capacity to exercise agency (Martinez Dy et al. 2014; Martinez Dy and Agwunobi 2018). Entrepreneurs, like all persons, are simultaneously positioned within multiple, intersecting social structures and move through them across the



life course, accumulating or shedding material and cultural resources (Jayawarna et al. 2013, 2014; Martinez Dy et al. 2016, 2017).

Culture refers to the social norms that possess the power to influence how agents think, speak and act (Elder-Vass 2012). Agents are positioned variably in relation to particular norms, for instance, those relating to gender. Cultural positioning furnishes agents with vocabularies to describe and legitimise particular projects and practices (Lee et al. 2019). Agents themselves may be unaware of the embeddedness of their personal beliefs and motivations in a deeper normative context that shapes cognition and action unself-consciously or habitually (Fleetwood 2008; Porpora 2015). Entrepreneurs act on the basis of impulse-driven behavioural logics as well as deliberative reasoning (Lerner et al. 2018). Norms encourage nascent entrepreneurs to start new ventures, or particular kinds of venture - for example, particularly positioned women to start businesses in 'feminised' sectors (Carter et al. 2015) - and also influence their capacity to achieve legitimacy by shaping stakeholder perceptions and expectations (Tornikowski and Newbert 2007; Fisher et al. 2017).

The social world is an open system, with multiple structural and cultural powers contributing to the production of social events. The connection between the causal powers of social objects, actual events and agents' experience is therefore non-deterministic (Bhaskar 1978, 1979). Structural and cultural powers are capacities, or potentials, for particular events such as venture creation to occur, but they require agents to activate them, whether intentionally or inadvertently (Collier 1994; Archer 1995; Lawson 1997). Such powers may or may not be activated by agents or, if activated, interact with other activated powers to generate different events; and events may or may not be experienced/observed either by the agents studied or

by researchers. For instance, when entrepreneurs activate property rights to engage in trade with the aim of generating a profit, this does not guarantee they *will* make a profit. Customers, suppliers and competitors also activate *their* powers to pursue their own projects which may facilitate or hamper the entrepreneur's capacity to achieve a profit.

Adopting a stratified ontology of powers, events and experience enables researchers to avoid two problems. One is voluntarism, where events are explained solely in terms of agents' motivations without reference to the social contexts that make those events possible. The second problem is determinism, where events are explained solely in terms of contextual forces, ignoring agents' capacities to reflect on their circumstances and to act otherwise. Critical realist philosophy therefore supports process explanations of venture creation (Bhave 1994; McMullen and Dimov 2013) that place a reflexive, creative entrepreneurial agent in potent structural and cultural contexts that influence, but do not determine, what they do.

The purpose of social science theory, in our view, is to explain *how* social events such as new venture creation occur. Critical realist social science proposes theoretically informed and empirically substantiated, though fallible, explanations of social events (Brannan et al. 2017). Causal explanation requires description of explanatory powers, narratives of the contingent conjunctures of powers and adjudication between rival explanations (Porpora 2015). This explanatory task requires a three-stage process of: conceptualising events; retroducting, or hypothesising, the causal powers (structural, cultural and agential) argued to have generated those events; and seeking relevant empirical data to corroborate the argument proposed (Bhaskar 1979; Sayer 1992; Danermark et al. 2001; Hu 2017). Critical realist philosophy typically treats social events as multiply-determined, involving agential, structural and

cultural powers, but it privileges no particular causal power *a priori* in the explanation of particular cases (Archer 2013). These are social scientific, not philosophical, matters for researchers to investigate and debate.

### **Theorising new venture creation as a sociohistorical process**

Taking a critical realist standpoint, we conceptualise venture creation as a sociohistorical process emergent from the interaction of agential, structural and cultural powers. Entrepreneurship and small business researchers must therefore theorise how particular powers interact to create particular new ventures. We draw on Archer's (1995) morphogenetic approach to support theorising of the process of venture creation. Archer conceptualises the relationships between structure and agency *and* between culture and agency in terms of morphogenetic cycles that specify how structure, culture and agency emerge, intertwine and redefine one another through time. Morphogenetic cycles are composed of three analytical phases: structural (or cultural) conditioning of agency; interaction; and structural (or cultural) elaboration consequent to interaction.<sup>5</sup> The endpoint of each cycle of conditioning, interaction and elaboration constitutes the starting point for the next cycle. In practice, conditioning, interaction and elaboration occur continuously in relation to each structural and cultural context that entrepreneurial agents inhabit. Researchers must populate the morphogenetic framework with *specific* structural, cultural and agential powers, specifying how they interact to explain particular instances of venture creation.

Structural and cultural contexts condition, but do not determine, entrepreneurs' new venture projects, for example, activities such as investing personal savings, securing finance from

external investors, hiring employees or developing a product (e.g. Carter et al. 1996; Newbert 2005). From birth, individuals are enmeshed in intersecting structural and cultural contexts that shape the life course, including the capacity to start a business (Jayawarna et al. 2013, 2014; Jones et al. 2014; Martin and Wilson 2014; Kitching and Rouse 2017; Galloway et al. 2019). Entrepreneurs conceive of, and attempt to actualise, new ventures in circumstances that predate their actions, are largely not of their own making and which often resist their efforts to transform them just as they wish. Nascent entrepreneurs always possess a degree of discretion to act otherwise because structural influences impart contradictory pressures (Luke and Bates 2015) and because entrepreneurs are positioned variably in relation to structural and cultural contexts that impinge upon new venture projects in diverse ways (Forson 2013; Martinez Dy et al. 2014, 2018; Knight 2016). Social contexts are irreducible to interpersonal relations between nascent entrepreneurs and stakeholders. Starting a business presupposes a much wider structural and cultural context that makes the process possible, for example, a legal system supporting property and contract rights and a normative environment that legitimises commercial trading.

Nascent entrepreneurs' structurally- and culturally-conditioned activities contribute, by design or by accident, to the elaboration of structural and cultural contexts over time, reproducing or transforming social positions, relations and norms (Archer 1995; Elder-Vass 2012; Lawson 2013). Markets, for instance, vary in terms of structural properties such as the level and type of competition; these are partly - but only partly - a consequence of the focal entrepreneurs' own investment, buying and selling activities. Dynamic market processes change what particular entrepreneurs find it possible to do. Market entrants can drive up the productivity of incumbent firms (Fritsch and Changoluisa 2017), which is likely to influence

how the entrepreneur's new venture performs in future. These structural properties of markets exist only because of prior interactions between buyers and sellers, but they are not properties of entrepreneurs themselves (Elder-Vass 2009).

Critical realism is a philosophy *for*, as well as of, social science because it directs attention to what should be included in a powerful explanation. Applying the morphogenetic framework permits critical scrutiny of accounts of new venture creation and, in particular, the conceptualisation of the contextual conditions that make venture creation possible. We might ask whether the theory of effectuation provides an adequate causal-explanatory framework: does effectuation theory incorporate structural and cultural influences on venture creation? Or: does it omit or marginalise them? We use critical realist ontological commitments to evaluate effectuation accounts of venture creation.

### **Methodological approach: analysing effectuation concepts**

To evaluate effectuation theory as a causal-explanatory framework for new venture creation, we conduct an analysis of the theory's aims and core concepts. Our primary sources are Sarasvathy (2001a), which introduced the term effectuation in a major academic journal, and Sarasvathy (2008), a book discussing the primary effectuation concepts, methods and data used to generate the concepts, and the pragmatist philosophy argued to underpin effectuation. We also draw on conceptual works that discuss a range of overlapping issues, including: the nature of entrepreneurial expertise (Sarasvathy 2001b; Read and Sarasvathy 2005; Dew et al. 2009a, 2018); alternative logics of decision-making (Sarasvathy and Dew 2005a); the distinctive character of effectual reasoning (Dew et al. 2009b; Sarasvathy and Wiltbank 2010); the creation of new firms and markets (Sarasvathy 2001a, 2004b; Sarasvathy

and Dew 2005b; Dew et al. 2011; Dew and Sarasvathy 2016); firm/organisation design (Sarasvathy 2004a, 2012; Sarasvathy et al. 2008); a behavioral theory of the entrepreneurial firm (Dew et al. 2008), and the implications of effectuation concepts for strategic management (Venkataraman and Sarasvathy 2001), innovation (Dew and Sarasvathy 2007) and marketing (Read et al. 2009b). Two editions of a textbook illustrate the core concepts using real-life examples (Read et al. 2011, 2017). As Arend et al. (2015) note, there is considerable repetition of theoretical content across publications.

We focus on the core concepts of effectuation theory rather than applied effectuation research for two reasons. First, it is adherence to the conceptual core that distinguishes applied effectuation studies of venture creation from *non*-effectuation studies. Second, applied effectuation studies simply operationalise the core concepts (Chandler et al. 2011; Brettel et al. 2012), apply, or test, the core concepts (e.g. Sarasvathy and Kotha 2001; Bhowmick 2011; Dew et al. 2015; Reymen et al. 2015; Parida et al. 2016; Jiang and RÜling 2019) or present secondary analyses (Read et al. 2009a; Fisher 2012; Perry et al. 2012; Mauer 2014; Welter et al. 2016; Matalamäki 2017; Mansoori and Lackéus 2019; McKelvie et al. 2019).<sup>6</sup> Some researchers have proposed minor modifications to effectuation concepts while retaining the basic framework (e.g. Bhowmick 2011; Nielsen and Lassen 2012; Daniel et al. 2015; George et al. 2016; Martina 2019). As applied studies do not theorise structural and cultural influences on venture creation explicitly, discussing them would add no value to our conceptual analysis. We therefore focus our critique on effectuation concepts and ask whether they fully explain – or even *could* fully explain - venture creation.

Sarasvathy (2008:ch.13; see also Read et al. 2016 and Alsos et al. 2019) has invited

researchers to 'effectuate' the effectuation approach by developing connections to other ideas, approaches and debates, including structure/agency accounts. A small number of empirical studies have combined effectuation concepts with other approaches. Examples include: Actor-Network Theory (Murdock and Varnes 2018); sensemaking and personal dispositions literatures (Jones and Li 2017); role identity frameworks (Hannibal 2017); regulatory focus theory (Palmié et al. 2018) and C-K design theory (Agogué et al. 2015). None of these studies explicitly adopted a structure/agency framework; they therefore do not theorise structural and cultural influences on the venture creation process in the manner we proposed earlier.

### **The theory of effectuation**

Sarasvathy (2008:ch3) presents effectuation theory as an approach to understanding the process of new venture creation under conditions of uncertainty using the concept of decision-making logic. Such logics are defined as internally consistent sets of ideas that form a clear basis for action. Two decision-making logics that entrepreneurs might use to create a business venture are distinguished – these are conceptualised as effectual and causal (Sarasvathy 2001a, 2003, 2004a, 2004b, 2008; Sarasvathy and Dew 2005a; Read et al. 2009b; Dew et al. 2011; Read et al. 2011, 2017). Effectual and causal logics were identified by asking 27 'expert' entrepreneurs (company founders with 10 years' experience as full-time founders/entrepreneurs and of taking a company public) and 37 'novice' entrepreneurs (MBA students) to use think-aloud protocols to make new venture decisions in an experimental situation (Sarasvathy 2001b; Sarasvathy 2008:ch3, Appendices 1-2; Dew et al. 2009a, 2011). Expert entrepreneurs are argued to take new venture decisions guided principally by effectual logic, while novice entrepreneurs rely mostly on causal logic (Sarasvathy 2001a, 2008).

Sarasvathy (2001a) contrasts the two decision-making logics as follows: causal logic takes a particular effect as given and focuses on using selected means to create those effects; it presupposes given markets, with entrepreneurs searching the environment in order to select the most suitable course of action to achieve pre-selected goals. Effectual logic, in contrast, takes particular means as given and ponders what effects entrepreneurs might create. Effectual decision-making therefore involves design, the generation of alternative goals, rather than choice among already existing ends (Sarasvathy 2003). Effectual reasoning is argued to enable entrepreneurs to transform their environments into new artifacts - products, opportunities, firms and markets - in a social world characterised by three features (Sarasvathy et al. 2008:ch4): Knightian uncertainty, where future states of the world cannot be predicted; goal ambiguity, where agents' preferences are neither pre-given nor well-ordered; and environmental isotropy, where entrepreneurs do not know which aspects of the environment to attend to when making venture decisions. Sarasvathy (2001a:245) illustrates the two logics with the example of preparing a meal. A causal chef chooses what meal to make, shops for the necessary ingredients and prepares it; effectual chefs see what ingredients are readily available, imagine possible meals to make, and choose one to prepare.

Sarasvathy (2001a) claims effectual entrepreneurs act according to five principles, and contrasts these with causal logic (summarised in Table 1); later works reduce it to just four (e.g. Read et al. 2011, 2017). Starting with available means, rather than pre-selected goals,<sup>7</sup> defined in terms of 'who I am', 'what I know' and 'whom I know' (the bird-in-the-hand principle), effectual entrepreneurs are argued to: invest only what they can afford to lose in new venture projects, rather than seek to maximise returns (affordable loss principle); build



a network of 'self-selecting' stakeholders, rather than undertake competitor analysis (crazy quilt principle); and leverage unanticipated contingencies, rather than exploit pre-existing knowledge (lemonade principle), in the process of co-creating a new venture by interacting with stakeholders (pilot-in-the-plane principle). Effectual entrepreneurs, it is claimed, seek to control the environment rather than predict its future states when taking new venture decisions (Wiltbank et al. 2006); if entrepreneurs are able to control the future, there is no need to predict it (Sarasvathy 2001a:251; Sarasvathy 2003:208; Read and Sarasvathy 2005:50; Dew and Sarasvathy 2007:275). Hence effectual and causal logics are often referred to as non-predictive control and predictive logics, respectively (Sarasvathy 2004a; Wiltbank et al. 2006; Dew et al. 2009a).<sup>8</sup> Through repeated stakeholder interaction, entrepreneurs are argued to acquire expanding resources while, at the same time, the venture's goals converge (Read and Sarasvathy 2005; Sarasvathy and Dew 2005b).

Sarasvathy (2001a) suggests that business and management schools have traditionally taught causal, rather than effectual, approaches. It is not surprising therefore that, having been taught 'causal thinking' (Dew et al. 2009a: 295), MBA students report causal models when asked by a university professor how they would set up a hypothetical new venture. Expert entrepreneurs may receive a different kind of education to novices (Baron 2009). Moreover, whether decision-makers would act similarly in real new venture situations is a moot point, one acknowledged by users of experimental methods (Kuechle et al. 2016:44).

**TABLE 1: Contrasting Effectual and Causal Decision-Making**

<i>Decision-making principle</i>	<i>Effectual decision-makers...</i>	<i>Causal decision-makers...</i>
Bird-in-the-hand	generate and use readily available means in pursuit of aims unknown at the initiation of the venture creation process	choose the best means to achieve pre-selected ends
Affordable loss	invest in projects only what they can afford to lose	select projects offering the highest expected return
Crazy quilt	create a network of 'self-selecting' stakeholders who, by making precommitments, provide support to the emerging venture, expanding the resources available while simultaneously producing a convergence of ends	undertake competitive analysis in order to position themselves in a given, pre-existing market
Lemonade	seek to leverage unanticipated contingencies as new inputs and opportunities for the emerging venture	seek to exploit pre-existing knowledge and treat contingencies as barriers to be overcome in pursuit of pre-selected ends
Pilot-in-the-plane	concentrate on co-creating the future through interaction with stakeholders	predict the future in order to position themselves to adapt to it

When we refer to the theory of effectuation, or to core concepts, we refer to the conceptualisation of the process of venture creation in terms of a decision-making logic and to the five specific principles of effectual and causal decision-making set out in Table 1 (bird-in-the-hand, affordable loss, patchwork quilt, lemonade, pilot-in-the-plane). We now turn to examining the objectives of effectuation theory to ascertain whether *explaining* new venture creation is its principal purpose.

### **The ambiguous aims of effectuation theory**

We detect substantial ambivalence in Sarasvathy's theoretical objectives. Effectuation theory vacillates between *proposing design principles* that guide how (expert) entrepreneurs might

create new ventures, *describing* how entrepreneurs take actual venture decisions and *explaining* venture creation processes. Design, description and explanation are different aims. In places, Sarasvathy (2004a:524) claims effectuation “at heart is a theory of design”, emphasising entrepreneurs’ capacity to ‘worldmake’ (Sarasvathy 2012). Sarasvathy provides real life examples “as illustrations of what *could be* rather than as claims to truth about what *actually is*” (Sarasvathy 2008:xvii, italics in original). Sarasvathy (2008:61-62) argues explicitly that effectuation is *not* “a theory of how entrepreneurs do (descriptive) or should (normative) act.” Others describe effectuation as a performative theory, as an active intervention capable of constituting the world (Garud and Gehman 2016), while Read et al. (2016) ask what difference it makes if people act as though they believe in an effectual worldview.

Despite disclaimers that effectuation is *not* proposed as a superior logic of decision-making in terms of producing success (Sarasvathy 2001a:246), it is difficult to resist the strong hint of prescription in such arguments. We agree with McKelvie et al. (2013) that there is a “tacit undertone ... that the use of effectuation is superior”. Sarasvathy (2001a) stipulates stringent criteria for inclusion in her sample of expert entrepreneurs that entail a substantial degree of success (see also Arend et al. 2016:549, footnote 1). The alleged connection between *expert* entrepreneurs and effectual reasoning strongly implies that those seeking to be expert, rather than novice, entrepreneurs ought to take decisions informed by the five effectuation principles set out in Table 1.

While proposing effectuation as a design theory, Sarasvathy also uses the term effectuation to *describe* new venture decisions taken in accordance with the five principles set out in Table 1. Sarasvathy further claims that effectuation *explains* the creation of firms/organisations and

markets (Sarasvathy 2001a:243), high growth firms (Sarasvathy 2003:205) and the rise of the ordinary entrepreneur (Sarasvathy et al. 2014:235). Sarasvathy does not clarify what she means by 'explain' here, but we presume she would say that uncertainty influences entrepreneurs to take decisions according to the five principles. We might counter that it is insufficient for a causal-explanatory theory of venture creation simply to invoke heuristics, or 'rules of thumb', that guide an abstract entrepreneur, lacking specific properties or powers, to take new venture decisions in an uncertain but otherwise equally abstract and unspecified social context. But the important point here is that effectuation becomes more than a theory of design about the way the world might be; it is a hypothesised explanation about the way the world actually is.

In sum, the aims of effectuation theory are ambiguous. Effectuation is claimed to be a set of design principles, a description of a decision-making logic *and* an explanation of the venture creation process. But even if we treat effectuation only as a theory of design, we believe this is a major weakness. The purpose of social science theory, in our view, should be to *explain* how venture creation occurs, as Sarasvathy and co-authors claim elsewhere. If, on the other hand, we treat effectuation as an explanatory theory, it is legitimate to ask how far it is able to explain particular cases of venture creation that occur under specific sociohistorical conditions. This is the purpose of the next two sections. We begin by exploring the conceptual and explanatory problems that arise from the failure to make effectuation theory's ontological commitments explicit.

## **Ontological commitments matter: problems with pragmatism**

Sarasvathy (2008:ch9) claims effectuation theory is philosophically underpinned by pragmatism. While pragmatists differ in their analytical concerns and methodological approaches (Talisie and Aikin 2008), many avoid ontological questions as being impossible to settle, preferring instead to press on with the practical work of deciding whether ideas are useful guides to action (Rorty 1982; Kivinen and Piironen 2004; Baert 2005). Sarasvathy (2008:184, italics in original) suggests that pragmatists are “interested in how things work more than in how things *really* are, more focused on what is useful than in what is true.” In contrast to this view, we would argue that propositions about the way things work constitute ontological claims about the way things really are!

Effectuation scholars, like all researchers, inevitably make ontological assumptions. Their theoretical and empirical work presupposes them, whatever their explicitly declared standpoint (Bhaskar 1978; Sayer 2000; Fleetwood 2005; Groff 2016). As far as we are aware, neither Sarasvathy nor any other effectuation researcher has responded to Chiles et al.’s (2008) invitation to make effectuation’s ontological commitments explicit. Yet, effectuation theory’s conceptual vocabulary of entrepreneurs, new ventures, decision-making logic, means to hand, affordable loss, self-selecting stakeholders, precommitments, leveraging contingencies and venture co-creation *necessarily* commits researchers to particular ontological assumptions, even if these are left implicit or researchers themselves remain unaware of them.

Advocates of effectuation theory conceptualise the social world as uncertain (Sarasvathy 2001a, 2008). This claim comprises the *ontological* assumption that the social world possesses

certain properties and powers regardless of whether entrepreneurs happen to be aware of, or understand, them (Sayer 1997). For critical realists, it is the dynamic openness of the social world and the presence of multiple social objects with diverse causal powers – agential, structural and cultural - capable of interacting in novel and unforeseen ways that is the *source* of the uncertainty entrepreneurs experience and have to manage. This dynamic openness enables entrepreneurs to act creatively in order to transform their structurally- and culturally-conditioned circumstances, but *only* in ways made possible by those circumstances. This has important implications for effectuation as a theory of design. Not just any design theories can be performative because the social world constrains what actions it is possible for particular entrepreneurial agents to perform (Felin and Foss 2009).

When researchers fail to make their ontological commitments explicit, problems can arise using concepts that are not anchored in explicitly specified notions of the social world that constrain what is possible. Let us pause to reflect on the concepts of effectual and causal decision-making logics at the centre of effectuation theory. Despite claiming that effectuation inverts “every aspect of causal rationality” (Read and Sarasvathy 2005:50) and “the fundamental principles, solution process, and overall logic of predictive rationality” (Read et al. 2009a), Sarasvathy (2001a:245, italics added) also theorises that entrepreneurial decision-makers can use the two logics *simultaneously*. Empirical studies make similar claims about simultaneity (e.g. Reymen et al. 2015; Villani et al. 2018). Yet simultaneous use of causal and effectual decision-making logics presupposes contradictory conceptions of the social world. It presupposes a world that possesses the property of being predictable, where decision-makers face a closed set of decision choices whose outcomes are knowable, probabilistically, in advance (causal logic) *and* also the property of being unpredictable, where decision

outcomes and probabilities are unknowable in advance (effectual logic). The social world, considered as a unitary whole, cannot simultaneously be both predictable and unpredictable. Researchers cannot ignore the properties of the social objects they conceptualise and theorise just because they find it pragmatically convenient (Holland 2014). Effectuation researchers must define their concepts clearly and apply them consistently, without contradiction, if effectuation theory is to contribute to knowledge. We now turn to the central question animating our analysis of effectuation concepts: whether the theory of effectuation is able to *explain* cases of new venture creation adequately.

### **Effectuation theory's neglect of structural and cultural influences on venture creation**

Effectuation theory focuses on what Bhaskar (1979) calls the empirical and actual strata of social reality, on how nascent entrepreneurs experience and manage uncertainty, rather than on the deep level of structural and cultural powers that generate the uncertainty entrepreneurs must manage in order to bring a new venture project to fruition. By conceptualising the process of venture creation in terms of entrepreneurs' decision-making logics, effectuation theory does not – and *cannot* – explain fully how entrepreneurs create new ventures. Entrepreneurs act in particular ways in concrete sociohistorical settings that make possible, but do not determine, the process. Structural and cultural contexts enable, motivate and constrain entrepreneurs positioned variably in relation to structural relations and cultural norms (Martinez Dy et al. 2014, 2017; Wang and Warn 2018). Failure to theorise structural and cultural influences means that effectuation can offer only an under-socialised and ahistorical conception of new venture creation that implicitly grants nascent entrepreneurs excessive powers of agency.

Effectuation theory largely ignores entrepreneurs' structural and cultural positioning, although both affect the practices and interactions that interest effectuation researchers. Entrepreneurs are positioned variably in relation to social structures, including class, gender, race/ethnicity and markets, that enable and constrain new venture projects (Rouse and Jayawarna 2011; Loscocco and Bird 2012; Jayawarna et al. 2014; Tonoyan et al. 2019) *and* in relation to cultural norms that motivate individuals to embark on particular 'entrepreneurial journeys' (McMullen and Dimov 2013). Structural and cultural positioning affects the resources entrepreneurs are able to accumulate over a life course that they bring to the task of creating a new venture (Jayawarna et al. 2014; Jones et al. 2014).

To our knowledge, no empirical studies of venture creation have explicitly adopted a critical realist-informed approach. So, to illustrate the *kinds* of structural and cultural influences we believe can help to explain specific cases of venture creation better, we draw selectively from the rich insights of *non*-effectuation studies. We demonstrate the connections between structural positioning and venture creation using the example of entrepreneurs' socioeconomic class; we stress we use class only as an example and do not attribute it greater causal significance than other structural influences such as gender or race/ethnicity. Class positioning, often referred to as, and partly concealed by, family background, confers unequal access to: financial assets (Mulholland 2003; Blackburn and Ram 2006); skill development in childhood, adolescence and early adulthood (Obschonka et al. 2011; Jones et al. 2014); and formal education (Anderson and Miller 2003; Kim et al. 2006) (all relevant to the bird-in-the-hand principle). Class positioning also influences: the stakeholders entrepreneurs are likely to meet and may 'self-select' into supporting new ventures (Anderson and Miller 2003) (crazy quilt principle); the investments they feel willing to make in a new venture (Martina 2019)



(affordable loss principle); the capacity to leverage environmental contingencies (lemonade principle), and therefore the ability to co-create a new venture with stakeholders (pilot-in-the-plane principle) (Lee et al. 2019). By explicitly adopting a structure/agency framework, critical realist theorising can therefore incorporate structural influences such as class in explanations of venture creation.

Cultural norms possess the power to motivate, or discourage, nascent entrepreneurs' venture-creating efforts by shaping perceptions of the desirability and feasibility of start-up, but these too are absent from effectuation theory. Norms influence venture creation by moulding entrepreneurs' beliefs and habits, and by shaping stakeholder perceptions of entrepreneur legitimacy (De Clercq and Voronov 2009; Williams Middleton 2013). Non-effectuation studies have, for example, argued that norms influence: entrepreneurial intentions and attitudes to risk taking and innovation (Hayton and Cacciotti 2013; Valdez and Richardson 2013; Kibler et al. 2014; Williams and Vorley 2015; Spigel and Harrison 2018); perceptions of entrepreneurial self-efficacy (Hopp and Stephan 2012); men and women's varying propensity to start a business across the life course (Cheraghi et al. 2019); inter-generational transmission of role models and peer effects (Mungai and Velamuri 2011; Fritsch and Wyrwich 2014); the choice to become self-employed on a full- or part-time basis (Block et al. 2019); entry into self-employment through 'contagion effects' (Nikolaev and Wood 2018); and entrepreneurs' moral legitimacy (Kibler and Kautonen 2016). By explicitly incorporating social norms within a structure/agency framework, critical realist theorising is able to integrate cultural influences in explanations of venture creation.

Sarasvathy (2004:525) notes that “effectuators do not ignore external constraints” and Dew and Sarasvathy (2016:169) refer to ‘reciprocal causation’ between organisations and their environments, but the influence of social context is mostly left implicit in references to entrepreneurs’ scope of action and use of resources (Tryba and Fletcher 2019). Effectuation theory does not therefore ignore contextual influences entirely but tends to conceptualise them in very narrow terms, as relations between entrepreneurs and ‘relevant’ stakeholders (Dew and Sarasvathy 2007:279), where relevance is defined in terms of interpersonal interaction. This local, interpersonal focus omits reference to the wider distributions of material and cultural resources across major social groups - by class, gender and race/ethnicity, for example – that influence structural and cultural positioning, and the variable capacities to exercise agency they enable.

Effectuation researchers acknowledge entrepreneurs’ limited resources in terms of who and what they know (Sarasvathy 2001a), but neglect the wider structural and cultural contexts that enable, motivate and constrain access to the skills, finance, social connections and other resources needed to create new ventures. This neglect is surprising given that Sarasvathy (2004a:522) conceives of entrepreneurs as “evolved socio-biological beings whose psychology, history and culture matter” and who come “onto the world stage in the middle of a drama already in progress. And like any other human being, the entrepreneur too is constrained and shaped by the socio-economic and psycho-historic forces that prevail at the moment of his or her advent upon the stage” (Sarasvathy 2004b:3). We agree strongly with Sarasvathy on these points, but effectuation theory does not refer directly to history, culture or socio-economic forces. Nor can effectuation theory explain entrepreneurs’ variable structural and cultural positioning or their consequent variable capacities to formulate, and

actualise, new venture projects.

Summing up, this section has sought to make two points that are at the heart of our contribution. First, the theory of effectuation fails to conceptualise the causal, conditioning influence of structural and cultural contexts on entrepreneurs' new venture projects. Effectuation cannot therefore provide an adequate causal-explanatory account of the venture creation process. Second, *non*-effectuation studies offer more detailed insights into structural and cultural influences on venture creation than applied effectuation studies. Reconceptualised as emergent structural and cultural causal powers that entrepreneurs (and other agents) might activate, each of the influences discussed by *non*-effectuation studies potentially contributes to the explanation of actual cases of venture creation.

### **Conclusion and implications**

Drawing on critical realist philosophy of science, we have interrogated the theory of effectuation to examine whether it provides – or even could provide - a powerful causal *explanation* of the process of new venture creation. We have focused on effectuation theory for three reasons: the theory's growing popularity and visibility; the underpinning assumption of the under-socialised 'heroic' entrepreneur as the instigator of new business ventures, an assumption common in entrepreneurship research; and the limited critical scrutiny of the theory thus far. We have sought to remedy this research gap by evaluating the contribution of effectuation theory to *explaining* processes of venture creation. Our analysis has been explicitly conceptual. We have focused on the core concepts of effectuation theory, namely, what the concepts refer to, what they marginalise or omit, what they presuppose about the nature of social reality and, as a consequence, whether the theory is adequate to explaining

the influence of social context on business formation. Concepts are important because they define the social objects effectuation researchers believe are important to the study of venture creation and the scope of the theories which empirical effectuation studies are able to support.

By reducing venture creation to a decision-making logic, we argue that effectuation theory pays insufficient regard to the influence of social context on nascent entrepreneurs' cognitions and actions. By conceptualising the influence of social context in terms of an abstract, generic context of uncertainty or, slightly better, in terms of interpersonal relations between entrepreneurs and the stakeholders who 'self-select' into their emerging ventures, effectuation theorists neglect the substantial, pervasive and enduring structural and cultural influences on new venture creation. Effectuation theory cannot explain fully how structural and cultural conditions make particular new ventures possible in particular times and places. We therefore conclude that the contribution of effectuation theory to entrepreneurship scholarship is more limited than its advocates claim because it can offer only an under-socialised, ahistorical account of the venture creation process. Failure to theorise the influence of structural and cultural contexts on venture creation implicitly grants nascent entrepreneurs excessive powers of agency.

Our critique of the theory of effectuation is also a contribution to contemporary debates on the influence of context on all forms of entrepreneurial action, including new venture creation. Our analysis suggests three wider implications for entrepreneurship and small business researchers. First, building on the insight that venture creation is *necessarily* both an agent- *and* a context-dependent sociohistorical process, we recommend that researchers

explicitly adopt a stratified social ontology to inform their empirical work, one that distinguishes causal powers/mechanisms, social events and agents' experience. Most researchers simply do not report their ontological commitments yet these inevitably underpin theorising of the processes of new venture creation. Conceptualising the influence of social context in terms of causal powers/mechanisms that may (or may not) be activated by entrepreneurs or other stakeholders permits theorising that is neither determinist nor voluntarist because it places the entrepreneurial agent in a potent social context that conditions, but does not determine, action.

Second, we distinguish structure and culture as two analytically distinct dimensions of social context, and conceptualise these in terms of causal powers/mechanisms capable of conditioning entrepreneurial action. Powerful explanations of entrepreneurial action require attention to structural and cultural powers/mechanisms as well as to entrepreneurial agency. This deep social ontology of structural and cultural powers/mechanisms situates nascent entrepreneurs in a richer social context than allowed for by effectuation theory's abstract, shapeless, condition of uncertainty. Entrepreneurs must activate the specific powers of their structural and cultural context, for example, by engaging with specific stakeholders, in order to create particular types of new business venture and to manage them successfully.

Third, we advise that researchers utilise Archer's morphogenetic approach to theorise the connections between structure, culture and agency, in explaining entrepreneurial action, including venture creation. Specifically, researchers might use the framework to explain how particular entrepreneurs exercise their powers of agency *in relation to* the historically emergent structural and cultural conditions they inhabit. Using the morphogenetic approach

takes seriously entrepreneurs' variable positioning in relation to the intersecting structural and cultural powers that influence their actions, while recognising that entrepreneurs' actions also contribute to the reproduction or transformation of those structural and cultural powers. Theory must be able to explain cases of both entrepreneurial privilege, where agents possess substantial resources, and entrepreneurial disadvantage, where agents possess limited resources (Martinez Dy et al. 2014). Entrepreneurs occupy multiple structural and cultural positions that facilitate, or impede, the accumulation of resources (skills, money, social connections) across the life course that enable them to create and operate particular types of venture in particular times and places – or, conversely, that prevent them from creating a new venture at all.

## Notes

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<sup>1</sup> Sarasvathy (2001a) uses the term ‘entrepreneur’ to refer to people creating new business ventures, and ‘entrepreneurship’ to the process by which new ventures are created.

<sup>2</sup> Social objects are the ‘socially real’ products of human interaction conceptualised and studied by social science researchers (Fleetwood 2005). Examples include practices, relations, organisations, institutions and social structures. The term ‘object’ connotes no fixed properties; social objects are dynamic and transformable over time.

<sup>3</sup> Bhaskar (1978, 1979) developed this conception of a stratified ontology from investigations of natural science experimentation and from immanent critiques of rival philosophies of social science. Positivism and hermeneutics both presuppose a ‘flat’ ontology of empirical regularities or meanings, respectively. These can be contrasted with the ‘deep’ ontology of critical realism that permits theorisation of the conditions of possibility of experience and meaning-making.

<sup>4</sup> To avoid confusion, we follow Lawson (1995) and Fleetwood (2005) in preferring the term ‘deep’ to Bhaskar’s (1978) designation of the ‘real’ level; all three levels are real.

<sup>5</sup> Although we use Archer’s morphogenetic framework, it is Elder-Vass’ (2010b, 2012) conception of culture as norms, defined as socially endorsed beliefs, that we incorporate within the framework. This is preferred to Archer’s concept of culture as intelligibilia, defined as artefacts capable of being understood by someone, for example, books or films (Archer and Elder-Vass 2012).

<sup>6</sup> Some effectuation researchers study *established*, rather than new, venture settings, for example, studies of decision-making and venture performance (e.g. Wiltbank et al. 2006; Cai et al. 2017; Smolka et al. 2018; Wu et al. 2020). Sarasvathy (2001a) has always envisaged effectuation theory might be relevant to non-new venture settings.

<sup>7</sup> Effectuation researchers offer contradictory views on entrepreneurs’ goals, conceptualising them *both* as pre-selected, predating action *and* as formulated in action. Although most treat goals as formulated in action, entrepreneurs are also assumed to bring with them to the venture-creating process a “generalized end goal or aspiration” (Sarasvathy 2001a:245) or “very generalised goals” such as making “\$40m by age 40” (Dew et al. 2008:42, 45). Indeed, without pre-selected goals that predate action, it is impossible to explain why entrepreneurs create new ventures at all.

<sup>8</sup> This binary distinction between predictive and non-predictive control seems unduly simplistic. We agree with Arend et al. (2015:641, italics in original) that “*control requires prediction*”: experimenting with means to generate new ends are *tests of prediction*. Even effectuation researchers accept that effectuators sometimes make “highly speculative *guesstimates*” of expected returns (Sarasvathy and Dew 2005b:554, italics in original).

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