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A logic of entrepreneurial action without judgment? Effectuation revisited

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Abstract
Since its introduction in 2001, effectuation has matured significantly and become an influential perspective within the entrepreneurship literature. However, despite advances in the theory, some aspects of it remain ambiguous. One such case is its relationship to entrepreneurial judgment, the importance of which for effectuation has been explicitly denied. We revisit this claim and reevaluate whether effectuation can really get by without entrepreneurial judgment. We find that characterizing effectuation as a distinct entrepreneurial logic devoid of judgment is untenable: quite the opposite is true. Effectuation is in fact a specific form of entrepreneurial judgment. Recognizing this helps both to enrich effectuation theory and its practice by incorporating core insights from entrepreneurial judgment theory and to integrate different accounts of entrepreneurial action in attempts to build a more unified entrepreneurial action theory.

Keywords Entrepreneurial action · Effectuation · Entrepreneurial judgment theory · Uncertainty · Real-structuredness

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1 Introduction

An important strand of the entrepreneurship literature focuses on the concrete actions entrepreneurs take as they attempt to turn their visions of possible futures into reality. This entrepreneurial action literature (e.g., Klein 2008; Lerner et al. 2018; McMullen and Dimov 2013; McMullen and Shepherd 2006; Shepherd 2015; Townsend and Hunt 2019; Townsend et al. 2018; Wood et al. 2017, 2021, 2024) does not draw from a single theoretical perspective but subsumes a variety of theories that are similar in some ways but different in others. Prominent theories that fall under this umbrella include effectuation (Sarasvathy 2001, 2022; see Salajegheh et al. (2024) for a recent systematic literature review) and entrepreneurial judgment (Foss and Klein 2012) theories, among others, including bricolage (Baker and Nelson 2005) and creation theory (Alvarez and Barney 2007). These theories' shared focus on entrepreneurial action prompted Wood et al. (2021, p. 148, italics added) to suggest grouping them under "the umbrella of *entrepreneurial action theory*, which is broadly concerned with the decision to take action toward entrepreneurial endeavors under conditions of uncertainty."

However, despite this common bond, the various theoretical perspectives under the umbrella of entrepreneurial action theory (hereafter EAT) have not been well aligned. In this paper, we focus on one specific example: the relationship between effectuation theory (hereafter effectuation) and entrepreneurial judgment theory (hereafter EJT)[1]. Prominent voices from the effectuation camp, namely Sarasvathy and Dew (2013), have questioned the relevance of entrepreneurial judgment for effectual approaches to entrepreneurship, going so far as to claim a contradictory relationship between effectuation and EJT. They argue that an effectual approach to entrepreneurship evolves "without judgment" (p. 277).

Since their controversial argument, EJT has been developed and refined in various directions (Foss and Klein 2015; Packard and Bylund 2025; Rapp and Olbrich 2023). One recent advancement is the establishment of a link between entrepreneurial judgment and the Simonian notion of decision problem structures (Rapp and Olbrich 2023). Doing so reveals that entrepreneurs exercise judgment on not just uncertain options and outcomes (Packard et al. 2017), but also the appraisal of action alternatives, involved goals, and the solvability of the decision problem. This extended EJT implies that entrepreneurial judgment is not a single, overarching decision but rather a process involving many decisions.

In this paper we utilize this extended view of entrepreneurial judgment (Rapp and Olbrich 2023) to reevaluate and, in conclusion, reject effectuation theorists' assertion of an oppositional relationship between effectuation and EJT (Sarasvathy and Dew 2013). In so doing, we contribute to ongoing efforts to systematically and critically analyze effectual logic (e.g., Arend et al. 2015; Bylund and Gupta 2021; Kitching and Rouse 2020; Rapp 2022; Rapp and Olbrich 2023), including those related to

[1] This theory has historically employed the moniker *judgment-based approach* or JBA (Foss and Klein 2012, 2015; Foss et al. 2019a). Recent developments, however, have aimed to elevate "JBA's status to that of a theory– EJT" (Packard and Bylund 2025, p. 54). In light of these efforts, we have embraced the EJT moniker herein.

the 'without judgment' claim (Foss and Klein 2015; McMullen 2015). We assert that effectuation does not, in fact, unfold without judgment; instead it is a continuous process of comparatively *smaller* and more cautious predictions and judgments over time relative to the more ambitious (and often foolhardy) causation approach of stronger predictions and fewer plan adjustments (McMullen and Dimov 2013; Packard and Clark 2020a; Packard et al. 2017; Rapp 2022; Rapp and Olbrich 2023). As such, the effectual process is one particular way—among others—in which entrepreneurial judgment can manifest processually. Thus, effectuation should not be mischaracterized as an alternative logic of entrepreneurial action distinct from EJT, nor as a process that skirts judgment entirely. Instead, it is but one expression of the entrepreneurial judgment process, which suggests integrating EJT as a complement to and foundation for effectuation's framework.

Resolving the alleged contradiction between entrepreneurial judgment and effectuation has implications beyond just effectuation. By integrating two strands of EAT, we contribute to a more complete and holistic account of entrepreneurial action, fulfilling Bylund and Packard's (2022a, p. 1255) prediction that "a subjectivist theory [of entrepreneurship] might emerge outside of effectuation, such as the entrepreneurial judgment approach…, which would then integrate the bulk of effectuation theory's insights into a new and more holistic process theory." By building on the explicit linking of entrepreneurial judgment to decision problem structures and interpreting effectual logics of entrepreneurial action as one particular expression of EJT, this paper thus also contributes to the development of a holistic subjectivist theory of the entrepreneurial process based on judgment.

2 An outline of effectuation theory and entrepreneurial judgment theory

2.1 Effectuation theory

Effectuation burst onto the scene with Sarasvathy's seminal paper in 2001 and has since attracted significant interest (e.g., Rudeloff et al. 2022). Sarasvathy (2001) portrayed the conventional academic view at that time as one in which entrepreneurs make decisions with clearly defined goals in mind, selecting the best possible actions based on predicted future returns. She challenged this account of entrepreneurial decision-making (perhaps exaggerated) on the grounds that it may be ineffective in the radically uncertain contexts that characterize entrepreneurial venturing (Packard and Clark 2020b; Packard et al. 2017; Welter and Kim 2018). She found via think-aloud protocols with experienced entrepreneurs that they often instead begin by considering the means at their disposal and explore the potential ends that those resources might be put to, rather than beginning with the ends and formulating a long-term vision and using detailed predictive business planning to determine the 'optimal' means to realize that vision (e.g., Harms et al. 2021).

Deliberately eschewing long-term predictions and predetermined goals, effectuation instead describes an adaptive and open-ended process that unfolds incrementally over time. Entrepreneurs who adopt this method focus on developing stakeholder

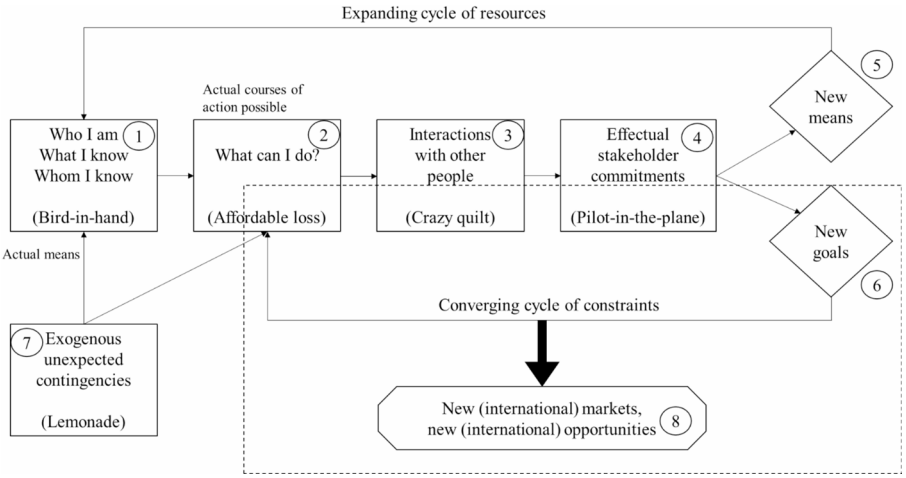

Fig. 1 Effectuation process

networks, building the resource base, and taking advantage of unforeseen contingencies as they emerge (Sarasvathy 2001, 2022). In contradistinction to the more traditional causation approach (Sarasvathy 2001), which is predicated on forecasting and building goal-oriented strategies, effectuation prioritizes a logic of *nonpredictive control*, thereby enabling entrepreneurs to manage uncertainty through gradual, iterative actions and allowing the market to direct their activities rather than relying on long-term projections (Bhowmick 2011; Ferreira et al. 2019; Sarasvathy 2001, 2022).

A total of five principles have been introduced to facilitate the use of an effectual logic in entrepreneurial venturing: (1) bird-in-hand, (2) affordable loss, (3) crazy quilt, (4) pilot-in-the-plane, and (5) lemonade (Sarasvathy 2022; Sarasvathy et al. 2014). This effectual process has been illustrated in Fig. 1 (Sarasvathy 2022; Sarasvathy and Dew 2013; Sarasvathy et al. 2014).

The effectual process (Read et al. 2017; Sarasvathy 2022; Sarasvathy and Dew 2005; Sarasvathy et al. 2014) starts with the entrepreneur's (self-)evaluation of the means they already have at hand: who s/he is, what s/he knows, and whom s/he knows (*bird-in-hand*). Somewhat related, effectuation encourages entrepreneurs not to focus on the future prospects of a particular venture but to assess the resources they and their network partners can divert into the venture and what they can stand to lose if things go sideways (Dew et al. 2009; Martina 2020) (*affordable loss*). Effectual reasoning, moreover, emphasizes the significance of forming stakeholder networks (*crazy quilt*). If—sidestepping initial goal formulation—"you start with a given set of means… and let various ends emerge, the partnerships create the venture" (Read et al. 2017, p. 158). Forging such alliances aims at onboarding partners "who may end up transforming the venture in a way you could not anticipate" (Read et al. 2017, p. 158). Focusing on what is supposedly controllable (Arend et al. 2015; Bhowmick 2011; Bylund and Gupta 2021) in an effort to create the future wanted (*pilot-in-the-plane*), effectuation puts stakeholder commitments center stage, potentially resulting in new means, new goals, or both. At any time throughout the effectual cycle, surprise

contingencies are likely to arise and should ideally be leveraged by the entrepreneur (*lemonade*).

2.2 Entrepreneurial judgment theory

Like effectuation, EJT (Klein 2008; Foss and Klein 2012, 2015, 2020; Packard and Bylund 2025) is essentially an account of how entrepreneurs make decisions and take action under conditions of absolute uncertainty. However, there is an important categorical difference between the effectual logic and EJT: whereas the former prescribes a specific approach to entrepreneurial action, EJT provides a more general framework that can explain many concrete types of, or approaches to, entrepreneurial action (Bylund and Packard 2022a; Foss et al. 2019a), whether in new or established firms, in resource-poor or resource-rich contexts, relying on long-term predictions or not, in high-quality or low-quality institutional settings, and so on (Foss and Klein 2012).

This branch of EAT is a renaissance of a classical line of thought, reintroducing Knight's (1921) and Mises's (1998) understanding of the entrepreneur as one who exercises judgment and bears uncertainty (Foss and Klein 2015). As such, EJT links entrepreneurship to investment (Klein 2008) and entrepreneurs' decisions to allocate scarce resources in the face of Knightian uncertainty, that is, a situation in which neither all possible options nor their respective outcomes are (or can even be) fully known and in which there are no objective probabilities that can be assigned to potential outcomes (Knight 1921).

In earlier formulations of EJT, entrepreneurial judgment was defined generally as "residual, controlling decision-making about resources deployed to achieve some objectives" (Foss and Klein 2012, p. 78). Because the deployment of resources implies uncertainty, they add that entrepreneurial judgment is the skill of "dealing successfully with resource allocation decisions *under uncertainty*" (Foss and Klein 2012, p. 79; Packard et al. 2017). More recently, Packard and Bylund (2025, p. 62) clarified and elaborated that entrepreneurial judgment is "the process of determining and instigating entrepreneurial intentions toward entrepreneurial ends, which are, by definition, pursuant of new economic value."

Under conditions of Knightian uncertainty, formalized decision rules are unhelpful (Mousavi and Gigerenzer 2014). Instead, entrepreneurs must attempt to comprehend decision problems heuristically (e.g., Rapp and Olbrich 2023) and apply their judgment (Foss and Klein 2012). To do so, they rely on tacit knowledge (see Wuytens et al. (2025) for a recent review of research on tacit knowledge in the entrepreneurial context), subjective beliefs (Foss and Klein 2020), and gut intuitions (Huang and Pearce 2015). The special role that uncertainty plays for entrepreneurial judgment has particularly attracted scholarly attention because decision-making is fundamentally different under conditions of uncertainty than under conditions of risk (Foss and Klein 2012; Klein 2008; Packard et al. 2017; Rapp and Olbrich 2023), and uncertainty is what gives rise to entrepreneurial action in the first place (Knight 1921; Mises 1998; Townsend et al. 2018; Wu and Knott 2006).

Uncertainty, in this context, has typically been associated with the possible options an entrepreneur could adopt and their respective outcome sets. Rapp and Olbrich

(2023) extend this view by linking EJT to the Simonian notion of decision problem structures. They argue that entrepreneurs typically face 'real-structured' decision problems with specific structural characteristics that differentiate them from the well-structured problems typically examined in behavioral studies (Newell 1969; Rapp and Olbrich 2021; Simon 1973; Simon and Newell 1958; Townsend and Hunt 2019). Because "the judgment-based approach is, at its core, characterized by a particular understanding of context" (Foss et al. 2019a, p. 1202), recourse to the concept of decision problem structures provides a valuable foundation for the refinement of EJT. Doing so implies that entrepreneurial judgment should not be understood solely in terms of uncertain options and outcomes but also as comprising further structural characteristics in addition to the causality dimension normally associated with uncertainty. Linking EJT to decision problem structures, and to real-structured decision problems specifically, allows for a nuanced dimensionalization of judgment. In addition to the causality dimension (causality judgments), Rapp and Olbrich (2023) outline (sub-)judgments on the appraisal of action alternatives (appraisal judgments), underlying goals (goal judgments), and the solution mechanism for the entrepreneurial decision problem (solution judgments). In their words (p. 194),

> *Causality* judgment refers to the particular kind of judgment entrepreneurs exercise when defining their set of available action alternatives and imagining the effects the alternatives might yield. *Appraisal* judgment describes the distinct type of judgment entrepreneurs apply to compare and evaluate their options. *Goal* judgment reflects entrepreneurs' efforts to specify the goal(s) toward which they are striving. Lastly, *solution* judgment reflects the distinct type of judgment entrepreneurs exercise when attempting to (computationally) resolve a decision problem.

Thus, much like effectuation, the EJT casts entrepreneurial judgment—the decisive navigation of Knightian uncertainty—as the core and defining function of the entrepreneur. Arguably, the fact that EJT is a counterhistorical (Bylund and Packard 2022b) revival of insights that were lost and forgotten by the field for some time enabled effectuation to become an immediately relevant contribution to the entrepreneurship literature. When effectuation emerged at the turn of the millennium, entrepreneurship was just beginning to find its footing as a research discipline, and it filled a void in the discussion of how best to understand entrepreneurship and its relationship with uncertainty. Had EJT already been in place, the ideas of Knight, Mises, and others at that time not lost to the positivist era of economics, there might have been less space for effectuation to emerge as a direct contrast to prevailing views, and effectuation's relationship with judgment would likely have been evaluated differently from the beginning.

3 To judge, or not to judge, that is the question: effectuation and its relation to judgment

3.1 Effectuation proponents' critique of judgment and previous objections to it

With EJT explicitly built atop foundations from Austrian economics, Sarasvathy and Dew (2013) offered analysis from their effectuation vantage of several central pillars of Austrian economics as they relate to entrepreneurship and the firm. While they acknowledge some Austrian contributions in this context, they are particularly critical of the judgment concept. They suggest that there is weak empirical support for the construct and assert that "to the extent that judgment involves the use of prediction and planning,… [it] was long ago assassinated in the management literature" (Sarasvathy and Dew 2013, pp. 283–284). Additionally, they point to "a veritable industry" that has been "built out of examining flaws in human judgment that deviate from the rational ideal" (p. 284). They also deem the "argument for the non-contractibility of entrepreneurial services… somewhat suspect" and, in sum, view judgment as "a troublesome concept" (p. 284). They conclude that entrepreneurship can (and ought to) unfold "without judgment" (p. 277), that "[e]ntrepreneurial judgment… is in fact neither necessary nor sufficient for entrepreneurship" (p. 292).

They draw this conclusion from a definition by Langlois (2007, p. 1112, italics added), that "judgment is the (largely tacit) ability to make, under conditions of structural uncertainty, decisions that turn out to be reasonable or successful *ex post*." The problem with this definition is immediately apparent—that action is derived from judgment *only* if it is reasonable/successful, and is not judgment otherwise. Sarasvathy and Dew (2013), noting this error, find the concept of entrepreneurial judgment "rather unrealistic—a matter of hand-waving than thoughtful theorizing" (p. 284) and thus simply obviate the construct from the effectuation framework.

However, this conclusion has not gone unchallenged. Foss and Klein (2012, p. 95) "tend to see many more similarities than differences. Both… [Sarasvathy's] and our perspective emphasize the basic point that opportunities come into existence only as they are manifested in action." They contend that the alleged contradiction "is largely semantic, not substantive" (Foss and Klein 2015, p. 592). McMullen (2015, p. 652), too, has rejected the claim "that effectuation negates the existence or usefulness of the entrepreneurial judgment construct" and has instead described "the judgment dilemma as one of scope rather than existence" (p. 675).

The claims of effectuation theorists deserve further scrutiny, and recent advancements to EJT allow us to do just that—to discern if EJT and effectuation are really contradictory, as claimed by Sarasvathy and Dew (2013), or compatible, as argued by Foss and Klein (2012). The following section, therefore, examines the effectual logic of entrepreneurial action through the lens of EJT. The goal is to ascertain whether a conception of effectuation as a logic of entrepreneurial action without judgment is plausible, as Sarasvathy and Dew (2013) suggest.

3.2 The effectual process and its judgment components

3.2.1 Why effectuation proponents' critique and the 'without judgment' claim are invalid

The conclusion that entrepreneurship can occur without judgment is a rather severe and unnecessary stretch of language. It is true that the definition proffered by Langlois (2007) is ill-conceived. But this is not the definition adopted by judgment theorists. In their seminal exposition of the judgment-based approach, Foss and Klein (2012, p. 78) adopt the more common semantic understanding of the term, defining entrepreneurial judgment as "residual, controlling decision-making about resources deployed to achieve some objectives; it is manifest in the actions of individual entrepreneurs." In some appearances, the qualifier of Knightian uncertainty is explicitly added, that is, judgment is decision-making *under uncertainty*. Hastie (2001, p. 657) defines judgment as "the components of the larger decision-making process that are concerned with assessing, estimating, and inferring what events will occur and what the decision-maker's evaluative reactions to those outcomes will be." More recently, Packard and Bylund (2025, p. 59) define judgment as "the determination and instigation of intentions, the process through which a shift from one intention to a new one, is or may be made." But notice here that the circular logic in Langlois's definition is removed. This is not by accident. As previously mentioned, EJT has a rich academic history and has thus benefited from rigorous theorizing developed over a long period of time. Accepting Hastie's, Foss and Klein's, or Packard and Bylund's definitions, can resources be deployed 'without judgment'?

Let us take Packard and Bylund's (2025) definition of judgment as a process of intention switching. Because effectuation entails resource (re)deployment, and because resource (re)deployment is a switch in intentions—moving resources to a new task—it *requires* judgment. Even taking Foss and Klein's (2012) definition of judgment as decision-making under uncertainty, it is impossible to conceive of an entrepreneurial process in which such judgment is unnecessary. It is worth noting that, in this common and general sense of the term, *all action*, *defined as intentional behavior*, *requires judgment*, including any and all entrepreneurial action (Mises 1998). "Action (including 'nonaction' such as resting or deferring a decision) is the necessary and immediate result of some decision. Only instinctual or reflexive (i.e., nonreasoned) actions can occur without decision" (Packard et al. 2017, p. 841). Even impulsive actions are arguably instigated by judgments, albeit without the attentional deliberation of more intensive decisions (Brown et al. 2018). It is in this sense that judgment theorists employ the term.

For Read et al. (2017, p. 158, emphasis added), "[e]ffectuation… is in part a mindset, a way of viewing opportunity and uncertainty. But ultimately, it's a *series of actions*." Because all intentional action results from judgment, this assessment implies a direct link to entrepreneurial judgment, as Rapp and Olbrich (2023, p. 203) highlight: "The specific series of actions summarized under the label *effectuation* is no exception in this regard; each action taken throughout the effectual process is in itself the immediate outcome of judgmental decision-making."

Let us walk through the principles of effectuation and the actions they entail to illuminate how they are inherently linked to entrepreneurial judgment. To begin with, the entrepreneur's initial (self-)evaluation of the means readily available (bird-in-hand principle) requires judgment. Do we as humans know with absolute certainty who we are, what we know, and whom we know? These categories are, in fact, *fuzzy*, that is, the boundaries and criteria of inclusion are not clear-cut (Zadeh 1965). When we attempt to answer such questions, are there never things or people that we are unsure whether they 'count'? Are we perhaps subject to certain biases, such as self-delusion (Arend et al. 2015; Simon et al. 2000) in the shape of overconfidence (Busenitz and Barney 1997; Simon et al. 2000; see Chwolka and Raith 2023 for a nuanced discussion), over-optimism (Hmieleski and Baron 2009; Lowe and Ziedonis 2006), or illusion of control (Zhang et al. 2021)? How reliable is our knowledge? For example, do we still have skills that have not been used in many years? Can one unequivocally evaluate how others we (believe we) know could assist in their entrepreneurial journey? Simon (1986, p. 211), whose work has been an important inspiration for effectuation theorists (e.g., Sarasvathy 2001), denies this and instead stresses that a distinction must be made "between the real world and the actor's perception of it and reasoning about it." Hence, none of those questions can be answered in the affirmative with absolute confidence. Arend et al. (2015, p. 640) argue that "the implied certainty and accuracy of [the effectual entrepreneurs'] assessments of their own personal resources—their traits, knowledge corridors, and social networks…—seem unjustified. Entrepreneurs are often considered self-delusional… in their confidence over the quality of their abilities, the quality of their data, and the quality of their networks." Goel and Karri (2006) additionally indicate that effectuating entrepreneurs tend to be over-trusting of third parties. Given the uncertainties surrounding entrepreneurial (self-)evaluations of available means, their determination *requires* entrepreneurial judgment.

A key part of the effectuation logic is that entrepreneurs commit to the venture only their 'affordable loss,' that is, only that which the entrepreneur (or stakeholder) is willing and able to lose (Read and Sarasvathy 2005). "By allowing estimates of affordable loss to drive their decisions about which venture to start, effectuators do not need to depend on any predictions" (Dew and Sarasvathy 2009, p. 1). Once again, however, this type of 'safe play' does not obviate the need for predictive judgment over the use of the resources committed. Affordable loss is contingent and, thus, uncertain (Rapp 2022)—*how much* is 'affordable' to lose? Adequately assessing it requires the entrepreneur to resolve a real-structured problem, including forming future expectations that require judgment (Rapp and Olbrich 2023). However, while effectuation rightly emphasizes the presence of uncertainty and the limits it imposes on entrepreneurial prediction in general, the uncertainties, predictions, and judgment involved in determining affordable loss have been largely neglected (but see Martina 2020).

To illustrate, suppose an aspiring effectual entrepreneur believes that $20,000 is an affordable amount to lose on a potentially lucrative venture. Shortly after making that decision, however, one of the entrepreneur's parents might require medical treatment beyond their financial means, the entrepreneur's house might need substantial repairs after a severe hailstorm, or another more attractive venture idea might appear on their

radar. Any of those instances might require the exact same funds deemed affordable to lose and already spent, in which case the entrepreneur is likely to regret a decision made on the basis of the available evidence at the time that the $20,000 was an *affordable* loss. By doing so, s/he failed to appropriately take the action's opportunity costs into account (Bylund and Gupta 2021). This has two main implications. First, the specification of an affordable amount of loss is naturally uncertain and, consequently, demands judgment. And second, the controllability that Dew et al. (2009) claim is a feature of the affordable loss criterion is, in fact, merely illusory. Other facets of real-structuredness can play into the affordable loss judgment also, such as one's bounded capacity for appraising imagined futures.

Effectuation sees entrepreneurship as *co*-creative—expressed in the crazy quilt and pilot-in-the-plane principles—and has acknowledged and emphasized that entrepreneurial venturing is essentially a social endeavor (Bhowmick 2011; Karami and Read 2021; Read et al. 2009; Pattinson et al. 2020; Sarasvathy 2022). Forming alliances in building a stakeholder network presents the entrepreneur with additional real-structured decision problems requiring judgment.

For effectuation, forging alliances and constructing a network occurs through self-selection: "It is more a process of stakeholders *self*-selecting into the venture rather than entrepreneurs masterminding a chase for the 'right' people" (Read et al. 2016, 2017; Sarasvathy 2022; Sarasvathy and Dew 2013, p. 289; Sarasvathy et al. 2014). While this is certainly true to an extent, it is not the case that any and every possible stakeholder who might self-select in is additive. The entrepreneur must assess whether to ally with interested parties (Rapp and Olbrich 2023); their desire to join the venture is only one aspect of that assessment. "As entrepreneurs form teams and assemble groups, they make subjective judgments about other people," Foss et al. (2019a, p. 1205) find. Indeed, entrepreneurs in fact make judgments over the stakeholders they wish to attract and engage (Brown and Bylund 2023) and who to trust (Dutta and Packard 2024). Such judgments are made regularly and recursively across the entrepreneurial journey (Packard et al. 2017).

Any decision to ally will involve facets of real-structuredness (Rapp and Olbrich 2023), in that the effectual entrepreneur cannot be cognizant of all stakeholders possibly willing to participate in the network or of the consequences of any particular stakeholder doing so (causality characteristic). In addition, the appraisal characteristic of the situation exemplifies real-structuredness because interested network members can bring different skills, assets, financial acumen, management experience, contacts in other networks, and so on, the entirety and limits of which the entrepreneur cannot fully know. Comparing the potential contributions of a disparate group of stakeholders for the decision to ally with one partner or another is typically a very challenging task—one that cannot be optimally solved.

Moreover, a network's cohesion can easily be undermined if there is no consensus on the venture's goals—yet the fluidity of goals is a core element of effectuation. A set of clearly defined goals resulting from goal judgment offers a benchmark against which to judge stakeholders' potential contributions to the network (Van Mumford and Zettinig 2022). As has long been known, the value of any means (in this case stakeholders) is a function of how much it can contribute to attaining goals (Mises 1998).

The effectual entrepreneur might alternatively face conflicting rather than unclear goals. Perhaps the venture is pulled between a for-profit goal and a social cause, with some stakeholders championing one or the other conflicting aims. To resolve the conflict, the entrepreneur must exercise judgment. One way to do so is by prioritizing conflicting goals. For instance, the entrepreneur might develop a for-profit model with a philanthropic allocation of profits.

Finally, entrepreneurial judgment plays a crucial role in the lemonade principle of leveraging contingencies. Whether particular events constitute promising contingencies that should be leveraged is hardly evident when they occur. Whether a political regime change, with its consequent regime uncertainty (Bylund and McCaffrey 2017), might have favorable or unfavorable consequences for a venture in a particular market cannot be ascertained *ex ante*, but only *ex post*. The pending decision to act upon a particular unexpected happening, too, potentially features various facets of real-structuredness, involving issues concerning unknown options, the relation between options and outcomes, the appraisability of known or imagined outcomes, unclear goals, etc. Given that it is fundamentally impossible for effectual entrepreneurs to know the optimal decision under real-world circumstances, they must apply judgment to the various real-structured characteristics accompanying the decision to act on a surprising event to ultimately reach a satisficing decision outcome (Simon 1976).

3.2.2 Two examples revisited

To further illustrate our argument that effectuation necessitates judgment, we will revisit two of the exemplary entrepreneurial stories provided by Sarasvathy and Dew (2013) in the prelude to their paper: Hershey and the Post-it note. About Hershey's story, Sarasvathy and Dew (2013, p. 277) share:

> By the time he was twenty-four, Milton Snavely Hershey had failed at his first candy venture in Philadelphia. After he failed again in New York, none of his wealthy maternal uncles would lend him any money. But a devoted aunt offered collateral on a bank loan to get his caramel company off the ground in Lancaster PA. And with a British buyer's large order coming in just the nick of time, the Lancaster Caramel Company took off and grew to literally transform its surroundings into the town we know today as Hershey, PA.

About the Post-it note we learn from Sarasvathy and Dew (2013, p. 278):

> The Post-it note was invented in 1968 by Dr Spencer Silver, a 3 M scientist who stumbled upon a glue that was not sticky enough. In 1974, a colleague of his, Arthur Fry, was singing in a church choir and frustrated that his bookmarks kept falling out of his hymnal. He applied some of Silver's glue to his markers. 3 M launched the product in 1977 but it failed as consumers had not tried the product. A year later 3 M swamped Boise, Idaho with samples. 90% of people who tried them said that they would buy the product. By 1980 the product was sold nationwide and a year later they were launched in Canada and Europe.

While both stories highlight core principles of effectuation, most notably the bird-in-hand (whom do I know?) and crazy quilt (stakeholder commitments) principles in the case of Hershey and bird-in-hand (what and whom do I know?), lemonade (leverage contingencies), and crazy quilt (stakeholder commitments) in the case of the Post-it note, they likewise highlight the significance of entrepreneurial judgment. Let us illustrate.

Action in the face of uncertainty is preceded by judgment, and the case of Hershey is no exception. Why did he undertake another attempt at starting an entrepreneurial venture despite having failed multiple times already? Although we cannot know for certain what Hershey was thinking, we can infer from his actions that he *judged* it worthwhile to try again. More specifically, he maintained or reaffirmed his goal judgment, that is, the profits he was striving for. He also continued to believe that building a candy company would produce the desired outcome and lead to his goals. In other words, he applied causality judgment, forming the belief that creating and running the venture would ultimately be successful. Finally, he must have concluded in his appraisal judgment that creating the specific company he had in mind was the best option to achieve his profit goals. It was only because he made these judgments and decided to take action that he was able to obtain, accept, and utilize his aunt's collateral (a judgment in and of itself) and pursue new clients. Had he deemed his business idea infeasible after the prior failures, he would not have sought support from his family members, nor would he have obtained that large order. His judgmental decision-making and actions were the antecedents to the successful venture story that followed.

Similarly, the Post-it note and its commercial success are also the result of specific judgments made by those involved. The mere coincidence of a glue inventor discovering a glue with no apparent application because of its lack of stickiness and the inventor's colleague being frustrated by his bookmarks not staying in his hymnal do not in and of themselves make a successful venture. Rather, it is agency—the judgments involved and the subsequent actions taken—that does. The judgments made at 3 M led to both the initial launch of the product and the subsequent large-scale distribution of samples, which allowed consumers to appreciate the Post-it note and ultimately made it a global success. After experiencing initial product placement failure, decision-makers at 3 M updated their causality and appraisal judgments. Initially, they believed that simply introducing the product would lead to a desirable outcome and thought it the best option. However, they quickly learned this was a misconception and changed their causality judgment, realizing that introducing the product to the market alone would not lead to success. They then appraised alternative options, including providing samples as a way for consumers to learn about the product, as a path toward achieving their profit goals. If they had not changed their causality and appraisal judgments the way they did but instead had judged that consumers simply did not want the product after its initial failure, the Post-it note would have been discontinued. Once again, it becomes clear that actions and outcomes under uncertainty are causally linked to and determined by entrepreneurial judgment.

3.3 Effectuation: a judgment-based logic of entrepreneurial action

One reason for Sarasvathy and Dew's (2013) conclusion that the effectual process proceeds without the need for such entrepreneurial judgment seems to be that they mistakenly associate entrepreneurial judgment with a hypothetical ideal of so-called rational decision-making in well-structured environments. They argue against this judgment construct on the grounds that real human action deviates from this rational ideal and emphasize that "entrepreneurial reasoning has more to do with decision processes that work well when *ignorance* reigns, rather than processes that leverage superior judgment" (p. 284, original italics)—as if ignorance and judgment are irreconcilable opposites. Well-structured scenarios would see entrepreneurs possessing clear goals and sufficient knowledge of actionable options and their respective outcomes. However, this again confuses what entrepreneurial judgment actually is. Foss et al. (2019a, p. 1203) explicitly link judgment to situations in which this kind of rational behavior is impossible, describing judgment as the

> cognitive faculty that humans deploy to be able to make decisions concerning the future in situations where it is not possible to meaningfully identify and use a clear decision model or rule, such as *standards of 'rational' behaviour*, but at best crude decision heuristics. (emphasis added)

Thus, Sarasvathy and Dew's (2013) rejection of judgment appears unfounded in light of clarifications made in EJT and, in particular, the advancements proposed by Rapp and Olbrich (2023). Viewing its foundational features through the lens of the extended EJT reveals that the effectual process is ultimately one of entrepreneurial judgment, whether the process is externally or internally motivated (Jiang and Rüling 2019).

In fact, the Austrian school is a great critic of economics' concept of human rationality, noting that there is no objective rationality but only *subjective* rationality (Packard and Bylund 2021), particularly when undertaken in conditions of real-structuredness. Mises (1998) explains that humans always act in the belief that their choice of actions will improve their chances of achieving their goals, subjectively chosen. However, because of uncertainty entrepreneurs cannot *know* all of the courses of action available to them nor which ones are most likely to improve their circumstances—in fact, such an optimum does not exist and so *cannot* be known (Knight 1921; Packard et al. 2017). This is a crucial point, made by proponents of effectuation (Dew et al. 2004) as well as EJT (Foss and Klein 2012; Packard and Bylund 2021). Dew et al. (2004) discuss the notion of 'exaptation'—utilizing something already in existence for purposes other than those originally intended—as a driver of new market creation. They argue that exaptation is a logical consequence of Knightian uncertainty because it is impossible to fully know a technology's potential applications in advance. They also emphasize that exaptation does not naturally follow from any given technology but rather necessitates and results from entrepreneurial agency.

Entrepreneurial judgment theorists make the same argument. Because no optimal solution exists for the task of choosing a path forward, selecting an action must involve exercising judgment based on some belief about future conditions (Mises

1998). Far from presupposing a 'perfectly' rational human working to achieve predetermined goals, EJT deeply acknowledges the imperfection of expectations and judgment and the consequent need for adaptation (Packard et al. 2017; Packard and Bylund 2025; Rapp and Olbrich 2023). Because of this, the concept of *homo oeconomicus*, the fully rational human agent, is nonsensical. The only sense in which humans are rational in any real-structured situation is if rationality is understood as pursuant of chosen ends (Mises 1998), that is, that their action reflects their underlying preferences (Rothbard 1956, 1962). Put differently, "the actor believes the chosen action is the best available way to attain the underlying goal" (Rapp and Olbrich 2023, p. 204). Hence, the Misesian notion of subjective rationality focuses on the point in time when the decision is taken (Brown et al. 2018)—the actor's perception might change over time, causing that person to regret the chosen action (, Bylund and Packard 2022a; Packard 2022; Packard and Bylund 2021, 2025).

Linking EJT to Simonian decision problem structures and incorporating the notion of real-structuredness into EJT (Rapp and Olbrich 2023) extends both Foss and Klein's (2015) and McMullen's (2015) assessments concerning the supposed contradictory relationship between effectuation and judgment. The fact that most necessary entrepreneurial decisions are real-structured (due to, e.g., a constricted ability to foresee the link between actions and outcomes and to appraise alternative paths of action and the presence of unclear or conflicting goals) does not militate against the concept of entrepreneurial judgment. It is the opposite—real-structuredness *necessitates* judgment rather than choice (McCaffrey et al. 2023; Packard et al. 2017; Rapp and Olbrich 2023).

If entrepreneurial decisions were instead well-structured, the role of judgment would be limited, the scope of rational choice dominating. But entrepreneurship is deeply, inherently, and necessarily real-structured, and never well-structured. In fact, every action taken by the entrepreneur throughout the effectuation process—whether it is assessing what is their affordable loss, determining new goals from the resources at hand, or extending the network of precommitments—is driven by specific judgments directed at future outcomes. Such judgment, Tsoukas et al. (2024, p. 626) find, is "key to coping with uncertainty," making it highly relevant in the context of effectual entrepreneurship. Descriptives such as 'nonpredictive' and 'without judgment' are thus unproductive and misleading. Effectuation should not be described as an entrepreneurial logic which obviates judgment; instead, it is one of regular and recursive entrepreneurial judgment over time (Bylund and Gupta 2021; Packard et al. 2017; Rapp and Olbrich 2023). In the end, Sarasvathy and Dew (2013, p. 292) leave the door cracked for the possibility of judgment, remarking that "if such judgment actually does exist, effectual logic can leverage it as well." It does, and it can.

4 Implications

4.1 Effectuation theory and practice

The argument made in this paper, that effectual entrepreneurship is essentially an application of entrepreneurial judgment, implies that integrating key insights from

EJT can enrich effectuation theory and extend it beyond its now well-trodden paths. Among the valuable insights that EJT offers and from which effectuation theory and practice can benefit are (1) the contextual dependence of judgment, (2) the distribution of authority and decision rights within firms, and (3) the link between judgment and venture outcomes. Let us outline what each of these implies for future effectuation research.

4.1.1 Context-dependency

Specific acts of entrepreneurial judgment are contextual. Foss et al. (2019a, p. 1205) observe:

> Context shapes such concrete manifestations of entrepreneurial judgment because it provides regulative, normative and cognitive influences that, respectively, shape incentives, provide normative values and offer cognitive categories as well as direct stimuli that channel attention.

Context has many dimensions, including the technological, market, organizational, and institutional dimensions.

While effectuation research has begun to explore the choice of either effectual or causal logics and their performance implications in different (industry, institutional, and venture stage) contexts (e.g., Chen et al. 2021; Laine and Galkina 2017; Laskovaia et al. 2017; Shirokova et al. 2020, 2021; Wiltbank et al. 2009), there has been rather little exploration of how effectuation *itself* manifests in different contexts. Given that judgment is highly context-dependent, and that effectuation is a manifestation of entrepreneurial judgment, how context shapes the manifestation of effectual entrepreneurship warrants further scrutiny. Laine and Galkina (2017) step in this direction by proposing the concepts of 'opportunity driven effectuation' and 'survival effectuation' as two different applications of the effectual logic employed by firms in their study. However, there is significant space for further research that delves deeper into how the effectuation process is manifested, modified, or constrained by different contextual settings. For example, how does (the typically assumed) for-profit type of effectuation differ from a nonprofit type of effectuation? To what extent are institutional players (such as policymakers) valuable stakeholders within the effectual process? Can we identify manifestations of *institutional* or *policy* effectuation? A better understanding of these underlying mechanisms will not only enrich effectuation theory but also support practicing effectual entrepreneurs.

Moreover, effectuation is well-suited to resource-poor entrepreneurs, and thus to entrepreneurial aspirations in poorer or developing economies, because it essentially requires little more than the entrepreneur herself and the skills and network she has (bird-in-hand). However, poorer countries tend to have weaker institutional environments that potentially jeopardize the smooth unfolding of market-oriented ventures (Acemoglu et al. 2001; North 1990), and it remains crucial to explore what this means for effectual logics in weak versus strong institutional environments.

Relatedly, Baumol (1990) in his well-known contribution suggested that the institutional context is causally related to different types of entrepreneurship: productive,

unproductive, and destructive. Are there productive, unproductive, and destructive forms of *effectual* entrepreneurship? Destructive entrepreneurship has received growing interest in entrepreneurship research lately (e.g., Chase et al. in press).[2] So far, however, there has been little theoretical connection between these efforts and effectuation theory, suggesting new avenues for future research. For example, scholars have distinguished between deliberate destructive entrepreneurship (Chase et al. in press), suggesting that there may be effectual entrepreneurship intended to be productive but that causes inadvertent harm. Furthermore, future research on destructive effectuation would benefit from considering different levels of analysis when studying the drivers and outcomes of destructive effectual entrepreneurship.

4.1.2 Judgment authority and leadership

Contra allegations, the EJT does not portray entrepreneurs as lone wolves. Instead, entrepreneurs must act cooperatively and coordinate their production plans—often this involves organizing a firm, that is, in "a *nested hierarchy of judgment*" (Foss and Klein 2012, p. 98; Packard and Bylund 2025). Thus, judgment is not linked exclusively to the owner-entrepreneur's ultimate decision-making authority, but can be distributed amongst stakeholders in the "entrepreneurial division of labor" (Foss and Klein 2012, p. 230). Owner-entrepreneurs exercise *original* judgment, but often delegate some decision authority to others, who exercise *derived* judgment (Foss et al. 2007, 2019a, 2019b; Foss and Klein 2012;).

Effectuation theory conceives of entrepreneurship as *co*-creative, a social interactionist process that unfolds via stakeholder networks. However, because the role of judgment in effectuation has so far been denied, little is known about the distribution of judgment authority within these effectual networks. Whereas, in the traditional causal venture the ownership structure is formally specified, effectual ventures' ownership structure is much more distributed and ambiguous. Thus, the distribution of decision authority in effectuation is an important avenue for future research. Effectuation recognizes that stakeholders commit resources in exchange for "some voice in how the process should proceed" (Van Mumford and Zettinig 2022, p. 4). But how much voice each stakeholder gets and how differences of opinion are negotiated are largely hanging questions that effectuation theorists need to grapple with. The extent to which each stakeholder has such judgment and decision-making authority is contingent and temporal, as it is a function of changes in resource commitments over time. As the effectual network grows, more resources are committed, which in turn changes the landscape of judgment authority within the network. Some actors may withdraw their (financial) resource commitments over time and instead assume the role of a subordinate exercising derived judgment delegated by those with ultimate decision authority. Conversely, those who initially contributed only their skills (what they know) and their network contacts (who they know) and thus do not bear the uncertainty of losing a resource (e.g., financial) investment, may update their

[2] Anand, Wieszt, and Vajda (in press) offer a recent analysis of the broader concept of the dark sides of family businesses, which include destructive tendencies, thus focusing on a context well-suited for effectuation (Jones and Li 2017).

resource commitments, provide capital, and thus shift from a position of derived judgment authority to one of ultimate judgment authority.

In the context of capital commitments, judgment authority, and the delegation of decision rights, *leadership* also plays an important role. Who takes the lead in exercises of judgment within the effectual network and shapes directions as the journey unfolds? Sarasvathy and Dew (2008, p. 731) describe the idea that effectual entrepreneurs might present particular psychological proclivities such as leadership as "a rather troubling claim." Yet, while the effectual entrepreneur may not be the heroic leader of classical entrepreneurship theory, the role of leadership should not be discounted (Hubner and Baum 2018; Miles and Morrison 2020; see Ravet-Brown et al. 2024 for a more general discussion of entrepreneurial versus transformational leadership). The success of the venture depends on the entrepreneur's "ability to continuously develop and appropriately integrate external social capital with the firm's internal social capital" (Hitt and Duane 2002, p. 6), that is, what Sarasvathy (2022, p. 106) describes as "a dialectic between members already on board and the outside world." Such processes require the coordination of a leader, which has led Ravet-Brown et al. (2024, p. 494) to consider entrepreneurial leadership to be "the crux of successful entrepreneurship."

To our knowledge, very little has been written about the specifics of effectual leadership. Hubner and Baum (2018) distinguish 'causal' from 'effectual' leadership, where effectual leadership focuses on attracting and building personal commitment, intrinsic motivation, and creativity. Miles and Morrison (2020) theorize on the application of effectual leadership toward the building up of rural communities. Dutta and Packard (2024) elaborate the role of the effectual entrepreneur's charisma and trust-building for the enrollment of new stakeholders. However, what effectual leadership is and how it manifests is not well-known.

Effectual leadership is a specific type of leadership, not concerned with "an individual and his or her relationship to subordinates or followers" but rather with leadership as "an *activity* that is shared or distributed among the members of a group or organization" (Pearce and Conger 2003, p. xi, original emphasis)—what has been called "shared" or "distributed" leadership (Miles and Morrison 2020; Pearce and Conger 2003). More importantly, it is a "fluid" or "adaptive" leadership (DeRue 2011; Thomas et al. 2015). Fluid leadership describes the use of a variety of leadership styles in light of contextual cues (Thomas et al. 2015). In the context of effectuation theory's shared or distributed leadership, we can adapt it to reference the changing roles, responsibilities, and leadership among the different stakeholders in the effectual network. Watterworth et al. (2020, p. 307) offer the example of a hybrid cardiac operating room to illustrate such fluid leadership:

> When an unexpected event occurs in a hybrid cardiac operating room, a minimally invasive heart surgery may need to be transitioned to open-heart surgery emergently. In such cases, an interspecialty team must dynamically shift roles quickly and seamlessly… [including a] seamless transition of leadership in this complex procedure.

The distribution of judgment authority and leadership in effectual networks will be critical to unpack in attempts to further explore the inherently judgment-based logic of effectuation for the benefit of both effectuation theory and practice.

4.1.3 Effectual failure

In "a highly formal and abstract way, [judgment can be defined] as *that which generates profit and loss*" (Foss and Klein 2012, p. 78, original emphasis). Of course, simply equating good judgment with good outcomes and bad judgment with bad outcomes would lead to a tautological dead end (Sarasvathy and Dew 2013). However, focusing on the causal relationship between judgment and venture outcomes while carefully avoiding such tautological circles is nonetheless valuable because it carries an important implication for effectuation theory and practice.

If entrepreneurship in general, and effectual entrepreneurship in particular, are acts of judgmental decision-making and action, and since every entrepreneurial endeavor necessarily leads to some outcome—success or failure—then there is a crucial link between the actions derived from the exercise of judgment and the ultimate outcomes of entrepreneurial action. While this link is certainly much more nuanced than the above tautology implies and has yet to be fully unpacked, judgment over certain actions somehow contributes to the ultimate outcome of entrepreneurial venturing. For example, the decision to launch a particular product may or may not ultimately be successful, depending on how consumers perceive that value proposition.

That judgment, and in turn entrepreneurial action, has a significant say in venture outcomes seems obvious, and yet it extends effectuation theory well beyond its current state. Effectuation is typically portrayed in a rather rosy light—that is, if the logic is applied as its principles prescribe, the venture process should unfold successfully. However, while success is certainly a plausible outcome of effectuation, the adoption of an effectual process can hardly rule out failure. Yet, effectual failure in general, and effectual *venture* failure in particular, have received almost no interest in the effectuation literature beyond the suggestion to contain and learn from failure (Sarasvathy et al. 2008) and the core impetus to limit the cost of failure (Wiltbank et al. 2009). Experimental work by Spieth et al. (2024) finds that failed entrepreneurs can leverage emotional failure narratives to make their new venture more appealing, which helps them build bonds with co-founders and co-create the next venture. Integrating the insights of EJT with effectuation theory highlights the link between entrepreneurial action and success versus failure, and so would shed additional light on effectual failure.

4.2 Toward a unified entrepreneurial action theory

As noted above, EAT is not a single, cohesive theory, but rather an umbrella term that subsumes a variety of theoretical approaches to entrepreneurial action. However, these approaches have one important thing in common: they focus on entrepreneurial decisions and actions under conditions of uncertainty (Wood et al. 2021). Because the various lenses through which entrepreneurial action has been studied, such as effec-

tuation, bricolage (Baker and Nelson 2005), creation theory (Alvarez and Barney 2007), and EJT, have largely been developed separately, EAT has remained dispersed.

However, the reconciliation of effectuation and EJT proposed herein paves the way for a more unified, comprehensive theory of entrepreneurial action. Sarasvathy (2024) has also proposed a more integrated framework of entrepreneurial action, integrating effectuation with the lean startup method (Eisenmann et al. 2011). But this integrative framework remains limited to certain types of entrepreneurial action and so does not work as a general foundation for EAT. EJT serves as a better and more general foundation upon which to build a unified EAT—it is broader in scope, not focused on explaining a *specific* manifestation of entrepreneurial action, as with effectuation, bricolage, or lean, which manifest only in penurious environments. It skirts reliance on the problematic 'opportunity' construct (Foss and Klein 2020; Rapp et al. 2024) and thus outstrips creation theory.

In our view, future research efforts should work toward harmonizing the various strands of EAT in order to—hopefully—create a more complete theory of entrepreneurial action centered on judgment. This would involve assessing whether or not other theories that fall under the EAT label, including bricolage and creation theory, can be reconciled with EJT. We hope to have taken a necessary first step in this endeavor by highlighting how effectuation is essentially an account of entrepreneurial action based on and derived from judgment.

5 Conclusion

This paper extends previous efforts to systematically analyze the relationship between effectuation and entrepreneurial judgment. It builds on the recent extension of entrepreneurial judgment theory proposed by Rapp and Olbrich (2023) to help resolve the (pseudo) contradiction claimed by effectuation theorists (Sarasvathy and Dew 2013), who have suggested that effectuation is a logic of entrepreneurial action "without judgment." Contrary to effectuation proponents' claim, we have shown that there is no substantive contradiction between effectuation and the notion of judgmental decision-making (Foss and Klein 2015; McMullen 2015; Rapp and Olbrich 2023). Quite the opposite, effectuation represents the entrepreneurial journey as a series of adaptive judgments in the face of Knightian uncertainty and real-structuredness. Judgments include, for example, who to forge alliances with, determining a level of affordable loss, and adaptively specifying the goals aimed at. Our analysis of the principles of effectuation from the judgment perspective thus leads us to agree with McMullen's (2015, p. 654) assessment that "entrepreneurial judgment… is not only consistent with the effectual logic promoted by Sarasvathy and Dew (2013), but also necessary for effectual logic to function."

Despite persistent denial of the significant judgment component inherent to effectuation, effectuation scholars Read et al. (2016, p. 531) themselves have recognized that "[c]onceptually, effectuation is most useful where traditional notions of optimality and bias break down or simply do not apply"—a perfect description of the real-structured situations that demand judgment. In this way, effectuation is but one particular expression of the extended EJT. Ultimately, effectuation lays out one of

the various forms that entrepreneurial judgment may take, one that portrays entrepreneurial venturing as an incremental, adaptive, and co-creative process with limited predictive features. What it does *not* do, however, is describe entrepreneurial action without prediction or judgment—that would be strange 'action' indeed, if it could even be called such. Rather than perpetuating the notion that there is a distinct logic of entrepreneurial action devoid of judgment, effectuation scholars should thus conceive of it as a process logic rooted in judgment. Acknowledging the central role that entrepreneurial judgment plays in the effectuation process not only enriches effectuation theory by incorporating important insights from entrepreneurial judgment theory but also moves the field closer toward a unified theory of entrepreneurial action.

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