THE NATURE OF THE ENTREPRENEURIAL PROCESS: CAUSATION, EFFECTUATION, AND PRAGMATISM

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Abstract
This paper forms an appreciation of and a critical reflection on Sarasvathy's work on causation and effectuation models of entrepreneurship. While Sarasvathy has made significant contributions to the field, it is suggested that a more fruitful approach can follow if two modifications are made. First, it is argued that the six dimensions on which the two models differ are independent and therefore that it is more fruitful to focus on the dimensions rather than on the two models. Second, it is argued that a pragmatist view on entrepreneurship is most fruitful when it is not applied at the level of the entrepreneurial process but at the level of the underlying human actions.

Introduction

Entrepreneurship scholars have made significant efforts to explain how and why new firms originate, survive, and grow (Davidsson, 2004; Gartner, 1985; Schumpeter, 1934). These efforts have converged into a teleological model of entrepreneurship as a rationally planned, risk-taking and linear process of opportunity recognition and exploitation (e.g., Bhave, 1994; Bird, 1988; Jenkins & Johnson, 1997; Shane & Venkataraman, 2000). This model has now become the mainstream model of the entrepreneurship process. Recently, however, some scholars have started to question the validity of this model. As an alternative, these scholars have developed a model of entrepreneurship as a means-driven, risk-aversive, and circular process involving 'bricolage' and 'effectuation' (e.g., Baker & Nelson, 2005; Sarasvathy, 2001a; Sarasvathy & Dew, 2005). This alternative model could be described as the pragmatist model of entrepreneurship (cf. James, 1907; Peirce, 1931; Rescher, 2005).

The merit of the pragmatist model is that it provides a counterbalance against an overly rational view on entrepreneurship. As such, it addresses some of the limitations of the teleological model. At the same time however, it has appeared that also the pragmatist model does not provide a sufficient explanation of the entrepreneurship process and its relation to firm survival and growth. This has led scholars from both sides to believe that, to arrive at a better explanation, both models are needed or that the two models should be combined (Groen, Wakkee, & De Weerd-Nederhof, 2008; Sarasvathy, 2006b). Currently, entrepreneurship scholars are puzzled by the questions of what are the similarities and differences between the two models relate, how do they relate, and whether and how combinations can or should be made. Illustrative for the liveliness of the topic are the discussions held at the professional development workshop (PDW) on effectuation at the 2007 meeting of the Academy of Management (Sarasvathy et al., 2007c) and the initiation of a PDW on opportunity creation and discovery in 2008 (Alvarez et al., 2008).

The point that there are two opposing models of the entrepreneurial process has been most explicitly made by Sarasvathy. She even called her pragmatist model of effectuation the *inverse* of the teleological model, which she labeled the causation model (Sarasvathy, 2001b). Below we shall argue that Sarasvathy's point carries weight but that it needs to be refined and extended. We shall put forward that it is more useful to focus on the dimensions on which the two models different than on the models themselves because they are merely two extremes within a much broader spectrum of entrepreneurial behavior. Moreover, we shall argue that neither of the two models should be exclusively connected to pragmatism and that a more explicit distinction should be made between the entrepreneurial process and human action in general.

We shall proceed this paper by reviewing and building further on Sarasvathy's work on effectuation and causation. Our analysis will we based on Sarasvathy's published work in conference proceedings and journals and her recent book (Dew & Sarasvathy, 2002, 2003; Sarasvathy, 2001a, 2001b, 2003, 2008; Sarasvathy & Dew, 2005, 2007; Sarasvathy, Dew, Read, & Wiltbank, 2007b; Sarasvathy & Kotha, 2001; Venkataraman & Sarasvathy, 2001) as well as unpublished manuscripts made available on her website (Sarasvathy, 2006a, 2006c; Sarasvathy, Dew, Read, & Wiltbank, 2007a; www.effectuation.org).

Comparison of the Two Models

In several of her publications, Sarasvathy systematically compares the causation and the effectuation model. Six dimensions appear repeatedly in these comparisons, mostly in the form of dichotomies: means-driven vs. ends-driven, control vs. prediction, affordable loss vs. expected returns, new vs. existing products and markets, cooperation vs. competition, and cyclicality vs. linearity (see Table 1). Below we summarize Sarasvathy's arguments and assess them.

Table 1. Comparison of the causation and effectuation model

Dimension	Causation model (teleological)	Effectuation model (pragmatist)
Starting point	Ends are given	Means are given
Assumptions on future	Predictability means controllability	Controllability reduces need to predict
Predisposition towards risk	Expected return	Affordable loss
Appropriate for	Existing products and markets	New products and markets
Attitude toward outside firms	Competition	Cooperation
Type of model	Linear	Cyclical

Means-driven vs. ends-driven

The key distinction that Sarasvathy stresses in all her publications on effectuation is the different starting point of the two models. She argues that the causation model starts with goals as a given and that the basic decision for that model is the decision on what means *should* be accumulated to achieve these goals. Effectuation, on the other hand, starts with means and focuses on the decision on what effect *can* be created given these means. The idea that effectuation starts with means and takes them as a given does not imply that it is merely a variation of the resource based view (e.g., Barney, 1991). On the contrary, by its focus on subjectivity and imagination, effectuation explains a great deal of what are means and how they are created (Dew & Sarasvathy, 2002). Effectuation involves seeing means and resources where others do not see them or only see worthless things that cannot be used to create value. It starts by asking the questions of who I am, what I know and whom I know, rather than by a particular goal or opportunity (Sarasvathy & Dew, 2005).

Sarasvathy's focus on means-driven entrepreneurial processes is an elemental extension of entrepreneurial thinking that serves as a counterbalance against the dominant teleological model. It allows for opportunistic and creative explanations of entrepreneurship that fall beyond the scope of the teleological model. Hence, this first dimension is a strong point of her model. However, as we shall argue below, her effectuation model requires further attention where Sarasvathy starts to directly connect this dimension to other dimensions of the entrepreneurial process.

Control vs. prediction

A second dimension – or actually two dimensions – on which the effectuation and the causation model differ, concerns the assumed predictability and controllability of the future. The causation model focuses on the predictable aspects of an uncertain future and follows a

logic of "to the extent we can predict future, we can control it" (Sarasvathy, 2001a: 251). Effectuation, on the other hand, focuses on the controllable aspects of an unpredictable future and follows a logic of "to the extent we can control future, we do not need to predict it" (*ibid.*). Hence, while causation primarily focuses on those aspects of the future that are predictable, effectuation primarily focuses on the aspects that are controllable.

As the above quotes illustrate, Sarasvathy considers controllability and predictability to be related. In the causation model, a higher predictability implies a higher controllability and in the effectuation model a higher controllability implies a reduced need for predictability. At other places, however, Sarasvathy suggests that predictability and controllability are two different characteristics of a firm's environment. Sarasvathy explicitly recognizes this when she locates effectuation in a 2x2 matrix spanning up four ideal type entrepreneurial strategies (www.effectuation.org/faq.htm). From that matrix we can invoke that effectuation will be most effective in situations with high controllability and low predictability. We can also invoke that there are three other strategies and not one, implying that the exclusive focus on effectuation and causation models is probably too limited. The other three strategies are labeled adaptive strategies (low predictability, low controllability), risk-aversion strategies (high predictability, low controllability) and scientific strategies (high predictability, high controllability). It is not clear which of these three relates to the causation model. Hence, we must conclude that, on these dimensions, causation and effectuation are not two mutually exclusive models and that there are more entrepreneurial strategies than only these two.

Through her focus on the two models, Sarasvathy claims that a means-driven entrepreneurial process goes automatically together with a focus on controllability. However, while the means-driven vs. ends-driven dimension *can* be related to controllability and predictability, it is not necessarily so. Means-driven entrepreneurship can just as well go together with a focus on predictability. Suppose, for example, somebody is extremely good in motivating and instructing other people and starts thinking what to do with this capability. This is a means-driven approach. Yet, the person can still adopt a strategy in which he or she chooses to focus on predictability. An example would be to become a teacher or a business coach in a stable and relatively predictable industry. Hence, we must conclude that a combination of means-driven behavior and a focus on controllability is only one out of multiple possible combinations.

Affordable loss vs. expected returns

A third dimension that Sarasvathy puts forward to distinguish the effectuation model from the causation model concerns the assumed predisposition toward risk in both models. She argues that causation focuses on maximizing returns by selecting optimal strategies while effectuation begins with a determination of how much one is willing to lose. "The causal entrepreneur calculates up front how much money he needs to start the venture and invests time, effort and energy in raising that money. The effectuator, in contrast, tries to estimate the down side and examines what she is willing to lose in order to start the venture." (Sarasvathy, 2006a: 1).

Also here we must conclude that this dimension is not necessarily related to the previous dimensions. A focus on affordable loss *can* go together with a focus on means and controllability. However, it not necessarily has to go together with them. If I start my enterprise from the question of how to maximize returns from my own capabilities and resources, I follow a means-driven strategy focusing on expected returns. Or, if I have a clear goal in mind where to go with my business, irrespective of whether I currently have the means to realize that, I can still follow a risk-aversive strategy in which I try to minimize my risks and potential losses.

Unlike Sarasvathy suggests, risk-aversiveness is also not directly related to the perceived predictability and controllability of the environment. I can perceive my environment as very predictable but still follow a strategy that focuses on minimizing losses. Similarly, if I focus on the controllability of my environment, I can still strive to maximize my expected returns. Hence, we must conclude that the three dimensions of means vs. ends-driven, control vs. prediction, and affordable loss vs. expected returns are not related in the unequivocal way suggested by Sarasvathy.

New products and markets vs. existing products and markets

A fourth distinction between the two models centers around a firm's focus on new or existing products and markets. Sarasvathy argues that the causation model focuses on acquiring a market share in existent markets whereas effectuation focuses on the creation of new markets (Sarasvathy & Dew, 2005). In terms of product-market combinations, causation is assumed to concentrate in existing products and markets while effectuation concentrates on new products and markets, also called the 'suicide quadrant' (Sarasvathy, 2003). Two remarks can be made about this.

First, it is not clear why the effectuation model would only apply in, or be best suitable for, the creation of new markets. Firms working smarter and more efficient within an existing market can just as well benefit from effectual thinking and behavior. When applied in such situations, effectuation would focus on how the current business can be improved or optimized by using and exploiting the existing means and contacts without creating any new product or market. Hence, effectuation also works for existing products and existing markets.

Second, effectuation typically only works for evolutionary development, while for radical disruptive innovations the causation model is more appropriate. Since the effectuation model starts from what is already there and gradually develops this into something new, it hinders the development of revolutionary changes. For such changes, vision, long term goals, anticipation of customer needs, and thinking beyond what is currently possible are important (Walsh, 2004). Hence, both the effectuation and the causation models can be suitable for the development and creation of new products and markets.

Cooperation vs. competition

The fifth dimension on which Sarasvathy characterizes the two models is the attitude toward outside firms. She distinguishes between cooperation and competition. She argues that, for the effectuation model, the focus is on establishing cooperative partnerships in order to build a market together with customers, suppliers, and even prospective competitors. Docility – people's ability to persuade and be persuaded – plays an important role in this. (Dew & Sarasvathy, 2003). In the causation model, firms are supposed to focus on competition and to constrain task relationships with customers and suppliers to just what is necessary. Two comments can be made about this.

First, the associations of effectuation with cooperation and causation with competition are not necessary and oversimplify both cooperation and competition in business relationships. By arguing that the causation model is associated with a minimizing of cooperative relationships and referring to the work of Porter (1980), Sarasvathy seems to put away the broad literature on alliances, interorganizational relationships, joint ventures and networks. While that literature focuses on end-driven behavior, it makes clear that firms make use of cooperative partnerships all the time (e.g., Dyer & Singh, 1998; Ring & Van de Ven, 1994). Hence, we can conclude that partnerships are elemental for both the effectuation and the causation model.

Secondly, Sarasvathy hardly pays attention to the disadvantages of cooperation and the impact of time. She focuses on the creation of markets, for which cooperation is assumed

to be necessary. At the same time, however, cooperation also means that returns and profits will have to be shared with others. This can mean a lower market share than otherwise could be the case or lower profits. For an entrepreneur, it can be beneficial in the early stages of development to cooperate with a venture capitalist, for example. However, this same cooperation also limits the returns that flow to the entrepreneur at a later stage. Also, if intellectual property plays an important role a too early cooperation with other firms can be detrimental for the firm when it has not sufficiently protected its own intellectual contributions.

Cyclical vs. linear

A final distinction that Sarasvathy sees between the two models is that the causation model is primarily linear and the effectuation model inherently cyclical. As she argues, causation is applicable in static, linear, and independent environment whereas effectuation is better applicable in environments that are dynamic, nonlinear, and ecological. We see no need why this should be the case and believe this too is an oversimplification of the teleological model. The mere fact that teleological behavior is mainly driven by goals does not imply that it is so in a simple linear way. Goals are adjusted based on the situations that are faced and the means that have become available. If we consider the entrepreneurial process of opportunity recognition, development and exploitation, there is an implicit and sometimes even explicit assumption that the process is iterative rather than linear (Bhave, 1994; Van der Veen & Wakkee, 2004). Along the same line, the fact that behavior is means-driven does not imply that it is cyclical. Hence, cyclicality cannot be a characteristic exclusively attributed to the effectuation model.

Intermediate conclusion

From the above evaluation of Sarasvathy's elaborations on the two models we can conclude that Sarasvathy has made substantial simplifications in automatically connecting the six dimensions to one another. We hope to have demonstrated that the six dimensions are to a large extent independent and that the effectuation model and causation model as described by Sarasvathy are only two extreme models. They are ideal types composed of the six dimensions but in no way is the practice of entrepreneurship limited to these two models.

Beyond the Dichotomy: Causation, Effectuation, Teleology and Pragmatism

So far, we have focused on Sarasvathy's work on causation and effectuation without much reference to teleology and pragmatism. While the notion of pragmatism does only play a peripheral role in Sarasvathy's papers, she repeatedly mentions the classical works of James, Peirce, Dewey, and more recently Joas (1997) as interesting developments in the broader social sciences (Dew & Sarasvathy, 2002: 12; , 2003: 25; Sarasvathy & Dew, 2005: 553-554; Venkataraman & Sarasvathy, 2001: 11-13). Moreover, she suggests that the effectuation model is a pragmatist model that stands in stark contrast to the teleological causation model.

While Sarasvathy thus clearly favors ideas developed in the pragmatist tradition, her work stands in an equivocal relation to that tradition. She refers to it and suggests that her own thinking is very close to pragmatism, but she does not really incorporate work on pragmatism nor does she explicitly contribute to it. As we shall argue below, her treaty on effectuation and causation could have been more accurate and productive if she would have done so. In a more general sense, her work is largely based on psychological and economic theories whereas important developments on the nature of human action in the field of sociology have been largely ignored. The disregard of the sociological roots of entrepreneurship is a serious omission since teleological and pragmatist approaches are in the center of the sociological debate for decades (e.g., Alexander, 1983; Giddens, 1984; Joas,

1997; Luhmann, 1995; Parsons, 1951). By ignoring these developments, Sarasvathy and entrepreneurship scholars in general have overlooked an important opportunity to bring the field's understanding of the entrepreneurship process a significant step further – Dunham & Venkataraman (2002) being an exception. Below we shall elaborate on the distinctions between the teleological and pragmatist views on human action as they are put forward in sociology and argue about implications for a model of the entrepreneurial process.

On pragmatism

Since Talcott Parsons' attempt to develop a theory of action in the 1930s, many sociologists have engaged in the debate on the teleological and pragmatist character of human action (e.g., Alexander, 1983; Giddens, 1984; Joas, 1997; Luhmann, 1995; Parsons, 1951). To explicate the differences between the two, we will draw specifically from Parsons' functionalist theory of action (Parsons, 1937, 1951) and Joas' theory of creative action (Joas, 1997). These two theories, respectively, provide exemplar teleological and pragmatic models of human action. Moreover, Joas particularly positioned his theory against that of Parsons. As such, the two theories are a good starting point for understanding the differences and similarities between the two entrepreneurship models. As Joas argues, there are three defining characteristics of the pragmatist model that distinguish it from the teleological model: situatedness, corporeality, and sociality. These three characteristics are similar to what Nonaka & Takeuchi (1995) have referred to as the Japanese tradition of oneness of humanity and nature, body and mind, and self and other. For explaining these characteristics we unashamedly adopt Dunham & Venkataraman's (2002) efficient summary:

> "According to Joas, our perceptions and hence our actions, are shaped by three major influences – our particular situation, our "corporeality" or connection to our bodies, and our sociality. The first of these is the most straightforward -- our particular situation shapes our action. We must continually revise our actions to conform to the experience that uniquely arises in each situation. And thus, "it is not sufficient to consider human actions as being contingent on the situation, but that it should also be recognized that the situation is constitutive of action" (1996: 160). Our very particular circumstances thus shape our perceptions and understandings of the world, and the actions we take in response to the circumstances. Thus the situation becomes the replacement for the means-ends schemas that characterize rational action theories. Rather than viewing each situation through the lens of pre-established means-ends frameworks, it is the reverse that is true. It is the situation that continually generates and revises our learning, perceptions, goals, and actions.
>
> The notion of corporeality is more complex. According to Joas, our perceptions are rooted in our bodies – it is through our sensory, locomotive and communicative powers that we experience the world and control our actions in it. "Given that the fundamental forms of our capacity for action lie in the intentional movement of our body in connection with locomotion, object-manipulation and communication, our world is initially structured according to these dimensions" (1996: 158). Our bodies also play an important role in shaping our conscious plans of action, for within our bodies resides the pre-intentional feelings, emotions, inchoate aspirations that ultimately shape our intentions.
>
> Although our situations and our bodies' connection with those situations are unique, the meaning we ultimately draw from our perceptions is socially based, rooted in language and shared experiences. We are inherently social creatures, dependent upon one another to make sense of the world. Furthermore, even our individual identity, and ultimate ability to achieve personal autonomy, is rooted in the social relationships that enable one to develop an evaluative sense of oneself. Hence, our interactions with others and the values, beliefs, and norms which guide those interactions play a critical role in the emergence of creative action." (Dunham & Venkataraman, 2002: 16-17)

Joas' view on human action comprised by these three characteristics can be summarized as follows. First, humans always perceive the world in terms of the possible actions they can take. Hence, they perceive the world as a set of alternative opportunities that allow them to do certain things and constrain them in doing other things. Second, in perceiving these opportunities, humans are facilitated and constrained by their own body – their own

capabilities, skills, and existing knowledge. Humans have a perception of their own abilities and take this into consideration when judging the opportunities they face. Finally, being social creatures, humans are facilitated and constrained by others. Humans mutually influence and persuade one another to take particular actions and to refrain from taking other actions.

Creative human action and the entrepreneurial process

In theorizing about the implications of a pragmatist view for the entrepreneurial process, both Sarasvathy and Dunham & Venkataraman focus on developing an alternative model for the dominant teleological model. Both consider that pragmatist entrepreneurship is radically different from teleological entrepreneurship and that these are alternative modes applicable in different situations. While such view on the role of pragmatism in entrepreneurship has been useful to go beyond the teleological model, it fails to appreciate the most important point that Joas makes: that *all* creative human action is characterized by situatedness, corporeality, and sociality. This means that, irrespective of whether an entrepreneurial process is means-driven or ends-driven, is based on predictability or controllability, focuses on expected return or affordable loss, aims at existing or new products and markets, is based on competition or cooperation, or is linear or cyclical, the human action involved is always situated, corporeal, and social.

The issue here is that Sarasvathy and Dunham & Venkataraman have applied pragmatist logic at the level of the entire entrepreneurial process while it is better applied at the level of individual human actions. Dew & Sarasvathy show some awareness of this in their remark "…entrepreneurial effectuation is but a special case of a more general theory of effectuation that might potentially be developed" (Dew & Sarasvathy, 2002: 22). Rather than taking entrepreneurial effectuation as the basis for a more general theory of effectuation, however, we believe it to be far more fruitful to turn their argument around. Building upon a long tradition of sociological theorizing and research on the nature of human action, Joas' theory is more developed than the model of effectuation. Therefore, it seems more appropriate to take Joas' theorizing as a pragmatist basis for conceptualizing the entrepreneurial process. Combined with the above observation that it is more fruitful to focus on the six dimensions rather than on the two models of entrepreneurship, we come to the following characterizations of entrepreneurial behavior (see Figure 1).

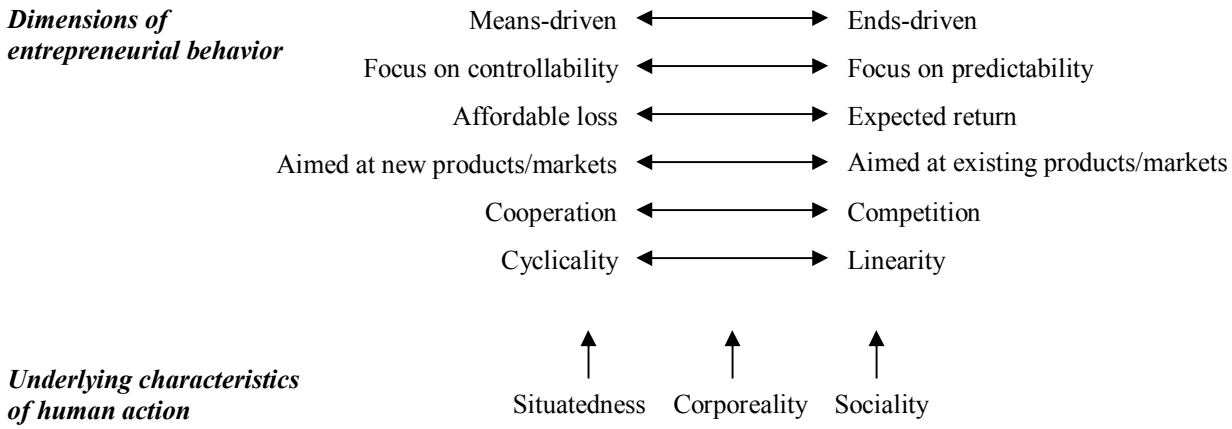

Figure 1. Human action and entrepreneurial behavior

Conclusion and discussion

In this paper we have taken stock of Sarasvathy's work on effectuation and have made two comments on it. First, we have argued that the six dimensions that Sarasvathy distinguishes are independent of one another and therefore, that the distinction between a causation model and an effectuation model is an oversimplication. Second, we have argued that pragmatism should better not be used to distinguish between two alternative models of entrepreneurship but to understand the nature of the underlying human action.

By making these two comments, the paper intends to make two contributions. First, we intend to contribute to the current discussion on entrepreneurship. Most particularly the paper suggests that we should move from a discussion on alternative models to a discussion on the dimensions that comprise these models. Second, the paper suggests that a more explicit distinction and connection between the nature of the entrepreneurship process and the nature of human action should be made.

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