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Path Dependent Entrepreneurs? A Decision Making Perspective

Gianpaolo Abatecola*

Abstract
In November 2011, Zahra and Wright published a very thought-provoking article aimed at discussing the state of the art associated with the entrepreneurship research domain. The main idea behind that article was that, although tremendously growing, entrepreneurship still lacks strong theoretical micro-foundations. Thus, this gap negatively affects the increasing efforts aimed at considering entrepreneurship itself as a per se discipline within the management literature. This research note seeks at contributing to fill this gap through explaining how the decision making literature can be useful to develop these micro-foundations. In particular, the research note uses the concepts of hidden traps and heuristics in decision making for the interpreting of that organizational behavior widely known as path dependence. It is known that, despite the latest relevant attempts, path dependence can be considered, for many aspects, as a black box to date. Opening this black box can represent an important opportunity for the research and practice of management widely. At the same time, this opportunity appears as greatly relevant also for the research and practice of entrepreneurship specifically, in that it can help both scholars and practitioners to orient, towards higher rationality, a number of entrepreneurial decision making processes mostly associated with the earliest stages of the organizational life cycle.

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Editorial notes

1. Introduction

In November 2011, Zahra and Wright published a very thought-provoking article aimed at discussing the state of the art associated with the entrepreneurship research domain. The main idea behind that article was that, although tremendously growing, entrepreneurship still lacks of strong theoretical microfoundations. Thus, this gap negatively affects the increasing efforts aimed at considering entrepreneurship itself as a *per se* discipline within the management literature (e.g. Bingham et al., 2007; Bingham, 2009).

Structured as a research note, this essay seeks at contributing to fill this gap through explaining how the behavioural decision making literature (Simon, 1947; Cyert and March, 1963; March, 1994) can be useful to develop these microfoundations. This literature has variously attempted to contribute to the entrepreneurship research domain over time, because, for example, it has been committed to developing promising conceptual bases for enhancing our comprehension of why some new businesses can be successfully founded (and developed) and why some other businesses conversely fail. In this vein, the present note adopts behavioural lenses for the interpreting of that organizational behaviour widely known as path dependence.

Diffusely used as a synonym of historical pattern, path dependence has been mostly referred to as a metaphor for showing all those types of imprinting effects of the past on corporate behaviour (e.g. Stinchcombe, 1965; Hannan and Freeman, 1984; Lounsbury and Ventresca, 2002; Marquis and Huang, 2010; Abatecola et al., 2012).

It is known that, in recent times, specific investigations on path dependence have been gaining momentum within the mainstream literature of management and organization theory. Still, path dependence can be considered, for many aspects, as a black box to date. This is why specifically addressing its conceptual nature still constitutes an important call for research, although it recently received much more focused efforts (e.g. Beckman and Burton, 2008; Sydow et al., 2009; Garud et al., 2010; Vergne and Durand, 2010).

Opening this black box can represent an important opportunity for the research and practice of management widely. At the same time, this opportunity appears as greatly relevant also for the research and practice of entrepreneur-
ship specifically, in that it can help both scholars and practitioners to orient, towards higher rationality, a number of entrepreneurial decision making processes mostly associated with the earliest stages of the organizational life cycle. These processes, for example, can vary from the understanding of what founding conditions can result the most appropriate within a particular environmental setting, to how to cope with the properly managing of that organizational drama (Pettigrew, 1979; Busenitz and Barney, 1997) associated with the founder’s succession in a start up firm.

This essay aims at contributing to the introduced debate by following the structure of the latest Research Prospectives (e.g. Bettis, 2012) series launched by the Strategic Management Journal in 2012. Aimed at enhancing theory building, Research Prospectives are those research notes which comment the latest theoretical trajectories about a research topic and try to develop some mechanisms explicitly recognized as block boxes by these trajectories.

Accordingly, this research note is structured as follows: first, it reviews the enhancements performed by the literature about organizational path dependence and highlights its association with the entrepreneurship research domain, because it provides readers with samples of potential path dependence mechanisms affecting the decision making process in the earliest stages of firms’ life cycle.

Second, the note focuses on the conceptual model on path dependence recently published by Sydow and colleagues (2009) in the Academy of Management Review. Here, the note explains how some concepts from the behavioural decision making literature, such as those of the hidden traps (e.g. Levinthal and March, 1993; Hammond et al., 1998) and heuristics (e.g. Newell and Simon, 1972) in decision making, can help the untangling of those issues which, according to Sydow and colleagues, still need appropriate developing as for their model.

Finally, the potential contribution of the suggested explanation is discussed and some prospective research avenues are proposed.
2. Organizational path dependence

Although very broadly, the studies about path dependence can be positioned within all those theoretical and empirical inquiries around the dynamics of resistance to change and organizational inertia. It is known that organizational ecology (Hannan and Freeman, 1977) has provided literature with seminal interpretations as for why inertias can occur in organizations:

Some of the factors that generate structural inertia are internal to organizations: these include sunk costs in plant, equipment and the personnel, the dynamics of political coalitions, and the tendency for precedents to become normative standards. Others are external. There are legal and other barriers to entry and exit from realms of activity. Exchange relations with other organizations constitute an investment that is not written off lightly. Finally, attempting radical structural change often threatens legitimacy; the loss of institutional supporting may be devastating. (Hannan and Freeman, 1984: 149).

It could be argued that the organizational inertia is a double-face concept and that, while organizational ecology has been mainly committed to exploring the positive side of this concept, the studies about path dependence have been mainly committed to investigating its negative side.

David (1985) and Arthur (1989) seminaly introduced the theory of path dependence, whose main tenets can be somehow associated with the Darwinian (1859) principle of heredity. In particular, the mechanisms of path dependence follow a chronological rationale, which starts from the earliest stages of the firms’ life cycle and suggests that: i) the start up firms able to survive to their initial natural selection stage are those firms which are able to build the most appropriate set of resources and capabilities needed for their survival; ii) the resources and capabilities initially disposed by the surviving firms determine a kind of organizational culture (i.e., mindset) which is somehow self-reinforcing during these firms’ evolution. In particular, the self-reinforcement is greater especially if these firms are able to establish effective routines for solving problems, with this establishment creating positive feedbacks in terms of competitive advantage (Mahoney, 2000; Pierson, 2000); iii) this growing self-reinforcement tends to remain imprinted and locked in the organizational cul-
ture of the evolving firms (e.g. Kimberly, 1979; Schein, 1983). This means that this decisional lock-in influences, most of the times irreversibly, the overall evolutionary path which the firms choose, with limited possibilities of radically deviating from the decisional processes and mindset that these firms’ top decision makers have become inert to use.

The explained mechanism suggests that the earliest decisions which firms take, tend to influence their overall evolutionary path. But, it should be acknowledged that there are no decisions which, *ex ante*, can conclusively ensure their expected consequences *ex post*. Thus, also all those organizational decisions which can be considered as path-dependent, cannot *ex ante* guarantee positive feedbacks in terms of profitability and competitiveness. This is why, to date, the path dependence mechanisms are not marginally used for explaining all the plethora of declining performance situations (Arthur, 1994). Specifically, Arthur characterizes path dependent processes on the basis of 4 general properties: *i)* nonpredictability, that is the indeterminacy of an outcome; *ii)* nonergodicity, which means that several outcomes are possible (multiple equilibria), with history selecting among the possible alternatives; *iii)* inflexibility, that happens when actors are entrapped, so a shift to another option is impossible; *iv)* inefficiency, i.e. those actions, that result from the path, lock the market into an inferior solution.

It has been argued that the continuous improvement of our comprehension of the path dependence mechanisms can represent an important opportunity for the research and practice of management widely. At the same time, this opportunity appears as greatly relevant also for the research and practice of entrepreneurship specifically, in that it can help both scholars and practitioners to orient, towards higher rationality, a number of entrepreneurial decision making processes mostly associated with the earliest stages of the organizational life cycle. Table 1 presents some of these processes from the viewpoint of the literature about organizational life cycles (Cafferata, 2012).

Also, it is known that a number of other theoretical trajectories of organizational paths have been proposed within the management literature over the years (Phelps et al., 2007). Thus, it is a matter of fact that the prospective contribution of the path dependence literature to the developing of solid founda-
tions within the management literature generally – and the entrepreneurship research domain specifically – can be huge.

3. Self-reinforcing mechanisms. Why do path dependent decisions happen?

As introduced, specific investigations on organizational path dependence have been gaining momentum in recent times, but its most vivid understanding has substantially produced no conclusive results. In this regard, one of the most interesting and promising conceptual contributions to this understanding was recently attempted by Sydow et al. (2009). Substantially, these scholars interpreted the constituting of an organizational path through a sequential three stage model. Substantially, this model points out that the range of options available to the organizational top decision makers reduces progressively along the three stages. Conversely, a unique, almost unchangeable, and potentially inefficient, organizational path progressively emerges along them.

Stage I is called Preformation. This stage is featured by a huge range of strategic options, whose choosing effect cannot be predicted ex ante. Once a decision is taken, it can bring an effect that, sometimes (often, for example, because of temporarily positive feedbacks), starts a self-reinforcing process. This starting is labelled as a critical juncture (Collier, Collier, 1991) and sets the transition to stage II. In this stage, called Formation, the self-reinforcing processes become a sort of regime, with a dominant decision making logic emerging and incrementally orienting the whole decision making process towards irreversibility. In sum, a path is evolving and the options available for reversing incrementally narrow. The transition from stage II to III is then characterized by a further constriction, i.e. the dominant decision pattern becomes fixed and almost deterministic. Even new business entrants consider this path as a standard to follow, with no possibilities for changing it. In stage III, called Lock-in, even if more efficient decision making alternatives come to be realistic, both the existing and the prospective organizations do not consider them, as they are completely locked with their established mindset. Obviously, this brings potential inefficiency to the overall decision making process.
Interestingly, Sydow et al. support their theoretical trajectories through a number of examples from the practice of management. At the same time, they recognize that more research is needed for the untangling of why the self-reinforcing mechanisms, i.e. the transitions along their 3 stage model, occur. This note aims at following this call and, in this section, sets the agenda for discussing how the decision making literature may prospectively contribute to this untangling.

Specifically, the present discussion considers the decision making process of a conjectured organizational Top Management Team (hereafter TMT), or of a single entrepreneur (in the case of small or nascent start ups) at the time X1, X2, and X3, with these variables representing the very beginning of each of the stages supposed in the model by Sydow and colleagues. It is argued here that the deviations from rationality, which eventually affect the TMT’s decision making process in some (or all) of the 3 decision points above, are mainly determined by the TMT’s misperceptions (i.e. wrong perceptions) of the firm’s external environment and/or of the firm’s internal resources and capabilities as well. Why can these misperceptions occur? Stemming from the milestones of Simon’s bounded rationality (1947), a growing corpus of studies within the behavioural decision making literature has devoted efforts to the explaining of why human misperceptions can occur (e.g., Starbuck and Mezias, 1996; Nutt, 2001; Bazerman and Moore, 2008; Gatti, 2008). In this regard, one of the most evocative interpretations was provided by Hammond et al. (1998), who proposed the concept of hidden traps in decision making for considering all those situations in which the human brain is abnormally deviating from deciding rationally.

It has to be stressed here that the utility of considering the hidden traps in decision making for explaining organizational path dependence is twofold. First, the general acknowledging that these traps often occur can help to explain why the decisions in each of the stages depicted by Sydow and colleagues, also when taken separately into account, can deviate from rationality. Second – and this is even more important as far as path dependence is overall considered – the decision making literature has growingly evidenced that most of these traps (e.g. status quo, anchoring, or confirming evidence) create real self-reinforcing mechanisms when people take decisions. Thus, if the self-reinforcing mechanisms, which ideally occur between each of three stages in the model by Sydow and col-
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leagues, are sequentially summed up, an overall incremental – and irrational – self-
reinforcing effect (i.e. path dependence) can be presumed.

The decision making literature has often associated the reasons for why the
presented traps can happen with the concept of heuristics. Newell and Simon
(1972) seminally defined the heuristics as those cognitive shortcuts that the
human brain tends to use when its decision making process is limited, in terms
of time and availability of data. A number of psychologists have stressed the
limitations of heuristics (e.g., Tversky and Kahneman, 1974; Carlson and Shu,
2007; Ayal and Zakay, 2009). In particular, these psychologists have maintained
that the heuristics are often sources of decision making bias because, not
rarely, they lead to the misuse of probability computations while the decision
makers try to actualize the future states of the world (Kahneman and Tversky,
1973; Thaler, 1991; Piattelli-Palmarini, 1994). It is worth mentioning that, more
than once, this negative view by psychologists has also influenced the way in
which the heuristics have been considered by the strategic management litera-
ture (e.g. Busenitz and Barney, 1997; Holcomb et al., 2009).

Indeed, current claims argue that more research is needed to understand
whether heuristics are really negative or not for the corporate decision making,
as contrasting evidence is growing. In particular, some emerging psychological
researches have stressed the positive facets of the heuristics (e.g. Gigerenzer,
2008; Gigerenzer and Brighton, 2009; DeMiguel et al., 2009; Taylor et al.,
2009). Also, these researches have affected the way some strategists have
started to think about heuristics and the way these strategists have started to
collect evidences about them. For example, in a very recent article on a special
issue of the Strategic Management Journal devoted to exploring the psychological
foundations of strategic management, Bingham and Eisenhardt (2011) pro-
vided a very interesting multiple case study narrative, which highlights a posi-
tive view of heuristics as rational, and their findings turned to be consistent with
some other recent insights on this topic (e.g. Bingham et al., 2007; Bingham,
2009; Davis et al., 2009; Gary and Wood, 2011). In this regard, also Kahneman
et al. (2011) recently maintained that the heuristics can enhance the quality of
the overall decision making process, if the cognitive distortions which can be
somehow associated with them are promptly monitored and minimized.
4. Discussion and implications

In the previous section, the research note has devoted specific attention to commenting the recent model on path dependence by Sydow and colleagues, model that it has attempted to integrate with some elements from the behavioural decision making literature. The proposed integration has explained that, because of the hidden traps and heuristics in decision making, the TMT misperceptions can be crucial for untangling why the self-reinforcing mechanisms of path dependence incrementally occur.

TMT misperceptions can be generally conceived as wrong interpretations of the environment and/or of the firm’s resources and capabilities as well. In this note, as written, their understanding has been associated with the hidden traps and heuristics in decision making. Still, it seems that the future efforts towards their conclusive understanding merit additional attention and this represents the first element of discussion in this section. In particular, are there any socio-demographic and/or personality antecedents of these misperceptions? Over the years, the upper echelons theory (Hambrick and Mason, 1984) – also through its progressive psychological advancements – has focused on a number of relations between the socio-demographic features of TMTs and different strategic outcomes, such as acquisitions, alliances, firm’s innovativeness, strategic dynamism, internationalization and diversification (Carpenter et al., 2004). To date, the most significant scholars within this stream of research depict the exploring of specific personality traits of the executives, such as the CEOs’ narcissism (Chatterjee and Hambrick, 2007), as a very promising area for understanding TMTs’ internal dynamics, although empirical evidence within this field seems still in infancy (Abatecola et al., 2011). On this premise, one of the most relevant – although somehow provocative – future research avenues can be constituted by the strict field (and multiple case study) investigations on possible sociodemographic/personality based TMT misinterpretations. This avenue, indeed, seems to occupy a major place in the research agenda of the nascent behavioural strategy research group worldwide.

Also, it is known that the upper echelons theory belongs to the voluntaristic views within the parental organizational adaptation research domain and this opens the door to the second item of discussion within section. If the future
goal is to provide both the management scholars and practitioners with conclusive (and holistic) assessments of why path dependence occurs, it is strongly maintained here that the organizational adaptation literature widely – and its co-evolutionary lenses specifically – can be of great help. Over the second half of the 20th century, organizational adaptationists have been stemming from the various studies about biological adaptation for producing both conceptual and empirical explanations about the competitive (or cooperative) relationship between firms and their external (i.e. task or general) environment (e.g. Cafferata, 1984, 2010; Stoehlorst, 2008; Hodgson, 2009; Breslin, 2011a; Price, 2012).

Over the years, a relevant scientific challenge among adaptationists has always concerned the dichotomy between environmental determinism and managerial voluntarism in defining adaptation, thus in shaping corporate goals and behaviour (e.g. Astley and Van de Ven, 1983; Hrebiniak and Joyce, 1985; Van de Ven and Poole, 1995). Determinists have argued that the firms’ top decision makers are substantially dependent on the external environment as for their strategic planning. Thus, determinists have mainly conceived firms as fundamentally reactive – and sometimes even inactive – with regard to environmental pressures. Conversely, voluntarists have contended that the firms’ top decision makers are basically independent of the external environment and their role, as a consequence, is fundamentally proactive in shaping corporate goals. The dichotomy has been reduced over the last thirty years, because the organizational adaptation literature has also seen the birth and development of more convergent interpretations, which have substantially agreed in viewing determinism and voluntarism as variables whose relationship is dynamically changing. These interpretations have substantially contended that firms can be either proactive or reactive to environmental pressures within the various stages of their life cycle. Thus, the intensity of determinism and voluntarism, as competitive forces, can be different and changeable over time. In this vein, some scholars have specifically developed a co-evolutionary approach to the understanding of organizational adaptation, with co-evolution being defined as the joint dynamic outcome of managerial intentionality, environment and institutional effects (e.g. Cafferata, 1987, 2009; Burgelman, 1991; Baum and Singh, 1994; Levinthal, 1997; Lewin and Volberda, 1999; Volberda and Lewin, 2003; Breslin, 2011b).
As said, the development of the co-evolutionary approach has basically decreased the distance between determinists and voluntarists over the years (Murmann, 2003; Lewin and Volberda, 2005; Abatecola, 2012). It is argued here that, in the future, this approach can constitute a very useful lens for understanding the self-reinforcing processes of path dependence also. In particular, it is maintained that the (ineffective) decision making process that leads to path dependence can be exhaustively captured only if the external (i.e. environmental) and internal (i.e. firm specific) determinants of this process are simultaneously considered. In sum, the basic assumption here is that, although each of these determinants, if separately considered, may have its own influence on the TMT’s (or entrepreneurial) decision making process over time, the sole possibility for exhaustively catching this influence is given by considering the potential joint occurrences between the determinants. In this regard, the TMT misperceptions can constitute a significant tool for expliciting the co-evolutionary approach roughly conjectured here. In fact, if treated as external to their parental TMT, these misperceptions may serve as the linking pin between the external and internal factors of the decision making process supposed above. Nonetheless, it is recognized that the way people, not only corporate decision makers, perceive the real world around them is, of course, influenced and conditioned by their socio-demographic features and personality traits. Thus, considering the TMT misperceptions as external to their TMT could result in a limitation to the conjectured framework.

5. Conclusions

This research note has been aimed at setting the basis for implementing our comprehension of those self-reinforcing decision making processes which constitute organizational path dependence. It has been argued that the continuous improvement of our comprehension of the path dependence mechanisms can represent an important opportunity for the research and practice of management widely. At the same time, this opportunity appears as greatly relevant also for the research and practice of entrepreneurship specifically, in that, for example, it can help both scholars and practitioners to orient, towards higher ra-
tionality, a number of entrepreneurial decision making processes mostly associated with the earliest stages of the organizational life cycle. Although still roughly, this research note has intended to contribute to the capturing of this opportunity.
References


## Tables

**Table 1:** Models of Organizational Life Cycle. Possible Path Dependence Mechanisms in the Earliest Stages.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Model</th>
<th>Overall Stages</th>
<th>Possible Path Dependence Mechanisms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steinmetz (1969)</td>
<td>Problems of the Monoproduct Enterprise</td>
<td>VI</td>
<td>Stage I (Start Up): Simple division of labour and direct control of the owner. Stage II (Take Off): Coordination of parts and participants.</td>
</tr>
<tr>
<td>Scott (1971)</td>
<td>Historical Evolution of the Firm</td>
<td>IV</td>
<td>Stage I (Start Up): Simple decision making process and few functional areas</td>
</tr>
</tbody>
</table>