

EVOLUTIONARY SELECTION PROCESSES

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Towards
Intra-Organizational Facets

BY

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PREFACE

This book adopts an evolutionary perspective on organizing and focuses on theorizing the strategy process and practices; more generally, the dynamics of organizational evolution. In particular, it focuses on the selection aspect of the classic evolutionary mechanism (VSR) and suggests that selection is explained not only by their interaction with the external environment but also by a set of internal – endogenous – factors. The book suggests that past research was unduly focused on the former. It proposes and describes a multilevel selection mechanism that integrates the endogenous and exogenous selection pressures and describes the dynamics of organizational evolution more fully. Concerning the behavioral and cultural circumstances, the book explains a managerial intervention and its effect on the adaptation mode. We complement it by adding explanations concerning interorganizational level selection in order to build a complex picture of the selection processes.

The book has three core ideas that extend the current conversation in the literature. First, the authors recognize the importance of the internal selection pressures, in particular, the behavioral and cultural factors that shape the selection environment within the organization. Second, the book attempts to integrate the endogenous and exogenous factors into a more complete picture of organizational evolution seen through the lens of an internal and external context. Third,

the book expands the scope of the discussion into multilevel selection within and beyond the organizations, showing how the entire selection mechanism behaves at each level and how these mechanisms are connected across levels.

The evolutionary logic, in principle, involves selection rationale. The selection phenomenon is associated with the idea that the “best” elements are selected – referring thereby to specific criteria such as fitness and efficiency. In general, the evolutionary approach is concentrated on exogenous selection; however, in some cases, it is focused on selection inside the organization (endogenous selection). That endogenous selection is underexplored in the studies. Nevertheless, an evolutionary metaphor is used in many sciences since it is associated with progress and cognitive inspirations.

From the aforementioned perspective, this book will complement management thoughts by evolutionary rationality. However, we include a multilevel approach to explain and discuss exogenous and endogenous selection process interplay. The book is a result of years of research combining expertise knowledge in the field of strategy, organizational change, and evolutionary approach. Finally, it leads readers inside the organization, inside a multilevel context, to discover and to find explanations of endogenous selection mechanism and factors influencing it. It links the evolutionary approach, process perspective, and practice perspective in making explanations in the area of the strategy process. The book challenges an important hypothesis explaining the problems of strategic management saying that in practice managers deliberate and a market decides.

Hopefully, our monography gets the interest not only of evolutionary theorists but also of strategists and change management scholars. We believe that taking the effort to give alternative explanations considering change, especially in the

terms of strategic choice, contributes to existing research as well as to better understanding of the organizational reality.

We expect the book contributes to strategic management research in terms of multilevel strategic adaptation to the environment as well as organizational change and organizational behavior research due to the internal criteria and determinants of organizational adaptation, especially by means of multilevel coevolving internal selection processes.

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CHAPTER 1

EVOLUTIONARY APPROACHES AND ORGANIZATION AND MANAGEMENT THEORY (OMT): COMMON GROUND

1.1. EVOLUTIONARY THEORY OF FIRM AND OMT: COMMONALITIES AND DIFFERENCES

Contemporary organizations face exciting, but tough challenges. Peters in 1988 had already suggested that there was a need to develop newer thinking approaches about organizations. This has led to the creation of a newer architectural plan for organizations. Organizational dynamics, flexibility, adaptiveness, and speed to change define the new characteristics of an organization.

In the 2000s, until the end of the first decade, the trend of a transition from stability and order to a turbulent, complex, networked management of intangible assets was undeniable. Starting from 2008, the new developing international issues interfered with the direction of organizational development trajectory.

In the case of managers, new conditions may be considered to be chaotic and treated as an opposition to the social and economic driving forces of the past, which were responsible for economic growth. Nevertheless, these conditions may prove advantageous for organizations and provide universal guidelines for challenging the organizational landscape. Contradictions and oppositions exist in the natural state of any organization, and a dilemma is rarely exhibited when needed to make an explicit choice. The tensions that arise because of such contraries suppress the opportunities for invention and implementing new managerial approaches. In this perspective, the existing political and social changes that create new tensions and encourage new behaviors for survival, the second guideline “to endure/survive and, if possible, to grow” helps achieve a superior position and leads to the emergence and growth of the organization’s potential.

Considering the challenges, several distinguished theories come into mind while searching for explanations, such as dialectics, autopoiesis, sensemaking, chaos, and evolutionary theories. All these theories focus on the logic of change affected by contradictions, dynamics, indeterminacy, etc.; however, only the evolutionary and autopoiesis theories refer directly to the imperative of persistence and survival. Both theories seek explanatory mechanisms that are responsible for the living organism to survive and die.

Autopoiesis elucidates on the rules of the living system (Maturana & Varela, 1980). Luhmann (1986) adapted that perspective into a non-living system of activities. The central building blocks of the autopoiesis theory, instead of “performance-causality” and temporal aspects, cover issues such as a system, a self-organization, a cognition, communication, structural coupling, an operative closure, a reproduction, constant production of further elements, surviving, and “trigger-causality” (Luhmann, 1995, pp. 22, 67). The structures

themselves are not pre-given, they are an outcome of the reproduction of elements (a feature of the autopoietic system). A self-organization means that the special properties of the structure allow its reactions to perturbations, irritations, and other environmental events. In this sense, the structure works as an active filter. According to Luhmann:

- “[...] organizations do not act. They do not ‘somehow’ consist of actions either. Instead, we may imagine the organization, as Luhmann does, as a continually disintegrating form within the medium of communication, albeit one that reinvents itself time and again – and a social system is just that” (Brandhoff, 2009, p. 307); and
- “[...] in the organization (the results of communication) a key element is a decision” (Seidl & Becker, 2006).

Autopoiesis is a complex theory deeply rooted in several theories: systems, communication, and evolution. This theory is applicable to different scientific fields and issues. The Luhmann’s theory, *inter alia*, is adaptable to organization and management theories (OMTs). However, the radicalism of the proposed changes influences the application of autopoiesis theory, which poses an extra challenge, extending the list already presented.

For these reasons, the theory of evolution has been portrayed in detail in this book, as it advances a better understanding of the development process either at the individual level or a collective one.

The foundations of the theory of evolution have been chronicled for more than 50 years (Campbell, 1960). The scale of expectation and optimism associated with the application of an evolutionary approach to the OMT can be illustrated by the engaging discussion that took place on Monday, August 7, 2000, at the Academy of Management

Meeting in Toronto. The subject of the meeting was whether to associate evolution theory and management and the numerous management researchers that took part argued in favor of the same.

Weick presented the following, more precise argument (2005, p. 395): “An evolutionary epistemology is implicit in organizational sensemaking, which consists of retrospective interpretations built during interaction.” In 2003, during the “Symposium on the State of the Art and Opportunities for Future Research in Evolutionary Theory,” Murmann, Aldrich, Levinthal, and Winter (2003) presented a brief but remarkable history on the evolutionary approach solicitation in the OMT. They provided answers to three questions, discussing them in detail, with emphasis on their importance for the future of research based on evolutionary logic:

“To what extent do evolutionary models take managerial intent into account?; What are the appropriate units of selection?; How successful have evolutionary theorists been in linking the micro and macro processes of social organization?”

Essentially, from the beginning, “the founding fathers” of the evolutionary approach and its followers have identified many significant glitches that the organization and management theorists need to look into. The first concerned the evolutionary point of view questioning managerial and leadership omnipotence in a design for organizational reality and managerial effectiveness. Accepting bounded rationality and the underlying importance of the blind variation stage (Campbell, 1960), the evolutionists placed managers in the position of one of the others. They were important but not a critical factor of an organization and its development/survival process.

The second issue posed by evolutionary theory was related to the level of analysis and rational intervention. For biologists, a species or a pool of genes is the object of evolutionary analysis. The third problem was related to the necessity of identification: what creates a chance for persistency/survival?

Table 1.1 presents the general suggestions instigated by the evolutionary approach, which can be addressed to managers facing contemporary challenges.

The questions entered in **Table 1.1** do not cover all of the ones mentioned earlier. Those mentioned in the table are of a general nature. They form the basis for an unambiguous way of thinking with regard to an organization's evolution and are the reason for managerial rational actions.

Aldrich (1979) proposed a complex representation of the evolutionary change stages which involved the four generic processes comprising evolutionary theory: variation, selection, retention (VSR), and the struggle over scarce resources. He defined variation as the change in current routines and competencies – change in organizational forms. He distinguished both intentional variations (occurring when people actively attempt to generate alternatives and seek solutions to problems, that result from conscious responses to difficult situations, planning sessions, advice from outside consultants, etc.) and blind variation (occurring independently of conscious planning, that results from accidents, chance, luck, conflict, etc.).

Selection means the differential elimination of certain types of variations. Not only does it refer to internal stimuli (see Zollo & Winter, 2002) but also to external selection forces exterior to an organization, which affect its routine and competencies (market forces, competitive pressures, and conformity to institutionalized norms).

Table 1.1. The Selected Recommendations for the Managers and OMT Researchers.

The former questions addressed to researchers and managers	How can OMT be linked to the process of constantly becoming evolution and to which it is hard to attribute vision of the end, rational goals?	What should be the main managerial role within the evolution of an organization?	What is the appropriate object of managerial intervention?
Selected managerial challenges	Recommendations		
Contradiction	<ul style="list-style-type: none"> Organizational values, goals and other elements influence uncertainty Difficulty to assess concrete contradictions in a moment they exist 	Manager as a source of contradiction	Sources, forces, processes, effects of tension, and solutions reducing the tensions (e.g., routines)
Persistence/survival	From a human perspective, natural, primary direction of activity is to survive (in the scope of individual or species)	<ul style="list-style-type: none"> Controlling and shaping a level of altruism or egoism Creating conditions for inheritance 	The rules and processes of survival, persistence, and inheritance
Flexibility	A condition of survival, but also a death factor	Conceptualize: how much of the same, and how much the new?	The relation between stable and changed parts of the whole

Inevitability – the unpredictability of changes and uneven pace of processes	Change always happens in various spaces and in different ways	<ul style="list-style-type: none"> • Be prepared for gradual, permanent change and an effect of punctuated equilibriums • The change models have to change 	<ul style="list-style-type: none"> • Process and its conditions • The processes of interactions between objects • The influence of the environment on individuals and the relationships between individuals
Minor causes of change	Everything could be important, but cumulative, inherited minor changes shape the future	<ul style="list-style-type: none"> • Permanent changes of a focus • Treat oneself as the subject and source of change 	The identification of a stable part of the whole and rules of its change or rules of its stabilization
Blurring borders between objects	Core elements and the relation between them are important for modeling the structure of reality and real process	<ul style="list-style-type: none"> • Recognize the multilevel nature of objects and processes • Assess consequences understanding the different logic of change and success that are hidden on various levels of reality 	The identification of an organizational borders

Retention means selected variations that are preserved, duplicated, or otherwise reproduced. Retention might occur either (1) within organizations: specialization and standardization of roles that limit discretion; or (b) between them: the institutionalization of practices in cultural beliefs and values. The fourth generic phase was the struggle over scarce resources (Aldrich, 1979). Within organizations, the struggle takes place when organizational members have different, even conflicting, expectations and perceive organizational goals in dissimilar ways (struggle over the structure of roles, division of labour, and distribution of power). A natural phenomenon of any evolving organization is the struggle among organizations. The stage, struggle over resources, is disputable since it is not the essence of evolutionary logic, and the perspective of competitive advantage devalues as the processes of changing routines ensuring the organization's survival become more important. We assert that the struggle over resource rather permeates the stages of the VSR model and might result in subjective decisions, selfish motives, and selection criteria as well as cognitive biases.

Zollo and Winter (2002) have proposed a knowledge evolution cycle (as the evolution of dynamic capabilities/operating routines) in the VSR model. Referring to the Campbell's blind variation and selective retention (BVSR model), it justifies the three evolutionary phases that Campbell (1969) had stressed in his work. Nonetheless, Zollo and Winter's considerations, that external stimuli refer only to variation and retention, and internal stimuli to selection, seem to be controversial and they will be discussed further.

Pentland, Feldman, Becker, and Liu (2012) use terms derived from the classical BVSR model introduced by Campbell (1960) that incorporates variation and selective retention as the mechanism by which recognizable, repetitive patterns form and change over time. However, in the