Preface

This Element did not emerge fully formed but instead represents decades of scholarship. The intellectual journey behind this Element started at Antwerp University (Belgium) with undergraduate research on optimal firm size in the late 1960s (Burgelman, 1969). This integrated insights from Chandler's (1962) historical research on the relationships between strategy and structure in diversifying US corporations, Penrose's (1959) economic analysis of the role of internal entrepreneurship in the growth of the firm, and Ansoff's (1965) (then) radically new analytical treatment of corporate strategy. The integration of these insights inspired the proposition that firm size at any given moment in time had to be considered as the outcome of a process of dynamically adjusting strategy and structure. This process integrates the internal impulse to grow (as argued by Penrose) and the organization-level response to externally emerging growth opportunities (as suggested by Chandler) and can be optimally guided by the components of corporate strategy (as predicated by Ansoff). Shortly thereafter, Bower's (1970) field study, which documented and conceptualized the process of strategic capital investment in a large diversified chemical firm in terms of the contributions of different levels of management to the definition, impetus, and structural context parts of the resource allocation process, fundamentally shaped thinking about the interplay between organization theory and business policy.[1]

The journey continued at Columbia University with Burgelman's dissertation research on internal corporate venturing (ICV) in a diversified major science-based chemical firm (Burgelman, 1980). This work was initially inspired by the applied anthropological research methods of Leonard Sayles (1965) focused on documenting different types of managerial behaviors and their interrelationships in complex organizations. Initial efforts to map all the detailed behavioral data obtained through in-depth field research during 1976–1977 concerning activities of different levels of management involved in ICV onto Bower's process model of strategic capital investment failed to accommodate all the documented managerial activities. Eventually the anomaly was resolved by extending the process model to encompass *strategic context determination* as a critical aspect. Today this model is known in the literature as the Bower–Burgelman (B–B) process model (Mintzberg et al., 1998).

The findings of the ICV process also produced an anomaly in relation to Chandler's fundamental proposition that "structure follows strategy." The ICV

[1] As a junior faculty member at Antwerp University, Burgelman reviewed Bower's book for the *Economisch en Sociaal Tijdschrift* in 1971, and subsequently collaborated with senior professor Andre van Cauwenbergh on integrating business policy and organization theory for a new course in the Faculty of Applied Economics.

research found that the creation of a New Venture Division was, at least in part, a response to the company already having several new venture initiatives dispersed in different divisions and the corporate R&D function before top management had articulated a deliberate corporate-level diversification strategy (Burgelman, 1985). This finding indicated the existence of autonomous strategic initiatives (not driven by the existing corporate strategy) in parallel with induced strategic initiatives (driven by the existing corporate strategy) (Burgelman, 1983c).

Continuing the journey at New York University (1978–1981) and then at Stanford University (from 1981 on), the discovery of autonomous strategic initiatives related to ICV suggested a reconceptualization of the ICV process in terms of "corporate entrepreneurship" and inspired the development of a theoretical framework integrating corporate entrepreneurship and strategic management (Burgelman, 1983a). This framework also made an early connection to work on complexity theory and the shift from the physics of "being" to the physics of "becoming" by Nobel Prize winner in chemistry Ilya Prigogine (1980). Decades later, this would form part of the conceptual foundation of strategy-making shaping the process of organizational evolution extended with the coauthors of this Element. An additional finding of the ICV research concerned the multilevel interplays between action and cognition, which suggest that the strategy-making process associated with corporate innovation involves a social learning process in which managers at middle and senior levels interpret (through cognition) the strategic implications of the actions of lower-level managers, which then drives their own actions, culminating in top management's support for a change in the corporate strategy (Burgelman, 1984, 1988). This early conceptualization of action-cognition interplays in organizations would not gain traction in the strategic management literature until much later.

The framework of induced and autonomous strategy processes could also be related to the variation–selection–retention paradigm of cultural evolutionary theory (Campbell, 1965; Weick, 1979). This intersected with some of the theoretical and empirical implications of the field of organizational ecology in organization theory, suggesting the possibility for a rapprochement between strategy and ecology (Burgelman & Singh, 1987). During the same period (1986–1990), efforts to apply simulation techniques to the induced/autonomous strategy-making processes resulted in CORPSTRAT: a discrete event simulation model of the intraorganizational ecology of strategy-making for studying individual and organizational decision-making and related processes, such as managerial risk behavior, performance, and survival (Burgelman & Mittman, 1994). Simulations have since become an important methodological addition to studying organizational evolution (Levinthal, 2021).

Starting in late 1988, further development of the internal ecology of strategy-making framework, which viewed large and complex organizations as ecological systems, became possible with longitudinal field research at Intel Corporation (Burgelman, 1991). The study of Intel's transformation from a semiconductor memory company to a microprocessor company resulted in the development of the "Dynamic Forces Driving Firm Evolution" framework (Burgelman, 1994). This framework helped highlight the powerful inertial forces associated with distinctive competence and the crucial importance of an organization's internal selection environment in coping with the external selection environment. A surprising insight of this paper was that strategic action – related to resource allocation – that diverges from the no-longer-adaptive corporate strategy but is compatible with changes in the external selection environment has survival value; in contrast, strategic action that is tightly aligned with the stated but no-longer-adaptive strategy does not. This framework also served to develop a practitioner-oriented framework for addressing "strategic inflection points" – periods of crisis in the evolution of companies – that are signaled by "strategic dissonance" emerging among the company's senior and middle management in response to structural changes in the firm's business ecosystem (Burgelman & Grove, 1996).

Tracking Andy Grove's tenure as Intel's CEO during the rapid growth of the PC ecosystem in 1988–1998 revealed the potential dangers of the CEO "vectoring" the corporate strategy when a company has the opportunity to singularly dominate its business ecosystem. It also identified the novel phenomenon of "co-evolutionary lock-in" (Burgelman, 2002a). The conceptual frameworks derived from the Intel research could be combined into an evolutionary lens on strategy-making (Burgelman, 2002b). Finally, the research lens of the internal ecology of strategy-making was used to examine various types of nonlinear strategic dynamics that Intel had faced throughout its evolution, producing insights that defined the role of the CEO in terms of "let chaos reign, then rein in chaos – repeatedly" to manage strategic dynamics for corporate longevity (Burgelman & Grove, 2007).

The research stream on Intel's transformations stimulated further research interest by Burgelman in corporate longevity in turbulent environments. This new research stream focused on Hewlett-Packard (HP), a company founded in Stanford University's backyard that had been able to transform itself multiple times by the mid-1990s. The research identified successive CEOs as a seldom-studied unit of observation, and John Young, Joan Platt (Lew Platt's widow, who provided interesting and poignant insights into Lew's tenure as CEO), Carly Fiorina, Mark Hurd, Léo Apotheker, and Meg Whitman made time to participate in interviews and provide the CEO perspectives that augment the

foundation for developing the theory of strategy-making and organizational evolution (Burgelman et al., 2017). Beyond using the frameworks derived from the previous Intel research to compare the strategic leadership of successive HP CEOs, this research generated a novel, inductively derived conceptual framework for explaining why CEO Meg Whitman decided to split HP into two new, independent companies in 2014.

In fall 2016, Yuliya Snihur visited Stanford and engaged in discussions about business-model innovation and ecosystem disruption with Burgelman. These interactions, also involving Llewellyn Thomas, inspired collaborative research related to ecosystem-level dynamics associated with business-model innovation at the firm level (Snihur et al., 2018). The initial collaboration continued with further joint study of the dynamics relating to organizational strategy-making, business-model changes, and ecosystem evolution. In particular, Snihur and Thomas took the initiative in developing large-scale longitudinal archival databases to study the extent to which the two novel conceptual frameworks derived from the HP field research could be corroborated. They also engaged in extensive literature research to link these frameworks to received knowledge and help to clarify the extent to which the frameworks filled gaps in the literature (Burgelman et al., 2022a, 2022b).

As well as representing a fascinating intellectual journey, underpinning this Element is a bridging of history and reductionism. The ICV dissertation research (Burgelman, 1983a) was among the first to apply Glaser and Strauss's (1967) method of "grounded theorizing" in the field of strategic management. Grounded theorizing is an inductive method that uses rich comparative field data to inductively derive novel theoretical concepts and frameworks to attain deeper understanding of substantive phenomena. As Spender and Kraaijenbrink (2011: 52) explain, "frameworks identify the relevant variables and the questions that the user must answer in order to develop conclusions." This involves iterative and comparative work, examining different types of data, and moving back and forth between emerging theory and the phenomenon under study. This back-and-forth movement is needed to abstract generalizable and theoretically relevant insights from empirical cases under examination.

Glaser and Strauss (1967: 33–34) made an important and often overlooked distinction between *substantive* and *formal* grounded theory. They consider both as "middle range" – falling between minor working hypotheses and grand theories. They view substantive theory as "a strategic link in the formulation and generation of grounded formal theory. We believe that although formal theory can be generated directly from data, it is most desirable, and usually necessary, to start the formal theory from a substantive one" (Glaser & Strauss, 1967: 79). Developing formal theory without first developing

a substantive theory grounded in research of a particular substantive phenomenon runs an important risk: "When the theory is very abstract, it becomes hard to see how it came from the data of the study, since the formal theory now renders the data without a substantive theory intervening" (Glaser & Strauss, 1967: 81). Glaser and Strauss also point out that: "Our strategy of comparative analysis for generating theory puts a high emphasis on *theory as a process*; that is theory as an ever-developing entity, not as a perfected product" (1967: 32; italics in the original). Hence, the methodology of grounded theorizing offers the opportunity for both exerting disciplined creativity and enjoying the associated intellectual pleasure of discovery – but, at the same time, it reminds the researcher that their theory-generation effort is only a step along the road toward additional, cumulative knowledge development that will lead to future modification and reformulation. In this Element, we endeavor to integrate models of strategy-making of different substantive areas into a more formal theory of strategy-making in organizational evolution.

The original grounded theorizing method emphasized the comparative dimension of research at the expense of the temporal one. The longitudinal research on the evolution of Intel and HP made it possible to introduce a stronger temporal perspective into grounded theorizing, which helped bridge historical narratives and reductionist quantitative models (Burgelman, 2011). This longitudinal grounded theorizing method could be situated between the historian's "particular generalization," characterized by complex and nonlinear causation, and the reductionist's "general particularization," characterized by statistically based models, mathematical axiom-based models, or simulations (Gaddis, 2002). This is presented in Table 1. In this Element, we capitalize on using the longitudinal dimension of grounded substantive research to develop our more formal theory of strategy-making and organizational evolution.

Inductively derived from small samples, the conceptual frameworks originating from longitudinal grounded theorizing naturally face questions about their external validity and generalizability. To address these concerns, we complemented the longitudinal grounded theorizing method, which relies on interpretative field data analysis, with realist historical research based on archival data (Vaara & Lamberg, 2016). In this combinatory research method, interpretative field data analysis involves interpreting the meaning of statements and actions based on qualitative data collected through interviews. Realist historical research involves the collection of extensive longitudinal archival data to examine whether the emerging theoretical framework can be independently corroborated through data sources other than interviews and researchers' own observations. This novel combinatory method ensures the robustness of derived frameworks

Table 1 The bridging role of longitudinal qualitative research in theory development

History: Particular generalization ←→	**Longitudinal qualitative research** ←→	**Reductionism: General particularization**
Particular	Specific	General
Concrete	Substantive	Abstract
Experiential	Suggestive	Nonexperiential
Narratives	Conceptual frameworks (boxes-and-arrows charts)	Statistical and mathematical models

Source: Burgelman (2011: 598).

and can help increase trustworthiness. We used it to examine the extent to which the framework for corporate split, a novel form of divestiture and portfolio reconfiguration derived from the HP study (Burgelman et al., 2022), as well as the framework of successive CEOs' strategic leadership of HP's continued organizational adaptation (Burgelman et al., 2022a), could be corroborated.

1 Introduction

In this Element, we consolidate an evolutionary theory of organizational strategy-making based on scholarly contributions over the past fifty years.[2] We analyze the firm through the lens of intraorganizational ecology, and showcase specific tools developed to clarify the role of *strategy-making*, a process involving the thinking and action of key managers and employees across the vertical and horizontal levels within the organization, in shaping *organizational evolution*. Organizational evolution refers to the unpredictable but potentially manageable process of long-term organizational adaptation in response to changing external and internal contexts (cf. Tsoukas & Chia, 2002). It concerns the way complex systems of strategy-making change a company's business model(s)[3] and institutional identity as it attempts to survive the relentless forces of Schumpeterian creative destruction – and it implies, importantly, that organizations should be studied as continuously evolving (Weick & Quinn, 1999).

[2] We rely on sociology-based evolutionary theories rather than on economics-based ones, such as Nelson and Winter (1982), who view organizational routines as the key elements – like genes – resulting from and driving organizational evolution.

[3] Consistent with others (Massa et al., 2017; Snihur & Zott, 2020; Zott et al., 2011), we define a *business model* as a system of interconnected activities performed by a focal firm (and often also by users and partners) that create value, and a profit logic that captures at least some of that value.

Sometimes, insights derived from new and somewhat unusual research unexpectedly fit most readily with theory that lies beyond received wisdom in the field. In this case, the link is with the organizational learning and organizational ecology perspectives of evolutionary organization theory, as well as insights from complexity theory. The organizational learning perspective of evolutionary organization theory focuses on how organizations, in trying to adapt, search for and use information – that is, how they proactively manage their fit with the external selection environment through internal processes of variation, selection, and retention. While organizational learning does not necessarily lead to organizational adaptation – organizations, composed of people, can learn the wrong lessons! – this perspective leaves room for cognitive managerial processes and knowledge development that is purposeful, even if only myopically so, in driving organizational change. Strategy-making as an adaptive organizational capability is one manifestation of evolutionary organization theory.

The organizational ecology perspective (Hannan & Freeman, 1977, 1984), on the other hand, suggests that organizational change must be understood at the level of entire populations of similar organizations, and as the result of replacement and selection rather than adaptation. Incumbent companies fail in the face of environmental change because inertia prevents them from adapting and they are replaced with newcomers that do different things, or the same things differently ("better," in the eyes of most customers). Such a logic is visible, for instance, in the recent studies on disruptive innovation that illustrate how new business models displace incumbents (Snihur et al., 2018). Organizational ecology, however, does not focus on the role of strategy-making in the entities that make up the populations of study, and leaves little room for explanations of organizational adaptation based on strategy-making.

Established companies are perennially subject to the selection force of the external environment (e.g., Burgelman & Grove, 2007) – and many do, in fact, succumb to it in the long run. But established companies have also gained the opportunity to substitute, to some extent, internal selection for external selection. This is the central idea of the internal ecology model of strategy-making, anchored in the processes determining the functioning of the internal selection environment. An established company can be viewed as an ecological system in its own right, and its survival and continued success depend on the functioning of this internal ecology during the complex environmental changes that can unfold over an organizational lifetime.

This Element is based on the premise that there need not be a fundamental opposition between the ecological and strategic management perspectives, and that a fruitful integration of these ideas is possible in some ways. To pursue this aim, we use the variation–selection–retention framework of cultural

evolutionary theory (Aldrich, 1979; Campbell, 1965; Weick, 1979), which has previously been applied to strategy-making by Western (Burgelman, 1983c) as well as Japanese (Kagono et al., 1985) scholars. We extend earlier work by addressing research questions motivated by the evolutionary perspective, always keeping in mind the various ways in which strategy-making manifests. Some of these concern strategy content and process: How does the content of an organization's strategy come about, and how does it evolve? How do strategy-making processes take shape over time? Of particular interest are questions concerning some of the connections between strategy-making processes and different forms of organizational change and adaptation: What, if any, is the link between strategy-making and inertia? Which sorts of strategy-making processes lead to major strategic change that is survival enhancing? And what is the role of strategy-making in organizational evolution?

This Element views an organization as an ecology of strategic initiatives that emerge – through strategy-making – in patterned ways and compete for limited resources to increase their relative importance within the organization. Strategy results, in part, from selection and retention operating on internal variation associated with strategic initiatives. Variation comes about, in part, as the result of individual strategists seeking to express their technical and social skills, and advance their careers, through the pursuit of different types of strategic initiatives and business-model experiments. Selection works through administrative, cognitive, and cultural mechanisms regulating the allocation of attention and resources to different areas of strategic initiative. Retention takes the form of organization-level learning and distinctive competence, embodied in various ways – organizational goal definition, delineation of domain and business model(s), and shared views of organizational identity. In this perspective, the focus of analysis is managerial activities associated with strategic initiatives, rather than individuals per se (Cohen & Machalek, 1988). Our analysis suggests how opposing ideas concerning the expected consequences of major strategic change – that is, organizational inertia or different potential modes of adaptation (Burgelman, 1991; Hannan & Freeman, 1984; Tushman & Romanelli, 1985) – can possibly be reconciled by connecting strategy-making from different levels within the organization through simultaneous and sequential process models.

Our analysis also suggests that the expected consequences of major strategic change can also be reconciled by connecting strategy-making and intraorganizational ecology with the business ecosystem (or interorganizational ecology) and the related dynamics. A business ecosystem is "the broader economic context which a focal firm must monitor and react to" (Thomas & Autio, 2020: 13) and consists of the "economic community of interacting actors that all affect each other through their activities, considering all relevant actors beyond the