Information and Organization Design Series

Volume 8

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New Approaches to Organization Design

Theory and Practice of Adaptive Enterprises
On August 12 2009, Richard Burton will be celebrating his 70th birthday. Such a milestone provides a natural occasion to look back and take stock of one’s work. Rich, however, would be the last person to draw attention to himself, to loudly proclaim his own accomplishments. And yet he has had a profound impact on our field.

With his frequent visits to Denmark (starting in 1974), Rich was one of the natural founders of the International Workshop on Organization Design. We are proud to take the publication of this book, originating from this conference, as an excellent opportunity to celebrate Rich and his major accomplishments.

Rich’s numerous books and articles have been published in the major journals within our field, and have had a far-reaching and substantial impact on the field of Organization Design. His research has advanced our understanding of organization theory and design, not the least by the use of simulation techniques. Rich has helped create and improve the journals Organization Science, Computational and Mathematical Organization Theory, and Management Science. He has helped found institutions such as the College on Organization Science, the EIASM conference on Organization Design, and the Organization Science Winter Conference. In many ways, Rich has been the catalyst in the formation of our international research community.

But above all, Rich has been and remains a friend and mentor to many of us, an exemplar of a gentleman and a scholar. This book is dedicated to Rich.
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Introduction: Use of Theory in Organization Design Research

George P. Huber

This volume had its origins in a conference on New Organization and Design Approaches: Anticipating the Future, sponsored by the Aarhus School of Business (ASB), Aarhus University, the CORE research center at ASB, and the Danish Social Science Research Council. In this introduction I begin by examining prominent organization theories in terms of how they might be extended to be more valid in today’s and tomorrow’s organizational environments and how they might be extended to be more useful to organization design research and practice. Afterward, I discuss the research studies reported in this book’s chapters and comment on the use or non-use of organization theories by the researchers.

The State of Organization Theories

Here, by an organization theory, I mean a cohesive set of beliefs held in the organization science community that are, or could be, expressed as related propositions specifying relationships among organizationally relevant variables (cf. Kerlinger, 1986: 9). The current validity and/or usefulness of some of the most well established organization theories is in question.

A number of paradigms for the study of organizations were elaborated during the mid-1970s, including transaction cost economics, resource dependence theory, organizational ecology, new institutional theory, and agency theory in financial economics. These approaches reflected the dominant trends of the large corporation of their time; increasing concentration, diversification, and bureaucratization. However, subsequent shifts in organizational boundaries, the increased use of alliances and network forms, and the expanding role of financial markets in shaping organizational decision making all make normal science driven by the internally derived questions from these paradigms less fruitful (Davis and Marquis 2005: 332; see also Daft and Lewin 1990).

The suggestions of Dorthe Døjbak Håkonsson were very useful in the preparation of this work.

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The suggestions of Dorthe Døjbak Håkonsson were very useful in the preparation of this work.
As most theories of organizational design derive from research conducted before 1980, one could argue that organization design is currently stuck in a theoretical rut. New kinds of organizations have emerged over the last 30 years; communication technologies have revolutionized organizations; knowledge-based activities are now central to working lives, and educational levels have risen. Although these changes must directly influence organization design, little research has explored these influences (Dunbar and Starbuck 2004: 497; see also Daft and Lewin 1993).

Given the deficiencies noted by Davis and Marquis (2005) we might question whether the theories established in the 1970s are now being used by organization theory researchers. *Are organization theory researchers using the more established organization theories in their current research?*

It seems that, on the whole, they are not. Walsh, Meyer, and Schoonhoven (2006), for example, report that of the 429 submissions to the Organization and Management Theory Division for presentation at the Academy of Management’s 2005 annual meeting, “the percentage of papers submitted in each of the established theoretical categories (as reported by the authors of the papers) were as follows: institutional theory, 25.4%; network theory, 16.8%; population ecology, 6.7%; agency theory, 4.5%; resource dependence theory, 3.9%; transaction cost theory, 3.4%; contingency theory, 2.5%; and stakeholder theory, 2.5%. ‘None of the above’ accounted for 56% of the papers submitted” (2006: 658). Whatever the reasons, and there may be good ones, it appears that more than half of the active organization theory researchers in this large convenience sample were not using an established organization theory to underpin their current work.

Dunbar and Starbuck (2004) change the focus just a bit, from organization theories to organization design theories (by which, I will assume, they mean organization theories from which organization design guidelines can be inferred). Relevant to this volume are two more questions: *Are current organization theories useful to organization design researchers? Are organization design researchers using organization theories in their current work on organization design?* It seems that there are good reasons why an organization design researcher might not use current organization theories. One is that some theories are useful for understanding the effects of organizational environments on organizations but do not readily lend themselves to the development of organization design guidelines (population ecology and institutional theory come to mind). A second reason is that several of the theories were developed in earlier eras, when organizational environments were quite different from those of the present or the future. Thus the validity of the theory may be low in the future-focused temporal domain of interest to the organization design researcher. A third reason is that, as is necessarily the case, not all organization design researchers can be aware of all of the changes that are developing in all of the theories and, consequently, are not drawing on the more temporally relevant versions of the theories.
Extending the Usefulness of Some Prominent Organization Theories

Below I discuss some prominent organization theories that are congruent with the positivistic and empirical verification characteristics of the organization theory field’s paradigm (see Aldrich and Ruef 2006; Daft 2007; and Scott and Davis 2007, for descriptions of these theories). I do this partly to re-familiarize readers with those theories that they may not have examined recently, but more so to suggest current or needed developments if the theories are to be more relevant to the design of organizations for current and future organizational environments. With regard to these environments, I hold that future organizational environments will be characterized by (1) increases in the number and effectiveness of information, manufacturing, and transportation technologies, (2) more and increasing environmental complexity, (3) more and increasing environmental dynamism, and (4) more and increasing environmental competitiveness. (For rationale and data supporting the existence of these four characteristics in future organizational environments, see Huber 2004. For an examination of the probable consequences of these environmental characteristics on the size, founding rates, performance, and survival of future organizations, see Huber forthcoming).

In the following analyses, I frequently speak of an organization’s nature or circumstances as dependent or outcome variables. By an organization’s nature, I mean the sum total of the attributes of its leadership, strategy, core technology, structure, employees, culture, and practices, and also the propensities and properties associated with these features, such as the organization’s inclinations and competences. By an organization’s circumstances, I mean its size, maturity, performance, status with regard to survival, and the current direction and speed of change of these variables.

Population ecology theory asserts that the suitability of the attributes of the organizations in a population, relative to the attributes of organizations in competing populations, determines the nature and circumstances (generally the survival or demise) of the population. In their early formulation of the theory, population ecologists viewed organizational adaptation to changing environmental conditions as highly unlikely due to inertia forces. Many might still so believe, but some more recent population ecology work does examine conditions where adaptation might be sufficient to maintain survival (Barnett and Carroll 1995; Dobrey et al. 2002). More such studies would be very useful to those organization design researchers who focus on adaptive redesign of an organization in the face of environmental change. Population ecology studies investigating whether the relationship between a particular organizational attribute and organizational survival actually has not changed when business press coverage indicates that it has changed (or vice versa) would also be useful. Neither of these two types of studies is commonplace in the population ecology literature, but would be welcome developments for both population ecologists and organization design researchers, especially in the face of more frequent and rapid environmental changes.

Institutional theory holds that institutional forces are a major influence on the nature of an organization (or of a population). Some institutional theorists are
recognizing that organizations can influence institutions and resist institutional forces, that the relationship is not just one way (Haunschild and Chandler 2008). Studies investigating the circumstances and methods where this is possible would be very useful to those organization design researchers who focus on adaptation strategies for coping with environmental change. Further, when organizational environments change rapidly, organizations might change more rapidly than can institutional forces (given that values and norms are slow to change), providing a window in which organizations are less institutionally constrained. The lack of regulation of the Internet might be an example of such a relatively unconstrained situation. Studies examining the relative speed of change would be welcome additions to the institutional theory literature and to policy makers, executives, and organization design researchers.

Network theory states that an organization’s internal and external network structures and the attributes of the network nodes determine the organization’s performance. Network theorists have been generating findings useful to organization designers at a relatively rapid rate and covering a broad scope of issues pertinent to future organizational environments (e.g., Provan and Sebastian 1998; Rosenkopf and Padula 2008; Soda et al. 2004; Uzzi 1996). Thus organization designers would appear to be well served by network theorists. What would seem to be useful to network theorists and organization design researchers alike at this time would be studies that examine the boundary conditions of existing studies and review pieces that integrate empirical findings into formal theories and design guidelines that can be used by organization design researchers.

Transaction cost theory focuses on the decisions and contracts regarding where the organization’s work is done – inside or outside of the organization. It asserts that the relative costs and risks associated with contacting work out versus having the work done within the organization cause the boundaries of an organization to be what they are. As the Walsh, Meyer, and Schoonhoven (2006) study notes, little work is being done in transactions cost theory. Advances in science and expansions in the variety and number of technologies have contributed to the need for organizations to specialize, while advances in communication and transportation technologies have contributed to the ability of organizations to provide their specialized products and services to other organizations efficiently. The consequence of these changes to organizational environments is that many firms have reduced their scope and many new firms choose to have work done outside the organization if it is not tightly linked to their core competence. Such firms, when they grow, grow either by adopting the strategy of selling their specialized products or services to multiple customers or by adopting the strategy of participating as specialists in multiple networks. It seems that transaction cost theorists could contribute more to designing organizations for the future by drawing on their own theory (1) to study the conditions under which firms can most advantageously adopt which of these, or other, strategies and designs and (2) to identify leading indicators useful for identifying when firms should change their boundaries.

Resource dependence theory claims that the organization’s actions and level of success in attaining power over those organizations that possess resources on which
the organization depends are what determine the circumstances of an organization. The purpose of these actions is to reduce dependencies and uncertainties about the availability of resources. Advances in information, manufacturing, and transportation technologies provide all organizations with more options and thus make it more difficult for an organization to maintain control over an unwillingly dependent organization. Perhaps as a result, it appears that in recent years many firms have chosen to reduce dependencies and uncertainties through cooperative relationships (i.e., alliances) rather than through power dominance. If resource dependence theorists drew on their own theory to investigate more intensely the variables which favor the use of collaboration versus dominance, it seems they could make important contributions to organization design theory and to the design of organizations and networks of organizations operating in future organizational environments.

**Strategic choice theory** asserts that the judgments and preferences of the organization’s dominant coalition, subject to the coalition’s interpretation of strength of the constraints posed by the organization’s internal and external environments and to its success in getting its preferred organizational attributes emplaced and maintained, are what determine the nature and circumstances of an organization. While strategic choice theory has influenced other theories (Child 1997), advances to the theory itself have been largely in the form of works concerning the upper echelons of organizations (see Hambrick’s 2007 review of this literature), particularly the echelon’s discretion. It appears that strategic choice theorists could contribute even more to the organization design literature if they provided more studies of the factors contributing to the dominant coalition’s effectiveness in making organization design choices, especially in the more complex, dynamic, and competitive organizational environments that organizations will encounter in the future.

The **resource-based view of the firm** (RBV) holds that the firm’s ability to create and implement strategies that develop and exploit those of its resources which are valuable, rare, not readily imitated, and not substitutable explains the relative competitiveness of a firm. A currently active area of research and an important extension of the RBV for future environments is the concept of **dynamic capabilities**, defined as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address rapidly changing conditions” (Teece, et al., 1997: 516). Examples given by Eisenhardt and Martin (2000) are “product development, strategic decision making, and alliancing” (2000: 1105). It appears that more empirical studies of dynamic capabilities (e.g., their nature, implementation, and sustainability), and especially review pieces that integrate empirical findings into theories or theory-based design guidelines, would be very useful to organization design researchers focused on investigating designs for the future’s more dynamic organizational environments. (For contemporary thinking about the RBV in dynamic environments, see Sirmon et al. 2007.)

**Structural contingency theory** holds that for each level of a contingency (e.g., environmental turbulence) there is a level of a structural attribute (e.g., formalization), which produces the highest performance. More generally, contingency theory explains the nature of an organization as an aggregate of organizational attributes, each of which satisfies one of the various contingencies with which the organization
is confronted. Because organizational environments are complex (e.g., possessing multiple important sectors), there are multiple environmental contingencies for (say) the structure to deal with, making it difficult to create a structure in which the multiple attributes of which (each optimized for a different contingency) are not incongruent with each other. Further, organizational features other than structure, such as culture and routines, must be chosen and maintained with respect to internal and external contingencies, creating the possibility of incongruities among the organizational attributes associated with the various organizational features. It seems that contingency theory would be viewed as broader in scope by organization theorists and of more practical value to organization design researchers and practitioners if contingency theorists elaborated the theory to deal with the possible incongruities arising from the existence of (1) multiple contingencies for a specific design feature and/or (2) multiple design features, the optimal attributes of which may be incongruent (see for example Drazin and Van de Ven’s (1985) “systems approach” to structural contingency theory). Similarly, the theory would be of additional value if it dealt with the fact that an organization’s attributes must change as the organization’s environment changes (see, for example, Perez-Nordtvedt et al. 2008, and Siggelkow 2001).

It seems important to call attention to the fact that many organization theorists contribute to process theories that are closely related to the organization theories just discussed. Examples are organizational learning, organizational information processing, organizational decision making, and organizational change. Because studies in these areas examine the antecedents and effectiveness of these organizational processes, where effectiveness is generally assessed in terms of variables that contribute to organizational performance and survival (i.e., organizational effectiveness variables), it can be argued that work in these four areas is encompassed within organization theory. Thus, in the next section, when I mention theory or organization theory, I mean to include both prominent organization theories such as those described above and also organizational process theories.

Having seen that numerous opportunities exist for extending current organization theories to be more valid in current and future organizational environments and to be more useful to organization design research and practice, let us examine how the contributors to this volume have used organization theories and the organization theory literature.

**Uses of Theory by Contributors to This Volume**

I turn now to the use and non-use of theories in the chapters of this volume. My comments are intended not to be evaluative or even descriptive of the chapters. Rather, I intend to use the chapters to suggest – when applicable – the variety of ways in which prominent organization theories (in both their established versions and their currently evolving extensions) can be made more useful in organization design research and practice, and also to suggest how and when they need not be used in
these endeavors. After noting the title and authorship of each chapter, I include
the authors’ abstract and then my comments regarding the chapter’s use of theory.

Part I. Towards New Organizational Forms

**Blade.Org: A Collaborative Community of Firms**

*Charles C. Snow, Doreen R. Strauss, and Christopher Lettl*

*Abstract:* The purpose of our chapter is to analyze Blade.org, a community of firms
focused on the development and adoption of open blade server platforms (an innova-
tive computer server technology). Founded in early 2006, Blade.org is a successful
community of more than 100 member firms which engage in various forms of col-
laboration to develop innovative products and services and to extend their market
reach. Blade.org is a community of firms, but it was purposefully designed to emu-
late many of the core features and processes of a community of individuals. We
argue that a community of firms is a new organizational form, one that increasingly
will be found in situations where continuous innovation is a strategic objective.

*Commentary:* Blade.org possesses certain features that distinguish it to some
extent from other types of virtual organizations to which it is related, e.g., user
groups and research consortia. Its primary claim to being a new organizational form,
however, is that it is a virtual organization composed not of a population of orga-
nizations, as are most user groups and research consortia, but of a community of
organizations. In their ethnographic study of Blade.org the authors did not seem to
draw on any organization theory. On the other hand, their knowledge of the orga-
nization theory literature enabled them to recognize that Blade.org was a unique
organizational form. (Blade.org, user groups, and research consortia are examples
of the types of network organizations that were not within the focus of organiza-
tional theorists during the fruitful theory-generation era to which Davis and Marquis
(2005) and Dunbar and Starbuck (2004) refer.)

**Network-Level Task and the Design of Whole Networks: Is There a Relationship?**

*Patrick Kenis, Keith G. Provan, and Peter M. Kruyen*

*Abstract:* This paper explores a key argument of structural contingency theory
in the context of whole networks of organizations. Specifically, we examine the
relationship between the task such networks perform and their design, which we
operationalize as one of three forms of governance. Based on an extensive review
of the literature on whole networks, we conclude that there is no clear relationship
between network-level task and network design. We offer a number of explanations
that might account for this finding. Our conclusions help to advance theory and
practice on the design of whole networks of organizations.
Commentary: One way that organization design researchers can draw on existing organization theories to benefit organization design practice is to determine whether the theories are valid for organizational forms or organizational environments for which the theories have not previously been evaluated. If the theory is validated for these situations, then organization design guidelines can be derived from the theory. This chapter is a good example of this use of organization theories – in this case, network theory. Structural contingency theory was tested and found to be non-predictive of governance structures for the relatively unstudied combination of organizational task and network governance structure. The authors did find some evidence suggesting that structural contingency theory might be predictive for whole network governance structures when the contingency is the network’s size. The study reported is especially interesting because it examines whether a well-known contingent relationship, the effect of task on structure at the level of the individual organization, also holds at the level of the whole network organization. The results indicated that the effect does not hold at this higher level of analysis.

Part II. Dynamics of Adaptation and Change

Organizational Trade-Offs and the Dynamics of Adaptation in Permeable Structures

Stephan Billinger and Nils Stieglitz

Abstract: Organization design has a critical impact on how firms adapt to the business environment. In our case study, we show how organization design increases a firm’s ability to sense and seize business opportunities by making its organizational boundaries more permeable. Our findings reinforce and substantiate prior work on organization design and organizational adaptation. They also suggest how insights from organization design theory may help better understand the dynamic capabilities of firms. We find that disintegration and the creation of a permeable corporate structure requires decision-makers to consider four organizational trade-offs: specialization, interdependencies, delegation, and incentives. We discuss how these organizational trade-offs provide a useful complementary perspective to the dynamic capability approach by highlighting the structural properties that shape organizational adaptation across time.

Commentary: Although their data collection process was not shaped with respect to a specific prominent organization theory, the authors explicitly analyzed their qualitatively collected data using four “theoretical concepts that are well supported in various streams of literature,” i.e., specialization, interdependence, delegation, and incentives. Aided by, or relying on, these literature-supplied lenses, the authors insightfully identify the evolution of several formal adaptation-managing routines (i.e., dynamic capabilities) which were enabled by the organization’s intentional redesign of its structure and which were described by the organization’s managers as being very effective for managing organizational adaptations. Thus
these organizational design researchers benefitted from their knowledge and use of the organization theory literature (especially the four theoretical concepts mentioned above and also a fifth – dynamic capabilities), but they did not draw on organization theories. It is unclear whether drawing on organization theories would have contributed to a deeper understanding of what they observed during their data collection or whether doing so would have hindered the scope of their insights. It may be that the important lesson to be learned is that organization theory concepts, as contrasted with the theories themselves, might be useful in the analysis of qualitative data and might be less cognitively constraining than would be the use of a particular organization theory in analyzing such data.

**Unpacking Dynamic Capability: A Design Perspective**

*Deborah E. M. Mulders and A. Georges L. Romme*

**Abstract:** This chapter reviews the dynamic capability literature to explore relationships between definition, operationalization, and measurement of dynamic capability. Subsequently, we develop a design-oriented approach toward dynamic capabilities that distinguishes between design rules, recurrent patterns of behavior, operating routines and processes, market and competitive conditions, and performance. This framework serves to develop a number of propositions for further research. As such, we integrate the literature on dynamic capabilities that primarily draws on economics, with a design-oriented approach.

**Commentary:** Through the creative and careful use of ideas and findings from the dynamic capabilities, organization design, and organizational change literatures, the authors generate propositions which they modestly describe as a “preliminary set of causal claims.” While the propositions set forth in the chapter will likely influence future empirical works contributing to theory about dynamic capabilities, the soundness of the propositions also serve as evidence that theory building efforts need not draw on – or even manifest knowledge of – formal organization theories. (The authors may well be knowledgeable about all of the prominent organization theories – that they apparently did not need such formalized knowledge in order to contribute to the development of new theory is the point to be recognized.) While reflection might lead to the discovery of ways that the authors might have used formal theories in their work, the creativity and yet thoroughness of the work suggests that had the authors used organization theories to guide their work they might have adversely constrained their thinking.

**Predicting Organizational Reconfiguration**

*Timothy N. Carroll and Samina Karim*

**Abstract:** This chapter addresses the issue of structural change within for-profit organizations, both as adaptation to changing markets and as purposeful experimentation
to search for new opportunities, and builds upon the “reconfiguration” construct. In the areas of strategy, evolutionary economics, and organization theory, there are conflicting theories that either predict structural change or discuss obstacles to change. Our aim is to highlight relevant theoretical rationales for why and when organizations would, or would not, be expected to undertake structural reconfiguration. We conclude with remarks on how these literatures, together, inform our understanding of reconfiguration and organization design and provide insights for practitioners.

**Commentary:** This chapter contains and builds on a wide-ranging and informative review of literatures reporting on the circumstances under which organizations do, and do not, reconfigure themselves. The authors use this review to develop and frame conclusions about these circumstances. It seems likely that some readers will take the next step and fine tune the conclusions as propositions, thus moving along on the path toward theory development. In other instances, the authors articulate questions unanswerable from current literatures, thus identifying areas for further work. Rather than employing organization theories per se to draw their conclusions, the authors employed organization theories to guide and present their literature review. The range and size of the literatures on which they drew, and for which they provide coherent reviews, indicates that this use of organization theories served them well.

Thus in this chapter and the preceding two chapters we see two different strategies with respect to the use of theory in theory building. On the one hand, the use of theory templates can restrain creative insights and, in a work intended to generate new theory, might be advantageously avoided. On the other hand, the use of the templates can add efficiency to literature reviews and can reduce the chance of being overwhelmed when attempting to draw conclusions about what existing literature has to offer. In either case concepts and ideas associated with prominent theories were important building blocks in the development of theories or the presentation of conclusions that precede theory development.

**Embedding Virtuality into Organization Design Theory: Virtuality and Its Information Processing Consequences**

*Kent Wickstrøm Jensen, Dorthe Døjbak Håkonsson, Richard M. Burton, and Børge Obel*

**Abstract:** What is virtuality in organization design? In this chapter we argue for the importance of understanding the nature and effect of the characteristics of virtual organizations, rather than simply focusing on how these characteristics are different from co-located organizations. Through a review of literature relating to virtual organizations we identify two dimensions: locational and relational differentiation which capture the nature of virtual organizations well. We anchor theoretically these dimensions to organization design and information processing theory. This enables us to identify their effects and consequences for coordination in information
processing terms. We thereby not only integrate theory of virtual organization into extant theory of organization design but more importantly, we also demonstrate how increasing virtuality essentially imposes an information processing dilemma for organizations: locational differentiation reduces the information processing capacity, while relational differentiation increases the information processing requirements. We discuss the managerial as well as the theoretical implications of these findings.

Commentary: In my view, the principal contribution of these authors is their portrayal of the organization’s information processing requirements as an environmental contingency that must be addressed with information processing routines and structures that provide for the organization’s information processing capacity. To do this well, the authors drew on information processing theory and information systems design theory. This chapter is a good example of where organization design researchers used a formal theory (albeit one not prominent in the organization theory literature) in conjunction with a version of contingency theory to make a contribution to the body of organization design research – in the form of a heretofore unarticulated organization design dilemma (that relational differentiation increases information processing requirements and locational differentiation reduces information processing capacity).

Part III. Fit and Performance

Learning-Before-Doing and Learning-in-Action: Bridging the Gap Between Innovation Adoption, Implementation and Performance

Eitan Naveh, Ofer Meilich, and Alfred Marcus

Abstract: Implementation links purpose to outcome. Our model of implementation effectiveness centers on learning – learning-before-doing (preparation) and learning-in-action (adaptation and change catalysis). We explain both the degree of implementation and its impact on various measures of performance (subjective and objective) and test our proposed model on a large, multi-industry sample in the context of implementing the ISO 9000 quality standard. We find that learning-before-doing, an important means for bridging the adoption-implementation gap, is a necessary but not sufficient condition for realizing the benefits of a planned change. To fully bridge the implementation-performance gap, both aspects of learning-in-action – adaptation and change catalysis – must accompany implementation.

Commentary: This chapter is a good example of how organization theory (and organization design theory – the findings can easily be framed as design guidelines) is developed. That is, the authors draw on organization learning theory and organization change theory to develop propositions concerning organization change routines that would contribute to performance and test the propositions in a richly described field setting.
Underfits Versus Overfits in the Contingency Theory of Organizational Design: Asymmetric Effects of Misfits on Performance

Peter Klaas and Lex Donaldson

Abstract: The contingency theory approach to organizational design traditionally treats underfit as producing equal performance loss as overfit, so that the effects of these misfits on performance are symmetrical. Recently, an asymmetric view has been proposed, in which underfit produces lower performance than overfit. The paper analyzes these views. The effects of underfits and overfits on benefits and costs are distinguished. The differential effects on organizational performance of underfit and overfit are to be understood by their effects on benefit and costs. Implications for organization theory and design. For future empirical research, it is specified how to correctly identify differential performance effects of underfits and overfits. In a managerial design perspective, underfit is liable to occur in growing organizations and to rob them of some of their potential growth. While underfit will lead to an acute condition, overfit will be more chronic.

Commentary: Arguably mistaken beliefs in scientific literatures are often challenged with empirical studies. In contrast, the authors of this chapter draw on their deep understanding of contingency theory, on the contingency theory literature, and on their previous analyses, to extend contingency theory by examining the asymmetric effects of misfit on organizational performance. In so doing, they disabuse us of the frequently encountered (mis)assumption that underfit produces the same performance effect as does overfit, and they describe the implications for organization design researchers and organization designers. Thus, by extending the established version of an organization theory, the authors contribute to organization design research and practice.

Based on this small but rich convenience sample of organization design research studies, what might we infer about how current organization theory is serving the organization design community? Below I offer some possible answers to this question.

Concluding Observations

At the beginning of this introduction we encountered the idea that several prominent organization theories were of limited usefulness for understanding organizations in current organizational environments. Our subsequent examination of these theories suggested that this idea had validity, but also that the theories did serve as foundations for extensions of the theories, extensions that could be useful for understanding organizational performance and survival in current and future organizational environments and for the conduct of organization design research and practice.
From the review of how the authors of the chapters in this volume used prominent organization theories, it seems to me that we can draw two interesting and useful inferences.

One is that currently prominent theories can be tested for their validity in current or evolving organizational environments. In this way, and as the foundation for outright extensions, these theories can be made to contribute to organization design research and practice. The theories can also serve to guide and present literature reviews and the conclusions that result from the reviews, conclusions that often serve as the bases for propositions to be examined for their possible contributions to organization design theory.

A second possible inference from the review of the chapters is that, as contrasted with the theories themselves, the ideas and concepts associated with the organization theory literature can serve as building blocks in the development of new theory. The ideas and concepts can also serve as cues and lenses for recognizing new organizational phenomena and forms and for interpreting the results of ethnographic and qualitative studies.

Together these inferences suggest to me that, rather than ignoring the theories that were developed in and for earlier organizational environments, we should view the theories as phases in the evolution of organization theory and as contexts for better understanding concepts and ideas that are useful and perhaps necessary for developing organization design theory for the future.

References

Part I

Toward New Organizational Forms
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Chapter 1

Blade.Org: A Collaborative Community of Firms

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Abstract  The purpose of our chapter is to analyze Blade.org, a community of firms focused on the development and adoption of open blade server platforms (an innovative computer server technology). Founded in early 2006, Blade.org is a successful community of more than 100 member firms which engage in various forms of collaboration to develop innovative products and services and to extend their market reach. Blade.org is a community of firms, but it was purposefully designed to emulate many of the core features and processes of a community of individuals. We argue that a community of firms is a new organizational form, one that increasingly will be found in situations where continuous innovation is a strategic objective.

Keywords  Community of firms · Collaborative community · Collaborative innovation networks · Open source innovation · New organizational forms

1.1 Introduction

More than seven decades ago, economist Joseph Schumpeter (1934) posited that innovation was the main driver of economic development. Today, the idea that a firm’s long-term competitiveness hinges on its ability to innovate is a widely accepted fact (Baumol et al. 2007; Hult et al. 2004; Zhonqi et al. 2004). Despite its importance to firm growth and success, innovation is not an easy task to accomplish in the typical firm. Indeed, one survey found that chief executive officers believe their firms utilize only 15–25% of their innovation capacity (Käser and Miles 2002). Various approaches to improving a firm’s ability to innovate have been developed, including cross-functional business teams, internal venture capital processes, creating or acquiring new business units, spinning off new ventures, and forming alliances with or investing in partner firms. All of these approaches, however, tend to produce periodic and incremental innovation that is mostly limited to the firm’s
existing businesses – not the continuous and radical innovation that is increasingly required by today’s global economy.

In recent years, a new philosophy of innovation has emerged. Referred to as “open innovation” (Chesbrough 2006, 2007), this philosophy rests on the belief that a firm’s innovation success comes from opening up its innovation processes to external sources of knowledge and creativity. Chesbrough (2006: 24) describes open innovation as a “...paradigm that assumes that firms can and should use external as well as internal ideas, and internal and external paths to market...” Open innovation processes are becoming increasingly collaborative and democratic (von Hippel 2005). Enabled by advances in information and communication technologies, individuals and groups outside of established firms are nowadays not only able to develop new products themselves but also are willing and able to share their knowledge, experiences, and innovative concepts with a community of peers at relatively low cost (von Hippel 2005, 2007). Those individuals or groups are often “lead users” of new products and technologies, and lead users have been shown to be an important source of innovation in many industries (Lilien et al. 2002; von Hippel 1988, 2001).

The newest form of open innovation has been called a “collaborative community of firms” (Miles et al. 2005). The community-of-firms’ organizational model differs from previous approaches to open innovation in three main ways. First, unlike most communities described in the organization sciences literature (e.g., von Hippel 2005; Wenger 1998), community members are firms rather than individuals. Second, communities of firms have an economic as well as a technical purpose. They have been established to both create and commercialize new products and services. Third, most open innovation communities are focused on the improvement of a particular subject or field such as the Linux operating system (Lee and Cole 2003). A community of firms, by contrast, is organized as an arena in which firms can collaborate with one another to create their own unique solutions for which they retain ownership rights. Launched in early 2006, Blade.org is now one of the largest and most influential communities of firms to emerge from the open innovation movement. In this chapter, we describe the evolution of Blade.org and highlight its collaborative features and processes. We also explain why we believe that Blade.org represents a viable new organizational form, and we discuss implications for organization design theory and practice.

1.2 Organizing for Collaborative Innovation

Due to the importance of new products, services, and technologies to firms’ growth, innovation in many companies has traditionally been a closely guarded process. Companies relied on their internal R&D capability to invent and commercialize products and services on their own (Gassmann 2006). Although market and other external information may have been gathered, analyzed, and distributed, outsiders frequently played a passive and limited role in the innovation process.
Today, however, it is evident that a paradigm shift is underway. The shift toward open innovation has been prompted by several factors (Chesbrough 2007). First, the competitive pressure to innovate is increasing in many industries due to rapid technological advancements. Second, the cost of developing new technologies and products is increasing due to greater product complexity and proliferation. Third, product life cycles are shortening in many industries, giving firms less time to amortize their investments in new product development. To solve the problem of developing new and more complex technologies and products at an even faster pace, firms need to leverage their and other firms’ resources extensively. This can be achieved by exploiting ideas and technologies developed outside the firm’s boundaries as well as by allowing unused ideas and technologies to flow to the outside (Chesbrough 2006; Huston and Sakkab 2006).

Open innovation was originally fueled by communities of individuals, a social innovation that is a major cultural phenomenon (von Hippel 2001, 2007; von Hippel and von Krogh 2003). Communities of individuals are social networks in which professionals and/or hobbyists voluntarily exchange new ideas, knowledge, and experiences about a particular topic or field of interest, thus creating an intellectual “commons” (Harhoff et al. 2003; von Hippel 2001, 2007; Wenger 1998).

1.2.1 Scope and Types of Communities of Individuals

Communities of individuals have appeared in a wide variety of fields and have assumed many different forms. One well-known form is the community of practice which refers to the process of social learning that occurs when individuals who have a common interest in a particular topic or field collaborate over an extended period of time to share ideas, find solutions, and build prototypes. Communities of practice have emerged both within and across firms (Lave and Wenger 1991; Wenger 1998).

A prominent community of practice which has gained attention from researchers and practitioners alike is open source software where communities such as those associated with the Apache web server and the Linux operating system have developed not only software solutions with superior market value but also new business models and successful new firms. Also, products in both high-tech industries (e.g., medical equipment, biotechnology, nanotechnology) and low-tech industries (e.g., sports equipment) increasingly are being developed by communities of professionals either independently or in collaboration with incumbent firms. The diverse forms of communities of practice can be classified into a typology whose main dimensions are organizational scope and degree of creativity.

With respect to organizational scope, three archetypes can be distinguished. First, communities can be primarily collectives of employees within a firm. This type of community enhances the learning processes by which an organization comes to “know what it knows” and thus is effective and valuable as an organization (Brown and Duguid 1991, 2000, 2001; Wenger 1998). For example, Siemens has established more than 20 internal communities of practice spanning organizational units as the anchor of its knowledge management system (Zboralski et al. 2006). The scope...