

Design Discourse for Organization Design: Foundations in Human-Centered Design

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Introduction

In the traditional, social science-oriented approaches to organization design, the word “design” was often used as a metaphor, with a meaning equivalent to “structure” or “configuration.” In more recent times, a number of writers taking a more design-oriented perspective have emphasized the following aspects of organization design: (1) It is a holistic phenomenon or a “gestalt”¹; (2) it is not a static configuration but a never-ending process of designing²; (3) it is driven not only by technical-structural rules but also by generative ones³; and (4) it is able to shape and even create new environments, rather than being determined by the environment.⁴ This trend seems to indicate a movement away from structure and toward a more action-oriented interpretation of organization design.

Given the significant volume of literature in the past few decades about the interplay between design, management, and organization, the question at hand is why design as a discipline has never taken center stage in organization design research and publishing.⁵ One reason, we submit, is the strong influence of the status quo in the form of the contingency paradigm, characterized by a search for variables—that is, measurable elements or factors that are deemed to produce the best fit between environmental contingencies and organizational configurations.⁶ In this school of thought, the organization’s design, which is considered to be the same as its configuration, is the result of external forces, with little regard for the internal workings of the organization. It overlooks perspectives that focus on the action and interaction of stakeholders, as well as on the consequences of managerial behavior or leadership on the design of the organization.⁷

The second reason, and the most important for the purposes of this paper, is that a clearly identifiable theoretical body of knowledge from the design discipline that can serve as an underpinning for research into organization design seems not to be available. A well-known exception is the work pioneered by Galbraith on the information-processing view, inspired by the

- 1 Youngjin Yoo, Richard Boland, and Kalle Lyytinen, “From Organization Design to Organization Designing,” *Organization Science* 17, no. 2 (2006): 215–29.
- 2 Raghu Garud, Arun Kumaraswamy, and Vallabh Sambamurthy, “Emergent By Design: Performance and Transformation at Infosys Technologies,” *Organization Science* 17, no. 2 (2006): 277–86; and Raghu Garud, Sanjay Jain, and Philipp Tuertscher, “Incomplete by Design and Designing for Incompleteness,” *Organization Studies* 29, no. 3 (2008): 351–71.
- 3 A. Georges L. Romme and Gerard Endenburg, “Construction Principles and Design Rules in the Case of Circular Design,” *Organization Science* 17, no. 2 (2006): 287–97; and Bradley D. Parrish, “Sustainability-Driven Entrepreneurship: Principles of Organization Design,” *Journal of Business Venturing* 25 (2010): 510–23.
- 4 Saras D. Sarasvathy, Nicholas Dew, Stuart Read, and Robert Wiltbank, “Designing Organizations that Design Environments: Lessons from Entrepreneurial Expertise,” *Organization Studies* 29, no. 3 (2008): 331–50.
- 5 See, e.g., Richard J. Boland, Jr. and Fred Collopy eds., *Managing as Designing* (Redwood City, CA: Stanford University Press, 2004); Special Issue on Design and Organizational Change, *Design Issues* 24, no. 1 (Winter 2008); and Ulla Johansson-Sköldberg, Jill Woodilla, and Mehves Çetinkaya, “Design Thinking: Past, Present and Possible Futures,” *Creativity and Innovation Management* 22, no. 2 (2013): 121–46.
- 6 Lex Donaldson, “Strategy and Structural Adjustment to Regain Fit and Performance: In Defence of Contingency Theory,” *Journal of Management Studies* 24, no. 1 (1987): 1–24.
- 7 Chester I. Barnard, *The Functions of the Executive* (Cambridge: Harvard University

- Press, 1938); Philip Selznick, *Leadership in Administration* (New York: Harper and Row, 1957); Christopher A. Bartlett and Sumantra Ghoshal, "Beyond the M-Form: Towards a Managerial Theory of the Firm," *Strategic Management Journal* 14 (1993): 23–46; and Sumantra Ghoshal and Christopher A. Bartlett, "Linking Organizational Context and Managerial Action: the Dimensions of Quality Management," *Strategic Management Journal* 15 (1994): 91–112.
- 8 See Jay Galbraith, *Designing Complex Organizations* (Reading, PA: Addison-Wesley, 1973); and Herbert A. Simon, *Administrative Behavior* (New York: The Free Press, 1945).
 - 9 Robert Simons, *Levers of Organization Design: How Managers Use Accountability Systems for Greater Performance and Commitment* (Boston: Harvard Business School Press, 2005).
 - 10 Ikujiro Nonaka and Hiroataka Takeuchi, *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation* (New York: Oxford University Press, 1995), 40.
 - 11 Karl E. Weick, "Rethinking Organizational Design," in *Managing as Designing*, eds., Richard J. Boland, Jr. and Fred Collopy (Redwood City, CA: Stanford University Press, 2004), 39.
 - 12 For the former, see Richard Buchanan, "Wicked Problems in Design Thinking," *Design Issues* 8, no. 2 (Spring 1992): 5–21; and Richard Buchanan, "Branzi's Dilemma: Design in Contemporary Culture," *Design Issues* 14, no. 1 (Spring 1998): 3–20. For the latter, see Klaus Krippendorff, *The Semantic Turn: A New Foundation for Design* (Boca Raton, FL: Taylor and Francis, 2006); and Klaus Krippendorff, "Principles of Design and a Trajectory of Artificiality," *Journal of Production and Innovation Management* 28, no. 3 (2011): 411–18.
 - 13 Sabine Junginger, "A Different Role for Human-Centered Design in the Organization." Paper presented at the European Academy of Design Conference (EAD06), Bremen, Germany, March 29–31, 2005.

decision-making model originally conceived by Simon.⁸ This research trend, which is rightly credited with advancing several aspects of organization design research, fosters a notion of organization that reduces the organization to a set of structures, emerging as a result of the application of management control policies and procedures.⁹ In our view, the field has suffered a growing "scientification" tendency (similarly reflected in a remark by Nonaka and Takeuchi about the field of strategy),¹⁰ which has led to a growing disconnect between the practice and the theory of organization design. As wittily noted by Karl Weick, "We [organization design thinkers] now function as a discipline of critics who lower confidence, rather than a discipline of designers who raise confidence."¹¹ To make our way out of this situation and render organization design more relevant to the world of practice, we must go back to basics and (re-)establish the design discipline as a foundation of organization design.

In the search for useful theories that can serve as a bridge between design and organization design, we were struck by the evolution toward a human-centered view of the design discipline and a degree of its convergence with some old and new trends in management and organization. We refer, especially, to the conceptual frameworks proposed by Buchanan and Krippendorff.¹² Buchanan's model of the four orders of design signals not only an evolution of the discipline to include the design of action (e.g., service design) but also indicates that the problems of context and change need to be taken into account. In the case of Krippendorff, the meaning-driven interpretation of design pioneered by that author is particularly insightful in suggesting the content of a human-centered approach to organization design.

Meanwhile, a careful look at some literature trends on management and organization reveals a number of concerns that coincide with human-centered design (HCD) principles or ideas.¹³ In other words, they consider situations where novel solutions have been put forward by academics or practitioners for the designing needs of organizations (e.g., the need to design the governance of companies in a fair and equitable manner for all stakeholders). Thus, our key research effort was focused on a matching of designing concerns, extracted from the literature and seen through the lens of HCD, and the traditional areas of organization design research. The next step was to group and label the concerns in accordance with HCD criteria. The final result is the "The Five Human-Centered Organization Design Concerns" presented and commented below. The expression "concern" was favored over labels such as, element, factor, or principle to highlight the fact that organization design is something carried out—on an ongoing basis—by practitioners (managers and non-managers) who have concerns about how best to design myriad organizational artifacts.

Hence, the aims of the present paper are threefold: (1) to contend that a great many aspects of HCD are in line with current concerns in management and organization, as represented in the literatures of marketing, entrepreneurship, and economics; (2) to argue that HCD as a body of knowledge has the potential to bring organization design research and theory closer to the needs of practice; and (3) to propose a prescriptive design tool based on five key organization design concerns, each associated with one or more of Krippendorff's design principles.

Epistemological Background

A rich epistemological background of organization design research includes not only two traditional schools of thought—*Contingency and Configuration* and *Complementarity*—but also another school of thought—*Design*—as an important new foundation.

Contingency and Configuration

The intellectual stance underpinning the research into design contingencies is positivist in nature, meaning that the research is aimed at finding cause-and-effect relationships and establishing testable theories between contingencies and various aspects of organizational performance.¹⁴ The key contingencies of organization design are the organization's environment, its technology, and its size. Contingency and configuration are two sides of the same coin, with contingency theory offering a conceptual framework on which to hang the analysis of organizational forms. The key hypothesis of configuration theory is that organizations featuring a form that fits their environmental contexts perform better than organizations having a form that fits their environment less adequately.

Contingency and configuration approaches have experienced weak developments since the 1980s, as leading writers in the field have recognized.¹⁵ This pace is due, at least in part, to vastly different conditions of environmental change, compared to the days when the contingency approach was conceived, and also to a growing consensus about the situated nature of organizations and the (co-)creation of business environments. Nevertheless, contingency theory still commands considerable influence, and in one of the latest review papers, scholars are urged to return to that research frontier, with a new agenda and new methods, but with the same epistemological stance.¹⁶

Complementarity

Complementarity is one of the four strands of post-contingency research identified by McGrath.¹⁷ Complementarity builds on the notion that, in pursuing the aim of achieving optimal fit, the design of organizations ought to leverage the interdependencies

- 14 Stewart Clegg, Martin Kornberg, and Tyrone Pitsis, *Managing and Organizations: An Introduction to Theory and Practice* (London: Sage, 2005).
- 15 Charles Snow, Raymond E. Miles, and Grant Miles, "The Configurational Approach to Organization Design: Four Recommended Initiatives," in *Organization Design: The Evolving State-of-the-Art*, ed. Richard M. Burton, Bo H. Eriksen, Dorthe D. Håkansson, and Charles C. Snow (New York: Springer, 2006).
- 16 Andrew H. Van de Ven, Martin Ganco, and C. B. (Bob) Hinings, "Returning to the Frontier of Contingency Theory of Organizational and Institutional Designs," *The Academy of Management Annals* 7, no. 1 (2013): 393–440.
- 17 Rita Gunter McGrath, "Beyond Contingency: From Structure to Structuring in the Design of the Contemporary Organization," in *The Sage Handbook of Organization Studies*, ed. Stewart R. Clegg, Cynthia Hardy, Thomas B. Lawrence, and Walter R. Nord (London: Sage, 2006).

between organizational elements, rather than dealing with individual elements separately.¹⁸ Grandori and Furnari take a similar stand and propose a comprehensive model in which the key design elements are linked to behaviors that are likely to be instilled in the organization's practices.¹⁹ The elements are as follows:

- *Communitarian elements*, including knowledge creation and a common culture that together instill identity, cohesion, and homogenization of judgments and interests
- *Bureaucratic elements*, which are the formal rules and plans, as well as the specialized divisions of labor that instill predictability, transparency, and accountability
- *Market-like elements*, including price and other market-related devices, which provide incentives for action and instill coordination capacity with minimal communication
- *Democratic elements*, including the diffusion of ownership elements and of decision and representation rights, which instill notions of fairness and the right to voice opinions

Although we do not share the epistemological stance of the article or the perspective that "organizational solutions" are obtained from combinations of "elements" that follow technical rules similar to those used to obtain chemical compounds, we assert that the classification of organization design elements can serve as a useful checklist for the areas of organization design concerns broached in this paper.

Design

Cross asserts that design should be seen as a discipline founded on the reflective practice of design and focusing on the "artificial world," i.e., the human-made world of artifacts as the area of expertise of the design profession.²⁰ One way designers can add to or change the artificial world is by creating meaning, as proposed by the human-centered design school of thought. Compared with Simon's stance on design science, HCD reverses the relationship between the design object and its intention.²¹ For Simon the artifact is at the core, while for Krippendorff, meaning is the core of the design process, and the artifact becomes a medium for communicating the meanings intended by the designer and perceived by the user.²² Krippendorff sums up this perspective in asserting that

As soon as we move beyond the engineering of functional products, we need to be concerned with what the artefacts of design could possibly mean to users and interested parties, with the multiple rationalities that people can bring to bear on them.²³

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- 18 Paul Milgrom and John Roberts, "Complementarities and Fit: Strategy, Structure and Organizational Change in Manufacturing," *Journal of Accounting and Economics* 19, no. 2–3 (1995): 179–208.
- 19 Anna Grandori and Santi Furnari "A Chemistry of Organization: Combinatory Analysis and Design," *Organization Studies* 29, no. 3 (2008): 459–85.
- 20 Nigel Cross, "Designerly Ways of Knowing: Design Discipline versus Design Science," *Design Issues* 17, no. 3 (Summer 2001): 49–55.
- 21 Herbert A. Simon, *Sciences of the Artificial* (Boston: MIT Press, 1996).
- 22 Johansson-Sköldberg, Woodilla, and Çetinkaya, "Design Thinking," 126.
- 23 Krippendorff, "Principles of Design," 413.

In his 2011 article, Krippendorff provides a useful summary of the trajectory of design in the past 40 years, from industrial design to the design of discourses. The discipline has evolved from the design of products to the design of communicative and social artifacts—the types of artifacts that organizations essentially are made of. Based on his trajectory of artificiality, Krippendorff developed nine design principles that he suggests are key for a contemporary understanding of design. Hence, we posit that the nine principles should also provide an appropriate foundation for the theorizing of organization design.

Buchanan's framework of four design orders shows a similar trajectory but is somewhat closer to the design of organizations.²⁴ The first order is about using communication (i.e., symbols, words, and images) to attract people's attention and to connect them to each other. The second order focuses on problems of constructing tangible products that serve human beings in their various activities—that is, the focus is on engineering, architecture, and mass production of artifacts. The third order of design, emerging in the middle of the twentieth century, is about how to design human action and interactions that form activities, processes, and services. Finally, Buchanan talks of a fourth order of design, comprising the design of the environments and systems within which all the other orders of design exist. This order deals with the core ideas and values that hold such environments and systems together and focuses particularly on the transformation and change of the systemic whole. Buchanan states that "the problems of transition are not problems of action but of reaching a new *understanding* of purpose and ends."²⁵

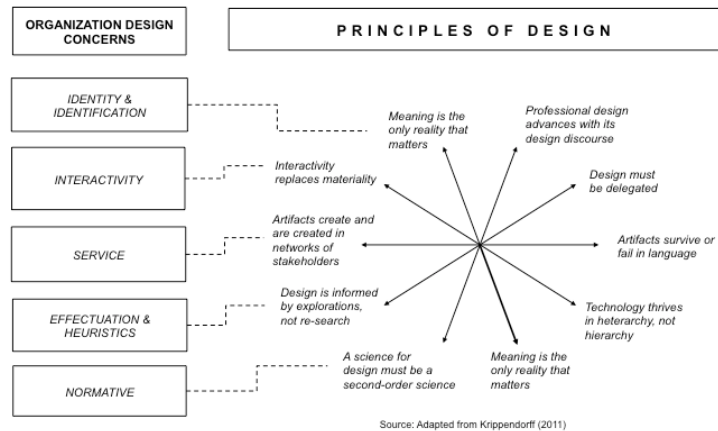
The Five Human-Centered Organization Design Concerns

Figure 1 features Krippendorff's nine design principles linked by two-way arrows, meant to indicate potential inter-relationships among the principles. In suggesting such inter-relationships we propose that, from the point of view of organization design, some of the design principles can be interpreted as complementary, in dealing with related issues, in the macro context of organization design. For example, "Interactivity Replaces Materiality" seems related to "Technology Thrives in Heterarchy, not Hierarchy"; and both concern the issue of change in organizational structure. However, it should be noted that the inter-relationships are merely hypothetical, and that a full justification of the hypothesis is beyond the scope of the paper. Figure 1 also shows, by means of dotted lines, five connections between the design principles and an equal number of organization design concerns. These connections are meant to represent the conceptual proximity found

24 Buchanan, "Wicked Problems"; and Buchanan, "Branzi's Dilemma."

25 Buchanan, "Branzi's Dilemma," 16 [italics added].

Figure 1
Connecting design principles and organization design.



between the HCD principles and the five major organization design concerns abstracted from the literature: Identity and Identification, Service, Interactivity, Effectuation and Heuristics, and Normative. The concerns concur, to a large extent, with the four basic elements of organization design identified by Grandori and Furnari, as previously described.²⁶ (See Figure 1.)

Identity and Identification

In the literature on organizational economics, identity and its satellite concept of identification have increasingly been put forward as “superordinate” mechanisms of governance and coordination, influencing knowledge creation and transfer throughout the organization.²⁷ Kogut and Zander state: “The knowledge of the firm has an economic value over market transactions when identity leads to social knowledge that supports coordination and communication.”²⁸ Such a perspective is indeed supported by a number of distinguished economists, including Simon, Arrow, and Akerlof, each treating identity and identification as major sources of motivation, commitment, and organizational effectiveness.²⁹

Identity and identification, we submit, find translation in the first principle of HCD: “Meaning Is the Only Reality that Matters”—the principle that contains the essence of the entire approach. Ashforth et al. explain that organizational identity and identification are processes of meaning formation, working at both the collective level and the individual level.³⁰ It starts with identity being formed as an iterative process between individual identity enactment and the collective processes of sense-breaking and sense-giving. Sense-breaking is about questioning who one is when faced with some new organizational reality, while sense-giving is about guiding the “meaning construction of others toward a preferred redefinition of organizational reality.”³¹ In this manner, newcomers begin to learn the features of the organization’s identity, in a recursive process of enactment that encompasses both the individual and the collective levels.

- 26 Grandori and Furnari, “A Chemistry of Organization.”
- 27 Linda Argote and Aimee A. Kane, “Superordinate Identity and Knowledge Creation and Transfer in Organizations,” in *Knowledge Governance: Processes and Perspectives*, ed. Nicolai Foss and Snezhina Michailova (Oxford: Oxford University Press, 2009).
- 28 Bruce Kogut and Udo Zander, “What Firms Do? Coordination, Identity, and Learning,” *Organization Science* 7, no. 5 (1996): 502–18.
- 29 See Simon, Administrative Behavior; Kenneth Arrow, *The Limits of Organization* (New York: W. W. Norton, 1974); and George A. Akerlof and Rachel E. Kranton, *Identity Economics: How Our Identities Shape Our Work, Wages, and Well-Being* (Princeton: Princeton University Press, 2012).
- 30 Blake E. Ashford, Spencer H. Harrison, and Kevin G. Corley, “Identification in Organizations: An Examination of Four Fundamental Questions,” *Journal of Management* 34, no. 3 (2008): 325–74.
- 31 Dennis A. Gioia and Kumar Chittipeddi, “Sensemaking and Sensegiving in Strategic Change Initiation,” *Strategic Management Journal* 12, no. 6 (1991): 433–48, 445.

Moreover, the organizational member's perceptions and understandings about the organization's identity are not limited to abstract verbal representations of feelings or beliefs; they also are embodied perceptions.³² From an embodied perspective, the construal of organizational identity is predicated on processing, examining, interpreting, and expressing emotional, visual, aural, bodily, or temporal information that can be formal and informal, official and unofficial, symbolic and material. Thus, given that embodied cognition also includes emotions and the ethical sense of individuals, it can be asserted that the emotional or motivational component of identity constitutes the individual's identification with the organization.³³ Thus, identification can be defined as the motivational component of identity, creating and created by the emotional bonds that each individual participant forms with the organization, in the flow of organizational life.

Interactivity

This concern is related to Grandori and Furnari's bureaucratic element.³⁴ Bureaucracy is often related to hierarchy—the dominant framework used to describe and explain traditional organization designs. Hierarchy, a fundamental organizing principle defined by Simon as a system of authority relations, has been very successful in providing organizations with the control and coordination they need to function in an integrated manner.³⁵ However, hierarchy has limitations. The same mechanisms that hierarchy affords for control and coordination also serve as constraints on broader collaboration both within and across firms. Hierarchy imposes multiple filters on the interactions among individuals and organizational units and/or external partners, creating delays and even obstructions to establishing productive connections and interactions.

However, the world of the hyperlink and the increasingly affordable ways to convey large amounts of information through the Internet are changing the rules of the game and causing significant shifts in organization design. Organizational structures are being shaped by a new world of interaction and collaboration demands and possibilities, afforded by the technology. The interactivity is related to generativity—a pervasive phenomenon that has been defined as the “capacity to bring forth novel practices.”³⁶ Indeed, faced with the staleness of the legacy rules and procedures, people take the initiative and simply redesign standard operating procedure, which sometimes represents the replacement of one or more layers of structures or processes. This newly gained autonomy is causing a growing disconnect between formal and informal organizational structures, leading Yoo to observe that the majority of companies are not designed for the “generative economy.”³⁷

32 Celia V. Harquail and Adelaide Wilcox King, “Construing Organizational Identity: The Role of Embodied Cognition,” *Organization Studies* 31, no. 2 (2010): 1619–48.

33 Giovanna Colombetti and Steve Torrance, “Emotion and Ethics: An Inter-(En)active Approach,” *Phenomenology and the Cognitive Sciences* 8 (2009): 505–26.

34 Grandori and Furnari, “A Chemistry of Organization, 464.”

35 Herbert A. Simon, “The Architecture of Complexity,” *Proceedings of the American Philosophical Society* 106, no. 6 (1962): 467–82.

36 Krippendorff, “Principles of Design,” 412.

37 Youngjin Yoo, “Design in the Generative Economy,” *Research in Technology Management*, March–April (2015): 1–7.

The second pervasive implication of interactivity for organization design is the rise of actor-based approaches. The move away from hierarchy and toward heterarchy increasingly causes organization design to be conceptualized as actor-oriented *architectures of collaboration*.³⁸ The implication is that organization design increasingly will be expressed in terms of the interactional principles that actors follow when engaging in organizational relationships rather than hierarchical structures.

Service

“Design is, by definition, a service relationship” and, unlike science or the arts, which are essentially self-serving, design is about “other-serving.”³⁹ In terms of organization design, service is the *raison-d’être* of any organization, although it has not always been recognized as such. Traditional economic science has been dominated by a manufacturing-oriented view, which places products at the center of wealth creation and treats service as the value added to the final output. However, a new perspective on markets and marketing, known as the service-dominant (S-D) logic, makes a strong argument in favor of the view that the exchange of service is at the root of *all* economic activity. The S-D logic points out that all economic exchange is based on service rather than goods, and that the market is a system of service-for-service exchanges, made up of configurations of resources (including people, information, and technology) connected to other systems by value propositions.⁴⁰

Value is created collaboratively (i.e., co-created) in configurations of mutual exchange, happening not only through the activities of dyads, but also by means of service systems, through an integration of resources that each of the systems has to offer. The literature on the S-D logic describes resources as “bundles of potential service,” and claims that service is a process “situated beyond traditional firm boundaries that links actors together.” It also explains that actors use language, symbols, and social institutions (e.g., monetary systems and law) to make sense and regulate the interfacing and exchange.⁴¹ Such a claim, and the recognition that the service exchange depends on the use of language, which requires the exchange of meaning, places the S-D logic squarely within the realm of HCD.

Effectuation and Heuristics

Traditional approaches to organization design work in tandem with the notions of strategic vision and planning. These notions presuppose a knowledge of the goals to be reached, and an assumption that, through rational planning, the goals can indeed be reached. Seen from the viewpoint of design, the point of departure is different—that intentions or desiderata, rather than

38 Oystein D. Fjeldstad, Charles Snow, Raymond E Miles, and Christopher Lettl, “The Architecture of Collaboration,” *Strategic Management Journal* 33 (2012): 734–50.

39 Harold G. Nelson and Erik Stolterman, *The Design Way: Intentional Change in an Unpredictable World* (Cambridge: MIT Press, 2014), 41.

40 Stephen L. Vargo and Robert F. Lusch, “Evolving to a New Dominant Logic for Marketing,” *Journal of Marketing* 68, no. 1 (2004): 1–17; Stephen L. Vargo and Robert F. Lusch, “Service-Dominant Logic: Continuing the Evolution,” *Journal of the Academy of Marketing Science* 36, no. 1 (2008): 1–10.

41 Jennifer D. Chandler and Stephen L. Vargo, “Contextualization and Value-in-Context: How Context Frames Exchange,” *Marketing Theory* 11, no. 1 (2011): 35–49.

visions, should guide the design of organizations.⁴² Thus, while traditional approaches assume a predictive or causal logic, a design-oriented view of organization design assumes a logic of *effectuation*.⁴³ The key assumption of effectuation is that, under conditions of true uncertainty, predicting and drawing statistical inferences about the future are not possible. In such conditions, entrepreneurs and managers tend to make choices based on their beliefs (i.e., their identity) rather than following processes by which they can order preferences for particular consequences (i.e., procedural rationality).⁴⁴

The two managerial logics—a causal logic versus a logic of effectuation—are representative of the dichotomy between Krippendorff's design principles of "re-search" versus "exploration." Although the aims behind the two poles should not be seen as mutually exclusive in the actual management of organizations, the notion of effectuation as a process of generating planning alternatives, rather than of choosing among known alternatives, brings an important new orientation to the process of organization design. The key proponents of effectuation theory agree that as a decision-making mode, effectuation does not replace causation; indeed, they suggest that managers and entrepreneurs transition between effectual and causal approaches.⁴⁵ Much the same happens between exploration and exploitation (or re-search), in the daily process of choosing between different strategic or tactical options. One additional point about a mind-set of exploration versus a mind-set of exploitation is that exploration opens up the way to the delegation of design decisions. Krippendorff's principle stated as "design must be delegated" is complemented by Gorb and Dumas' research finding regarding the reality of unplanned (or "silent") design carried out at the local level.

Thus, what effectuation theory has done is to issue a reminder that organizational decision-making is ruled by a paradigm of heuristics rather than rationality. Heuristics are the rules of thumb (or generative rules) that organizational actors have to learn in order to cope with uncertainty and with organizational rules that are no longer fit for purpose. The emphasis on heuristics pervades not only the writings on effectuation, but also the literature on the S-D paradigm.⁴⁶

Normative

An organizational design epistemology needs to be linked to the prevailing mindset about the role of organizations—mainly companies—in the economy. The history of organization design has been dominated by an emphasis on shareholder value and on the notion that value is about profitability and economic returns. However, in the past 30 years or so, this position has been consistently challenged by approaches such as stakeholder

42 Nelson and Erik Stolterman, *The Design Way*, 113–14.

43 Saras D. Sarasvathy, "Causation and Effectuation: Toward a Theoretical Shift from Economic Inevitability to Entrepreneurial Contingency," *Academy of Management Review* 26, no. 2 (2001): 243–63.

44 Stuart Read, Saras D. Sarasvathy, Michael Song, and Robert Wiltbank, "Marketing Under Uncertainty: The Logic of an Effectual Approach," *Journal of Marketing* 73 (2009): 1–18; and Robert Wiltbank, Nick Dew, Stuart Read, and Saras D. Sarasvathy, "What to Do Next? The Case for Non-Predictive Strategy," *Strategic Management Journal* 27, no. 10 (2006): 981–98.

45 Stuart Read, Saras D. Sarasvathy, Nicholas Dew, and Robert Wiltbank, "Response to Arend, Sarooghi, and Burkemper (2015): Cocreating Effectual Entrepreneurship Research," *Academy of Management Review* 41, no. 3 (2016): 528–36.

46 Stephen L. Vargo and Robert F. Lusch, "Inversions of Service-Dominant Logic," *Marketing Theory* 14, no. 3 (2014): 239–48.

Table 1 | Summary of Organization Design Concerns

Identity & Identification	To realize that identity and identification are superordinate in conveying meaning and purpose and have a powerful influence on the design of all other organization artifacts, including communitarian principles, values, and codes of conduct
Interactivity	To acknowledge that in the future, organizational designs will no longer rely on hierarchy and structural (technical) rules, but on control and integration mechanisms that are essentially dialogue- and identity-based
Service	To be mindful that service is at the heart of organization design and that cooperation and networking of resources are key ingredients of all managerial choices leading to the provision of service
Effectuation & Heuristics	To get comfortable with the notions that the activities of creating and managing enterprises are mostly based on rules of thumb, that environmental factors are contingent on human action, and that a mindset of exploration, rather than exploitation, must be at the forefront
Normative	To understand that design is about intentional change, that all the consequences of change need to be weighed against a moral background, and that ethical governance practices need to be embedded in the organization's design

management or corporate social responsibility (CSR). The stakeholder approach posits that a firm's performance must be defined as the total value it creates through its activities, with total value being defined as "the utility created for each of a firm's legitimate stakeholders."⁴⁷ The term "utility" is meant as the value that a stakeholder receives when engaging in any firm-related activity. One premise that sums up stakeholder theory is that taking stakeholders' interests into account helps firm performance by creating value along several trajectories, rather than just in terms of economic value.

Proponents of stakeholder theory suggest that firms that place moral value on mutual trust and cooperation are sought after as partners in relationships that require trust, which in turn brings them advantages in the marketplace.⁴⁸ Thus, if stakeholders are seen as being driven not only by the utility they receive from the firm but also by their ethical judgments regarding the treatment given by the firm to other stakeholders, the ethical nature of stakeholder approaches (including CSR) becomes evident. Indeed, the ethical dimension of organization design is inescapable, and as in normative economics or normative ethics, organization design needs to deal with how things "ought to be" rather than just "what they are." The first step in this process is to know the stakeholders and to understand their needs and concerns—in other words, to gain an excellent "understanding of stakeholders' understanding."⁴⁹

Table 1 contains a summary of the five organization design concerns, expressed as practitioner advice.

47 R. Edward Freeman, *Strategic Management: A Stakeholder Approach* (Boston: Pitman, 1984), cited in Jeffrey S. Harrison and Andrew C. Wicks, "Stakeholder Theory, Value, and Firm Performance," *Business Ethics Quarterly* 23, no. 1 (2013): 97–124, 102.

48 Thomas M. Jones and Andrew C. Wicks, "Convergent Stakeholder Theory," *Academy of Management Review* 24, no. 2 (1999): 206–21.

49 Krippendorff, "Principles of Design," 417.

Conclusion

The purpose of organization design as a discipline is to give the world organizations that are competitive, agile, and effective, while improving the quality of organizational life.⁵⁰ Although prior approaches to organization design have made enormous progress toward these ends, the consensual opinion is that much more needs to be done—especially toward organizational life, concerning both internal and external stakeholders. The main reason for the slow progress is that mainstream approaches have tended to emphasize structures, products, policies, or systems and to neglect the intangibles, such as action, perception, communication, and interaction. The evolution that is required in the practice of organization design is corroborated by the move in the design discipline, from strictly rational, engineering-like approaches to higher orders, human-centered perspectives, emphasizing action (third order) and transformational change (fourth order). In this article, we propose that according to such perspectives, organization design can be defined as a “language” that can be absorbed and exchanged among practitioners.⁵¹ The design concerns are intended to serve as the cognitive scaffolding that underpins and works in tandem with the “hard” elements of organization design: the structures, products, policies, and systems.

50 Roger L. M. Dunbar and William H. Starbuck, “Learning to Design Organizations and Learning from Designing Them,” *Organization Science* 17, no. 2 (2006): 171–78, 176.

51 Joseph Giacomin, “What Is Human Centred Design?,” *The Design Journal* 17, no. 4 (2014): 606–23.