Strategic Design: The integration of the two fields of Strategy and Design

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Strategic design: The integration of the two fields of Strategy and Design

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doi.org/10.21606/drs.2024.1399

Abstract: This article outlines the evolution of Design in Strategy and Strategy in Design and discusses the differences and similarities. By doing so, the examination of the evolutions revealed three different perspectives on integrating Strategy and Design in both fields. The article provides a nuanced understanding of Strategic Design by purposefully establishing the vocabulary of each perspective. The first perspective is a planning practice containing strategic tools and design methods to create conceptual models and plans. The second perspective is a learning practice through collective reflection from intent and action. The last perspective is the enablement of a comprehensive design practice in which tangible design and strategy emerge from the messiness of creative and collaborative design practice. These three Strategic Design practices require different organization and design capabilities and produce distinctive outcomes. The integration of Design and Strategy is becoming increasingly imperative as there is the need to address the more complex, interrelated socio-technological and economic-environmental challenges.

Keywords: Strategic Design; Design Thinking; Strategy; Comprehensive Design

1. Introduction

Strategic Design is the integration of Design and Strategy to address the more complex interrelated challenges (Auernhammer & Warner, 2020; Kotler & Rath, 1984; Manzini, 1999; Manzini & Vezzoli, 2003; Mintzberg, 1990). For example, Design in Strategy has been expressed as a powerful strategic tool that links design elements and strategies, offering opportunities for innovation and increased corporate performance (Kotler & Rath, 1984; Noble, 2011). Such Strategic Design utilizes design practices to develop an organization and region’s innovation capability and competitive qualities. The importance of being strategic increased in Design as responses needed to be developed to more interrelated, complex emergent challenges, such as social inequity, healthcare, global pollution, and business
growth (Brown, 2005; Buchanan, 1992; Manzini, 1999). For example, design scholars developed strategies for designing for complex issues, such as sustainability (Manzini, 1999; Manzini & Vezzoli, 2003). The aim and ambition of integrating Design and Strategy is to address the interrelated, complex challenges. Strategic Design is becoming more imperative as there is the need to develop capabilities to design artifacts and environments for a sustainable and livable world.

Nonetheless, Design has been discussed in Strategy, and Strategy has been debated in Design over decades. Designers, such as Buckminster Fuller, outlined strategies to address complex sustainable challenges (Buckminster Fuller Institute). Strategists, including Mintzberg (1987, 1990), outlined the “design school” in strategy and expressed the need for a craft that creates and implements strategy. In their 30-year review of strategy research, Wolf and Floyd (2013) identified a lack of conceptual and empirical studies that examine the strategic planning perspective related to the “design school” and found a notable decline in the literature on this topic. However, the rise of Design Thinking sparked increased interest in Design in the Strategy discourse (Boland & Collopy, 2004; Brown, 2008; Knight, Daymond, & Paroutis, 2020). Similarly, the field of Design has gained interest in the topic of Strategy in more recent years (Brown, 2005; Buchanan, 1992; Manzini, 1999). The developments over decades from both fields provide insights into the integration of Design and Strategy.

Therefore, this article outlines key developments in the evolution of Design in Strategy and Strategy in Design and examines similarities and differences. By doing so, the article discusses three different perspectives of Strategic Design and their limitations and criticisms. The first perspective is strategic planning through strategic tools and design methods to develop future scenarios and conceptual plans, often associated with “Design Thinking” (Knight et al., 2020; Mintzberg, 1990). Here, the term Design Thinking refers to methodology and not to the thinking of designers when enacting specific practices (Auernhammer & Roth, 2023). The second perspective is organizational learning through collective reflective practice that evolves strategies over time (Argyris & Schön, 1978; Schön, 1983). Such reflective learning has been discussed and developed in both Strategy and Design. The last perspective is enabling a collective, collaborative, and comprehensive practice in the messiness of everyday design practice (Auernhammer & Roth, 2023; Chia & Holt, 2009; Moholy-Nagy, 1947). Such strategic enablement of comprehensive design practices requires the development of individual, cultural, and environmental qualities (Auernhammer & Roth, 2021; Moholy-Nagy, 1947).

This article contributes to the Strategy Design discourse in three ways. Firstly, evaluating the similarities in the evolution of Design in Strategy and Strategy in Design identified three distinct practice perspectives. Secondly, it purposefully establishes the distinctive vocabulary of these perspectives. Lastly, the article informs strategic designers by discussing the various limitations and criticisms of the distinct practice perspectives. These limitations and criticisms have wider implications, such as the challenges associated with Design Thinking and its
Strategic design

bastardization, i.e., the dissociation of a heuristic model from complex design practices (Auernhammer & Roth, 2023; Buchanan, 1992).

2. Design in Strategy

Design in Strategy evolved over decades from a planning practice (i.e., the classical design school) to an open and more inclusive practice.

2.1 Classical design school

The classical design school in strategy emerged in the 1960s and dominated the attention of textbooks, teaching, and managers (Ansoff, 1965; Chandler, 1962; Porter, 1980, 1985). Mintzberg (1990) termed this strategy formulation the “design school” and used the term “Design” as a metaphor. The classical design school underpins the widely taught pedagogy that strategic planning is a formal, analytical, or systematic process that separates the evaluation of strategy formulation and its execution and implementation (Johnson, Whittington, Scholes, Regnér, & Angwin, 2017; Oakes, Townley, & Cooper, 1998; Pearce & Robinson, 2000). This strategic planning process follows an external and internal analysis in which strategists create and decide the strategy to be implemented, as illustrated in Figure 1.

Figure 1  Strategic planning is creating a fit between the external environment (i.e., opportunities and threats) and the internal organization (e.g., strengths and weaknesses) (Mintzberg, 1990). It follows the same logic of end-means analysis or problem-solution coevolution (Simon, 1969). Conception and implementation of the strategy are separate practices.

In this setting, the strategist assumes that strategic decisions will be made on rationalistic economic assumptions and informed by a range of analytical methods and tools to evaluate
strategic positions and sources of competitive advantage (Barney, 1991; Miles & Snow, 2003; Porter, 1980, 1985; Schoemaker, 1995; Wernerfelt, 1984). For this purpose, researchers developed various strategy methods and tools such as horizon scanning (Jain, 1984), scenario planning (Grant, 2003), and technology road-mapping (Phaal, Farrukh, & Probert, 2004) to plan strategy. These analytical tools are historically rooted in positivist traditions. A central planning goal of Strategy as Design is to calculate risk and reduce environmental uncertainty (Courtney, Kirkland, & Viguerie, 1997; Duncan, 1972; Koberg, 1987).

However, the classical design school evokes an image of the strategist as the “detached designer” who draws up detailed blueprints distant from the messy realities of action (Johnson et al., 2017). Mintzberg & Waters (1985) criticized the design school of strategic planning and argued that it is not a “grand plan” but emerging patterns of decisions that become clearer over time. Therefore, there is a need for an actual craft in strategy (Mintzberg, 1987). Mintzberg’s (1990, 1994a, 1994c) widespread criticisms about the fallacies surrounding the classical design school led to the shift in attention to studying a more granular process of actual strategizing and organizing practices (Golsorkhi, Rouleau, Seidl, & Vaara, 2015).

2.2 Strategy as organizational learning


Organizational learning and reflective practice interlink governing values (i.e., frames) and actions (i.e., interventions) with learning (i.e., reflective practice), as illustrated in Figure 2.

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![Figure 2](image-url)

**Figure 2** Governing values (i.e., frames) drive actions and consequences (Argyris, 1976). Reflection and learning lead to changes in action or reframing the problem. Organizational learning is an iterative process of designing strategy and making sense of emergent patterns from action.
Such organizational learning incorporates team and collective learning, knowledge creation and sharing modes, and the capacity to absorb insights from outside the organization (Argyris, 1976; Cohen & Levinthal, 1990; Nonaka & Takeuchi, 1995; Senge, 1990). The many concepts of organizational learning and knowledge creation, such as absorptive capacity, were captured under the umbrella term “Open Innovation” (Chesbrough, 2003).

2.3 Open strategy and strategy without design
The development of Open Innovation influenced the evolution of strategy from a central planning practice to a more open and transparent practice that includes diverse stakeholders (Whittington, 2019). Strategy as Design has been conceptualized as an open and inclusive practice (e.g., Appleyard & Chesbrough, 2017; Dobusch, Dobusch, & Müller-Seitz, 2017; Whittington, Cailluet, & Yakis-Douglas, 2011). Similarly, Brown (2005) argued that design thinking is a well-suited approach to strategy as strategy requires good storytelling, diverse expert collaboration, and learning through building to be effective in organizations. Design thinking has attracted increasing attention in the management field (e.g., Auernhammer & Roth, 2021; Beckman & Barry, 2007; Kolko, 2015; Micheli, Wilner, Bhatti, Mura, & Beverland, 2019). The rise of open strategy and design thinking, predominantly as a methodology, brought back a new form of strategic planning through participatory design workshops. For example, Knight et al. (2020) observed design thinking in strategy workshops where teams develop conceptual plans, allowing strategic sensemaking through collaborative practice and user data. Such workshops separate strategic planning from the messy realities of action and realization.

This continuous separation of planning without a design practice that manifests the tangible aspects of strategy resulted in scholars arguing that there is no “Design” in Strategy (Chia & Holt, 2009). Here, the term Design refers to the planning practice. Chia & Holt (2009) emphasize that it is not the planning practice that produces a strategy. Strategy emerges from the silent and mundane indirect actions (Chia & Holt, 2009). The many everyday design practices of diverse individuals and their integration through dialogue, prototyping, experimentation, and conflict resolution produce the strategy. From this perspective, designing strategy is the continuous process of enabling people in their everyday creative, collaborative design practice (Auernhammer, 2020a). A good example of this Strategy as Design is the development of the Macintosh team in the early years of Apple Computers (Hertzfeld & Capps, 2005). The composition of this pan-disciplinary team and the enablement of their everyday collaborative design practice produced the comprehensive design capability that resulted in the creation of the Macintosh. Such pan-disciplinary collaboration is the integration of diverse perspectives and practices (Auernhammer, 2020b; Auernhammer & Roth, 2023). Rather than producing a conceptual plan to be implemented, it resulted in the invention of a tangible design that contributed to the development of the personal computer. Such Strategy as Design is the continuous enablement of a comprehensive design practice that combines and integrates the many perspectives in the messiness of everyday practice.
3. Strategy in Design

Similar to the evolution of Design in Strategy, designers and design scholars developed various perspectives related to strategic practices in Design. The long evolution of Strategy in Design includes social design, comprehensive design, reflective practice, and participatory design.

3.1 Social and comprehensive design

In the 1940s, Moholy-Nagy (1947, pp. 358-361) outlined the need for collaboration among diverse experts and laboratories to address societal challenges. He outlined a proposal for a “Parliament of social design” as follows:

“Most of these institutions [e.g., scientific institutes, universities, colleges, museums, art institutes, and foundations] are working on specialized tasks according to the haphazard interest of the patrons. However, what neither America nor any other continent has built up yet are thriving agencies which strive for coordination of activities, for a synthesis. Such agencies should be cultural working centers, institutes of workers who by mastering their own fields, could embody all specialized knowledge into an integrated system through cooperative action. Such experts are already working in different parts of the world. If earnest efforts were made to relate their findings and if a suitable environment could be found for their work, a deeper insight into urgent problems would result. Regional groups, of the type proposed, would serve as catalysts for this process of integration. It is astonishing how differentiated knowledge can be in spite of a generally similar educational and social background. By directing interest to commonly accepted tasks and problems, this varied knowledge of the experts could easily be united and synthesized into a coherent purposeful unity focused on sociobiological aims.” (Moholy-Nagy, 1947, pp. 359-360)

Moholy-Nagy (1947, pp. 358-361) proposal of synthesizing diverse knowledge and practices to address the complex sociobiological needs and challenges follows the ambition of the Bauhaus to develop a design practice and education that addresses the social issues through a new design and architecture practice (Gropius, 1955, 1965). Integration of the psychological aspects (e.g., Gestalt psychology) with artistic aesthetics (e.g., cubism), technological developments (e.g., mass production), and economic factors (e.g., costs) addressed various social needs (e.g., affordable living) (Gropius, 1955; Kepes, 1944; Moholy-Nagy, 1947).

The Social Design proposal was developed further through designers, including Buckminster Fuller (1957), who worked with László Moholy-Nagy at the New Bauhaus in Chicago. Fuller (1957) outlined a Comprehensive Anticipatory Design Science that incorporated various strategies to address the complex global challenges, which he presented in John Arnold’s Creative Engineering Laboratory at the Massachusetts Institute of Technology (Buckminster Fuller Institute). He argued and illustrated that such a design practice produces design solutions that have the potential to address the complex challenges of sustainability and survival on Earth (Fuller, 1969, 1981). Arnold (1954, 1959) further developed the comprehensive design practice by integrating the psychology of creativity, ergonomics, engineering and design
practices, and management science. Arnold (1954, 1959) wanted to develop the potentialities of designers so that they are able to address human needs and social inequities, including poverty and hunger. Arnold’s collaborator Bob McKim and other colleagues at Stanford University expanded the Comprehensive Design practice through collaborative practices, such as need-finding, visual thinking, and integrated marketing and manufacturing practices (Auernhammer & Roth, 2021; McKim, 1959, 1968, 1972, 1980; Srinivasan, Lovejoy, & Beach, 1997). Need-finding requires designers to engage and collaborate with non-designers and develop sensitivity to their needs (McKim, 1959, 1980). It opens the design projects outside organizational boundaries and client interactions. Need-finding evolved under terms such as human-centered design (Auernhammer & Roth, 2021). These practices ground Design in the messiness of everyday life. However, a single profession can’t perform the many diverse, complex design tasks. Therefore designing for highly complex challenges requires a collaborative design practice (Auernhammer & Roth, 2023; Moholy-Nagy, 1947).

3.2 Design methodology
A different stream that aimed to advance design practices was the Design Methods Movement (Alexander, 1964; Archer, 1965; Jones, 1959). This movement tried to externalize design thinking into a systematic process and integrate methods from diverse fields, including industrial design, ergonomics, and management science (Archer, 1965; Broadbent & Ward, 1969; Jones & Thornley, 1963). Figure 3 illustrates the externalized design process.

![Figure 3](image)

*Figure 3  Externalization of design thinking into a process at a high level of abstraction (Archer, 1965; Asimow, 1962). Such creative thinking is discussed in early psychology (Selz, 1922; Wallas, 1926), which developed further into the means-end analysis of external and internal environment fit (Simon, 1969).*

This externalization of the design process allows non-designers to understand what is going on and participate in design projects (Jones, 1970). However, many leading design scholars of the Methods Movement abandoned and criticized the design methodology approach (Alexander, 1971; Jones, 1977). Horst Rittel criticized the methodology approaches as unsuitable for addressing social issues, the wicked problems (Rittel, 1972; Rittel & Webber, 1973). According to Rittel and his colleagues, wicked problems cannot be approached through rationalistic planning (Churchman, 1967; Rittel, 1972; Rittel & Webber, 1973).

Design methodology re-emerged in recent years as Design Thinking in which heuristic strategies and methods from diverse fields are aligned in a logical manner (Dorst, 2015; Ideo, 2015; Kumar, 2012). Such frameworks are used in Participatory Design workshops to generate conceptual plans separate from design realization. For example, Transition Design employs a framework to envision futures and identify leverage points (Irwin, 2018). However, it
is often removed from the learning when intentionally intervening in the socio-material world through various design practices (Jones, 1977). Method-based Participatory Design also ignores the human sensitivities and qualities of the individuals involved (Auernhammer & Roth, 2021; Lewin, 1946).

3.3 Reflective and social practices

The learning perspective emerged in Design, emphasizing learning about learning and reflection from action. This perspective emphasizes that design and other professional practices cannot be separated from the complexity of social messes and constant change (Schön, 1973; Schön & Rein, 1995). Donald Schön (1983) questioned the tendency that policies, institutions, and behaviors are designed “objects.” Schön (1973, 1983) expressed the need for reflective learning. In partnership with his collaborator Chris Argyris, he also emphasized social interaction as a continuous conversation between many individuals that produce social systems, such as institutions (Argyris & Schön, 1978; Argyris & Schön, 1989). This perspective builds on Kurt Lewin’s (1946) work on social challenges and action research. Lewin (1936, 1946, 1951) outlined the social and political complexity in resolving societal need tensions. The wicked problem argument follows the same idea as action research of capturing and resolving value tensions inherent in a pluralistic society (Rittel, 1987; Rittel & Webber, 1973). Such Participatory Design emphasizes the design of the socio-material world (Bjögvinsson, Ehn, & Hillgren, 2012). Such participation is grounded in design practices of building artifacts as boundary objects for communication and exchange. The social design practice of participatory design evolved over decades (Bodker, 1996; Sundblad, 2011).

However, the integration of diverse perspectives and different practices has been stated as the “wicked problem in design thinking” (Buchanan, 1992). He emphasized the need for a fourth-order of design that allows “designing” systems and environments. It is a similar proposition to the social design proposal by Moholy-Nagy (1947, pp. 358-361). Such Design incorporates the social, political, material, economic, and environmental complexity, requiring developing collective design capabilities and a design culture (Auernhammer, Leifer, Meinel, & Roth, 2022; Manzini, 2015; Margolin, 2002; Margolin & Margolin, 2002). In such environments, empowered individuals and groups with diverse expertise contribute collaboratively with many tangible designs to address the interrelated, complex challenges (von Hippel, 2016). Such an environment requires developing a design culture that includes groups who do not have the economic means or political power (Manzini, 2015; Manzini & Rizzo, 2011). However, a major challenge in such participation is when there seems to be no consensus within view between diverse groups (Bjögvinsson et al., 2012). Strategic Design requires identifying the need/value tensions between groups and establishing an environment of collaborative practice.
4. Discussion: Three perspectives of strategic design

Three distinctive perspectives emerged in the evolution of ‘Design in Strategy’ and ‘Strategy in Design.’ In Strategy, Design is viewed as a (1) rationalistic planning practice incorporating various tools, a (2) collective learning practice requiring reflection from action, and (3) integration of everyday practice to develop collective capabilities. Similarly, Strategy in Design is discussed as (1) methodology, incorporating various methods for conceptualization, (2) reflective practices within the social-material complexity, and (3) a comprehensive practice that integrates many diverse perspectives and practices in the messiness of everyday action. Table 1 outlines these three distinct perspectives of Strategic Design.

Table 1 Three perspectives of Strategic Design in the field of Strategy and Design

<table>
<thead>
<tr>
<th>Strategic Design as</th>
<th>Strategy</th>
<th>Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning practice</td>
<td>Rationalistic planning (e.g., strategic tools)</td>
<td>Design methodology (e.g., design methods)</td>
</tr>
<tr>
<td>Learning practice</td>
<td>Organizational learning</td>
<td>Reflective practice</td>
</tr>
<tr>
<td>Social practice</td>
<td>Strategy without “design”</td>
<td>Comprehensive design</td>
</tr>
</tbody>
</table>

The first Strategic Design practice is planning through strategic tools and design methods in strategic planning retreats and design workshops/sprints. This planning practice separates conception from the everyday design practices of realization and related learning. Using methods and strategic tools in participatory design workshops allows dialogues between diverse stakeholders and decision-making. However, it limits the design to conceptualization. Therefore, this planning practice has been criticized in Strategy and Design (Alexander, 1971; Jones, 1977; Mintzberg, 1994b; Rittel & Webber, 1973).

The second Strategic Design practice is the learning and reflective practice in which governing values (i.e., a strategic plan) are reframed, and actions (i.e., interventions) are changed when consequences do not meet expectations (Argyris, 1976). Such collective learning capabilities need to be developed to link strategy, actions, and results through reflective learning (Argyris & Schön, 1978).

The third Strategic Design practice focuses on developing collective capabilities by empowering diverse perspectives, practices, and groups to create tangible designs. Such development overcomes the limitations of specialization, which precludes comprehensive thinking (Fuller, 1969; Moholy-Nagy, 1947). It focuses on developing a creative, collaborative, and inclusive design culture in which individuals and groups are empowered in their everyday design practices. Such comprehensive design practice and culture facilitate pan-disciplinary creative collaboration grounded in everyday design practice and tangible making. Strategic Design enables a comprehensive design practice and culture that integrates diverse perspectives into
tangible outcomes. It goes beyond conversations and conceptualizations by engaging in the messiness of everyday design practice.

5. Strategic Design: Integration of strategy and design practices

The integration of Strategy and Design into a Strategic Design practice is the development of collective capabilities to integrate all specialized knowledge into an integrated system through cooperative action (Moholy-Nagy, 1947). This collective capability is a comprehensive design practice and culture in which pan-disciplinary groups collaborate and integrate diverse perspectives and practices. The Strategic Design practice focuses on developing this comprehensive design practice by empowering people to accomplish a strategic intent, as illustrated in Figure 3 (Auernhammer, 2020a).

![Diagram](image)

**Figure 3** Strategic Design through collective need-finding and collaborative prototyping to develop collective capabilities that produce tangible designs for a strategic intent (Auernhammer, 2012, 2020a; Auernhammer & Leifer, 2019).

5.1 Strategic intent

Every Strategic Design practice starts with a strategic intent of developing a collective capability. Moholy-Nagy (1947, pp. 359-360) expressed this as “by directing interest to commonly accepted tasks and problems, this varied knowledge of the experts could easily be united and synthesized into a coherent purposeful unity [...]” Strategic intent is the collaborative practice of identifying a societal need, complex environmental challenge, or strategic direction.
5.2 Collective need-finding
Developing a collective capability for a strategic intent requires understanding the environment that prevents or enables the pan-disciplinary design teams and their collaborative efforts. Need-finding is the practice that allows understanding of the situational and organizational context and needs and need-tensions of people (Auernhammer, 2020a). Understanding the situation and need-tension that prevent diverse members from collaborating provides strategic clarity to develop interventions to empower people. Understanding people’s needs provides opportunities to develop interventions that intrinsically motivate people.

5.3 Collaborative prototyping
Based on the insights from need-finding, Strategic Design requires collaboratively developing prototypes that resolve the environmental blocks and need tensions to empower people in their comprehensive design practice (Auernhammer, 2020a). From these new situations, new needs emerge, making Strategic Design an iterative and collaborative practice. Moholy-Nagy (1947, pp. 359-360) expressed that “[i]f earnest efforts were made to relate their [diverse experts] findings and if a suitable environment could be found for their work, a deeper insight into urgent problems would result.” Such environment design through collaborative prototyping empowers people in their collective capability and resolves their needs and need-tension to produce a productive social environment. This Strategic Design practice aims to develop comprehensive design capabilities to address the strategic intent.

5.4 Comprehensive design
This integration of Strategy and Design resolves the conception and action divide. It focuses on developing collective capabilities that produce design innovation for a strategic intent. In an interview about the Macintosh team, Steve Jobs describes the integration of conception and action within a pan-disciplinary design collaboration as follows:

“One of the things that really hurt Apple was after I left. [...] it’s the disease of thinking that a really great idea [e.g., a strategic plan] is 90 percent of the work, and then if you just tell all these other people here’s this great idea. [...] The problem with that is that there’s just a tremendous amount of craftsmanship in between a great idea and a great product. As you evolve that great idea changes and grows it never comes out like it starts because you learn a lot more as you get into the subtleties of it. You also find there are tremendous trade-offs that you have to make. [...] designing a product [i.e., a tangible design] is keeping 5,000 things in your brain [...] in a kind of continuing push to fit them together in new and different ways to get what you want. Every day you discover something new that is a new problem or a new opportunity to fit these things together a little differently. It’s that process that is the magic. [...] It’s through the team, through that group of incredibly talented people, bumping up against each other, having arguments, having fights, sometimes making some noise, and working together, they polish each other, and they polish the ideas [...]” (Sen, 2012)

Such comprehensive design incorporates pan-disciplinary collaboration that integrates diverse perspectives and practices. Diverse perspectives allow shifting between different points of view to see the whole in new ways (Wertheimer, 1945). Such integration of diverse
perspectives allows for perceiving conflicting constraints and resolving them in new ways. Integrating diverse practices is essential to performing the various aspects of the development of any design (Auernhammer & Roth, 2023). Integrating strategy with everyday design practices develops the collective capabilities of comprehensive design practices. Building these collective design capabilities has the potential to address the wicked challenges of socio-material and economic-environmental challenges (Auernhammer & Huber, 2023; Bødker & Kyng, 2018).

6. Contribution and implications

This article outlined different perspectives that evolved over time in ‘Design in Strategy’ and ‘Strategy in Design.’ By doing so, the article outlined similarities between the two fields, including the perspectives on strategic tools and design methods, reflective practice and organizational learning, and the integration of everyday design practices into an emergent strategy. The overview of the evolution also highlights various criticisms and limitations (Alexander, 1971; Jones, 1977; Mintzberg, 1994b). The article also outlines a Strategic Design practice that informs strategic designers in overcoming the conception-action separation, integrating strategy with design practices, and developing collective capabilities of comprehensive design. Such a Strategic Design practice is a continuous, iterative practice of organizational need-finding and prototyping (Auernhammer, 2020a).

6.1 Implications for strategy and design theory

The examination of the evolutions of ‘Design in Strategy’ and ‘Strategy in Design’ has several implications for Strategy and Design theory. The article illustrated that several theoretical perspectives are discussed in both fields under different terms.

The strategic planning and design method perspectives follow the structuralist psychology of means-purpose relationships (e.g., problem-solution frames, external-internal environment) (Maher & Poon, 1996; Selz, 1922; Simon, 1981). These perspectives in Strategy and Design focus on decision-making and conceptualization through strategic tools and design methods. The reflective practice and organizational learning perspectives incorporate the psychology of situated cognition (Clancey, 1995; Suchman, 1985). It is the theory that knowing is inseparable from action, and knowledge for Strategic Design is situated in activity bound to physical, social, and cultural contexts. Strategic understanding emerges through reflection and learning from action (Argyris & Schön, 1992). The perspectives on strategy without design and comprehensive design focus on the integration of perspectives and practices into a collective capability to accomplish a strategic intent, such as complex societal and environmental challenges (Auernhammer & Roth, 2023; Fuller, 1969; Moholy-Nagy, 1947). This theoretical perspective is bound to situations and embodied knowledge in which new perspectives allow perceiving and imagining the whole in new ways (Koffka, 1935; Köhler, 1947; Lewin, 1951; Wertheimer, 1945). This third Strategic Design perspective is the continuous development of the collective, collaborative, and comprehensive design capability required for developing tangible and experiential designs.
6.2 Implications for strategic design practice
The three Strategic Design perspectives have several implications for practice. The strategic planning and design workshop practices focus on dialogues and decision-making to develop conceptual models and plans that inform the implementation (Ansoff, 1965; Chandler, 1962; Porter, 1980, 1985). Strategizing occurs in retreats and workshops separated from everyday action. The organizational learning and reflective practices develop strategies (i.e., governing values) and evolve them through continuous reflection on actions. Such practices require developing learning routines and team learning within organizations (Argyris & Schöon, 1978; Argyris & Schön, 1996; Nonaka & Takeuchi, 1995; Senge, 1990). The third perspective of integrating diverse perspectives and practices requires deep engagement with pan-disciplinary design teams to continuously empower them and build a productive environment, such as a psychologically safe and free environment. Integrating Strategy and Design requires building collaborative and comprehensive design capabilities. These collective capabilities have the potential to respond to emerging complex challenges with strategic intent and through sophisticated design capabilities enacted in everyday practice.

Acknowledgment: I thank the anonymous reviewers, Karl Warner and Ade Mabogunje, for their input and discussions and the wider design and strategy communities at various places. I also thank Larry Leifer for the encouragement to bridge various fields to explore new directions.

8. References


New York: John Wiley & Sons.


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Jan Auernhammer is a Research Engineer at the Center for Design Research, Mechanical Engineering Design Group, Stanford University. His research interest is in the intersection of design, engineering, psychology, and management. In his practice-based research, he developed new organizational design practices and helped design and develop various collective capabilities in profit and non-profit organizations.