Heimstädt, M., & Reischauer, G. (forthcoming) Open(ing up) for the future: Practising open strategy and open innovation to cope with uncertainty. In: Krämer, H., & Wenzel, M. (Eds.): *How Organizations Manage the Future: Theoretical Perspectives and Empirical Insights*. Palgrave Macmillan: Basingstoke, UK.

Open(ing up) For the Future:

Practising Open Strategy and Open Innovation to Cope with Uncertainty

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Abstract

A common assumption in management studies is that organizations try to reduce the uncertainty of the future by accurate prediction and planning. This assumption is increasingly challenged by the much broader research on temporal and especially future-oriented practices. We build upon this line of research and argue that organizational practices of openness present paradigmatic examples of future-oriented practices. Using the two most prominent bundles of organizational practices of openness, open innovation (which includes crowdsourcing and corporate incubating) and open strategy (which includes transparent and inclusive strategizing), we demonstrate how opening up for the future helps organizations to develop new and uncertainty-reducing links between present and future. We close with a discussion on the limits of openness as a practice to address uncertainty.

Introduction

The diagnosis that 'the future is open' has recently (re-)emerged at the forefront of the social sciences. More specifically, we witness a growing interest concerning the question of how economic actors in general (Beckert 2016) and organizations in particular (Koch et al. 2016) deal with a future that is increasingly conceived as unknowable and unpredictable. A promising avenue for addressing this question is the study of 'temporal practices' (Kaplan and Orlikowski 2012; Reckwitz 2002) or, more specifically, 'future-oriented practices'. Examining these practices allows us to attain a better understanding of how organizations cope with the growing certainty that the future is genuinely uncertain (Koch et al. 2016; Reckwitz 2016). Although the uncertainty of the future has been a longstanding interest in management and organization scholarship (e.g. Cyert and March 1963), this new perspective enables researchers to move beyond organizational practices such as strategic planning and technological forecasting that aim at predicting the future towards practices that allow organizations to work with uncertainty in a much broader sense.

In this chapter, we argue that organizational practices of openness are paradigmatic examples of future-oriented practices. These practices help organizations cope with the uncertainty of the future without promising to resolve it altogether. We illustrate how these practices do so by focusing on the two most prominent bundles of organizational practices in management research that are based on the principle of openness: *open innovation* and *open strategy*. Organizations that open up their innovation process probe the future. Rather than trying to make accurate predictions about future customer preferences, they try to co-create these preferences (for example, by the external sourcing of ideas from the crowd) or create multiple pathways for addressing preferences in the future (for example, by corporate incubating). Organizations that open up their strategy process import the future; rather than secretly planning for a generally unforeseeable future, they engage stakeholders in a dialogue about their expectations regarding the future (in the case of transparent strategizing) or try to increase stakeholders' commitment by allowing them to partake in certain decisions (in the case of inclusive strategizing).

Our chapter proceeds as follows. In a first step, we show how openness presents an organizing principle that scholars have linked to the uncertainty of the future in various ways. After that, we develop our understanding of organizational practices of openness as paradigmatic examples of future-oriented practices. We then demonstrate this understanding with examples from the two bundles of the most prominent open practices: open innovation and open strategy. Finally, we close with a discussion on the limits of openness as a practice to address uncertainty.

Openness as an Organizing Principle

Looking to the past, we find at least three distinct understandings of openness as an organizing principle. First, openness can be understood as a general law that not just constrains but also enables organizations. In the late 1940s and 1950s, a group of scholars from diverse academic backgrounds worked on a scientific programme that tried to establish the 'system' as a common denominator of different academic fields (Hammond 2002). In his work on 'general system theory', the Austrian-born Ludwig von Bertalanffy (1969), one of the group members, argued that the idea of closed systems might apply to static or mechanical systems, yet is inappropriate when describing living systems. For von Bertalanffy, living systems needed to be described as open systems, whereby he understood openness as a system's constant interaction with its environment[1]. This interaction, he argued, is necessary for the system's continuity. Organization scholars quickly picked up on the recommendation to describe their research object through the language of systems (Scott 2003). In this tradition, openness is described as a necessary condition for organizations. The principle of openness ensures an organization's future; however, the organization is very restricted in deliberately shaping this future.

A second understanding pictures openness as a humanistic ideal, an organizing principle that is ethically superior to the principle of closedness. This perspective can be traced back to the work of Karl Popper. In *The Open Society and Its Enemies,* Popper (1945) described closed societies as those that are founded on collectivism and a belief in the certainty of knowledge. According to Popper, however, an open and desirable society is one that allows its guiding assumptions to be tested and eventually modified, and hence is one that allows its leaders to be 'falsified' through democratic elections. Armbrüster and Gebert (2002) adapted Popper's socio-philosophical ideas as a frame of reference for studying management and organizational trends and proposed using this frame of reference to examine whether certain practices follow open or closed patterns of thinking. One of their key findings was that management practices that follow the principle of closedness are those that favour collectivism as opposed to individualism, and the certainty of knowledge as opposed to continuous learning. In this understanding of openness, actors can deliberately apply the principle to themselves. By choosing openness as an organizing principle, organizations increase the contingency of the

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[1] An idea that most prominently informed Niklas Luhmann's (Luhmann 1995) later theory of social systems, and especially his concept of 'autopoiesis' (for the significance of Luhmann's work for the study of organizations, cf. Seidl and Becker 2006).

future and avoid taking a direction that does not allow for readjustment of means and ends later on.

A third understanding portrays openness as an efficient mode of production. Popper's contemporary, the Austrian economist Friedrich von Hayek, personifies this principle. In his opus magnum *The Road to Serfdom,* Hayek (1944), like Popper, rejected the idea of an authority with an uncriticizable claim to truth. Like Popper, Hayek was sceptical of political systems that rely (solely) on central planning, and supported the 'conviction that where effective competition can be created, it is a better way of guiding individual efforts than any other' (Hayek 1944, p.37). Hence, both argued that the way in which the future is performed in the present should not be closed but open. However – and this may present the most striking difference to the thinking of Popper – Hayek understood openness not as the scrutiny of the government by the people, but as a general decentralization of decisions that shape the future (e.g. allocation of resources through market mechanisms, not state planning). Openness in this tradition can thus be understood as a principle that prescribes the decentralization of ideas on what the future might look like, meritocratic decision-making, and a preference for emergence over planning. At the same time, this Hayekian understanding of openness as an organizing principle implies a paradox: on the one hand, it increases the contingency of the future by decentralizing the mechanisms that shape future; on the other hand, it decreases contingency, as it sees decentralization as the most superior organization of work. This resembles what Ortmann (2009, p.19) describes as the 'Golden Touch of modernity', a principle that, from a distance, looks like one that allows for utmost contingency yet which, once embraced, turns a contingent future into a necessary one.

Towards Organizational Practices of Openness

The three understandings of organizational openness described above share the assumption that openness as an organizing principle is closely linked to the uncertainty of the future. In the following, we present practices as a promising lens through which to explore this connection in greater depth. Following Giddens (1984), practices can be understood as social actions that recursively produce and reproduce the structures that constrain and enable actions (cf. Feldman and Orlikowski 2011). As a tool to study time not as an objective 'container' but as the malleable structures described by Giddens, Andreas Reckwitz has proposed the concept of 'temporal practices, that are 'practices that go beyond the organization of temporalities inherent in every practice, but that are *focused* and *specialized* on organizing time' (2016, pp.42-43, own translation, emphasis in original).

We can think of temporal practices as being oriented towards one or more temporal modes: the past, the present and/or the future. Focal to our interest are practices that are focused and specialized on organizing the future, for example, through imagination, calculation or planning. Future-oriented practices may include the calculation of risk in decision-making, scientific prediction or the development of alternative scenarios for the future. These future-oriented practices allow a colonization of time reaching out from the present into the future, whereby the future seems directly contingent on decisions made in the present (Reckwitz 2016).

Organizational practices of openness are paradigmatic examples of future-oriented practices that allow organizations to work with the uncertainty of the future in novel ways. The rise of such novel ways of dealing with the future are grounded in the recent diagnosis by Reckwitz (2016) of the 'crisis of modern-day rationalization of the future'. Since the 1980s, he argues, organizations have perceived the future less as an empty space to be filled out, but rather as a space that is filled with uncertainty. When uncertainty prevails, it becomes intriguing to find out how organizations form expectations, as a 'shadow of the future' (Axelrod 1984) that motivates decisions in the present (Beckert 2016). Against this background, we demonstrate in the following how the two most prominent bundles of organizational practices – open innovation and open strategy – allow organizations to work with uncertainty in novel ways.

Open Innovation: Probing the Future

Innovation management is a bundle of organizational practices strongly oriented towards the future. When organizations innovate, they attempt to develop new products and/or services that match future preferences. In traditional innovation management, organizations try to predict these preferences and feed these anticipations into their innovation processes. However, market forecasts continue to fail (Beckert 2016, p.221 et seq.), and product failure becomes more expensive in times of growing competition (Wiggins and Ruefli 2005). Thus, it becomes much harder to make these forecasts and to form expectations about future preferences. A key response to this challenge has been the open innovation approach. Introduced by the seminal work of Chesbrough (2003), it initiated a major shift in perspective with regards to practising innovation. Instead of seeking 'to discover new breakthroughs; develop them into products; build the products in its factories; and distribute, finance, and service those products – all within the four walls of the company', an organization that turns to open innovation uses 'purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation' (Chesbrough 2003, p.4). In the following, we describe two practices of open innovation and their link to the future: crowdsourcing and corporate incubating. As we illustrate, both forms of open innovation work with uncertainty by probing the future, by creating small tests of the future in the present.

Crowdsourcing

Crowdsourcing is a form of open innovation through which knowledge that ultimately should lead to innovation is gathered from external sources. Crowdsourcing refers to 'the act of outsourcing a task to a "crowd" rather than to a designated "agent" (an organization, informal or formal team, or individual), such as a contractor, in the form of an open call' (Afuah and Tucci 2012, p.355). An example of crowdsourcing is Procter & Gamble's Connect + Develop programme, to which individuals and organizations can submit ideas and proposals (Zimmermann et al. 2014). In general terms, tapping into the wisdom of a crowd is a promising innovation practice for solving a problem that requires understanding of a knowledge domain that, from the perspective of the focal organization, is distant. More specifically, crowdsourcing has been found to be a valuable form of innovation if: the problem is easy to delineate and to communicate to the crowd; the knowledge required to address the problem falls outside the organization's established knowledge domain; the capability to promptly evaluate and integrate the solution does exist; access to a large crowd is at hand; and all involved actors have easy access to the needed information technologies (Afuah and Tucci 2012).

How far does this practice relate to the future? On a general level, it probes the future but attempts to avoid the risk of present innovations falling short of future customer preferences. Rather than estimating the future preference, they involve potential customers in a collaborative innovation process to co-create these preferences (Djelassi and Decoopman 2013). The novel way in which these practices probe the future is that uncertainty is moved closer to the present and is considered during the stage of developing ideas, the so-called 'fuzzy front end of innovation' (van den Ende et al. 2015). In other words, the imagining of possible futures and how they might shape preferences is omnipresent in the early stages of the innovation process. In addition, the crowd presents a diverse source of knowledge and hence a variety of possible futures. By tapping into the ideas of the crowd, an organization gains access to a range of very different ideas about how the future may look like. A key mechanism that allows organizations to utilize the variety of different futures is what Powell (2017, p.7) describes as the 'feedback dynamics' of the crowd. The crowd constantly checks whether ideas hold up to ideals or criteria set by the innovating organization. This iteration allows the emergence of a variety of futures that has already successfully passed a first selection stage.

Corporate Incubating

Corporate incubating is described as a property-based and corporate-backed administrative apparatus that aims at promoting the commercialization of knowledge (Enkel et al. 2009; Phan et al. 2005, p.166; West and Bogers 2014). This highlights that, in contrast to the form of open innovation described above, spatial arrangements of social goods and the co-presence of persons are the key ingredients of incubators. The basic idea of corporate incubators is that new ventures – the incubatees – can launch innovations better and quicker than the corporation as a whole. More specifically, the incubator assists by diagnosing business needs, selecting and monitoring the processes of the new venture, providing access to financial capital and individuals, and by fostering quick learning (Hackett and Dilts 2004). This basic idea of corporate incubating includes several variants with regard to the dimension of time. For example, corporate accelerators like the Siemens Technology Accelerator perform a rather competitive and cyclical selection of new ventures and have a short incubation period (Kohler 2016). In contrast, technology business incubators, as increasingly found in universities to commercialize research outputs, have a more complex and less time-pressured intake policy (Mian et al. 2016).

The open innovation practice of corporate incubating probes the future by creating several possible pathways to the future. These pathways are explored through new ventures in a supervised and time-limited context. Corporate incubating produces a stream of nascent innovations that, depending on market conditions, may be nurtured or rejected. The way in which possible future pathways are created is a routinized trial-and-error process. While traditional innovation processes also involve trial-and-error, they are deeply embedded into existing strategies and organizational structures. By outsourcing the iterative commercialization of ideas into relative autonomous new organizations – which are somewhat 'protected' by the incubator, but still able to fail – a less restricted probing of the future can take place. In sum, corporate incubating allows an organization to build a portfolio of possible futures to be probed. In contrast to traditional innovation management that aims at building a portfolio of possible products, a more exploratory approach to innovation can take place. Thus, a portfolio of possible futures does not reduce uncertainty by simply spreading the risk across several innovations, but by having the opportunity to continue or discontinue nurturing possible pathways into the future as time unfolds.

Open Strategy: Importing the Future

Strategy is seen as the organizational function that is most strongly oriented towards the future. Traditionally, strategizing is understood as the determination of the long-term goals of an organization (Chandler 1962). Some strategy professionals engage with all sorts of techno-rational instruments that are expected to most accurately predict the future to set these goals. The general perception of an open and unpredictable future, however, reached the domain of strategy some decades ago (Hill and Westbrook 1997), an event best captured by the change in terminology from 'forecasting' to 'foresight' (Tsoukas and Shepherd 2004). By opening up the strategy process, organizations work with the uncertainty of the future in novel ways. In the following section, we focus on two forms of open strategy: transparent strategizing and inclusive strategizing (Hautz et al. 2017; Whittington et al. 2011). As we show, both open strategy practices work with uncertainty by 'importing the future', by dragging certain aspects of the future into the present.

Transparent Strategizing

Historically, academics and professionals have understood strategy as a highly secret endeavour. Accordingly, a sustained competitive advantage can only be achieved and sustained when information about strategy is withheld from competitors (Makadok and Barney 2001), or at least sufficiently obscured to avoid imitation (Vicente-Lorente 2001). Accounts of transparent strategizing have challenged this conviction. Transparency hereby refers to the 'visibility of information about an organization's strategy, potentially during the formulation process but particularly with regard to the strategy finally produced' (Whittington et al. 2011, p.536). In practice, this transparency is oftentimes mediated by means of digital information and communication technology, such as internal and external strategy blogging. Organizations have experimented with blogs as a tool within the larger toolbox of outbound corporate communication, for example when, in 2004, Sun Microsystems' Chief Operating Officer used the corporate employee blog to harshly criticize Hewlett Packard's product strategy and in return received a cease-and-desist order from HP (Cox et al. 2008). Like many other corporations to follow, Sun responded to this incident with blogging policies that create certain restrictions within the openness of strategy blogging.

Gegenhuber and Dobusch (2017) recently found more radical and thorough practices of strategy blogging that vividly exemplify how transparent strategizing can help organizations to import the future. In a comparative study, they showed how two startups use strategy blogging to engage with actual and (potential) users, the media and to attract investors. Using a practice lens, the authors analyzed strategy blog posts and found that the two software startups inform the public about their plans ('broadcasting'), receive feedback ('dialoguing'), and even include stakeholders in democratic decision processes ('including'). Zooming into the data provided by the authors, the particularities of open strategy as a bundle of future-oriented practices unfolds. In a blog post from 2009, one of the organizations addresses its audience directly:

> Now over to you. You can and should participate in the priority of our task list for new improvements! One decision criterion: what systems do you use most often or which would you likely use in the near future. I will develop a [product name] plugin for the 2–3 highest ranked ideas, ideally in the order that you suggested (Gegenhuber and Dobusch 2017, p.8).

What happens in this episode of strategy blogging is that the complex and resource-intensive process of traditional market research that includes large-n surveys and handpicked focus groups is replaced with a process that is functionally equivalent. Instead of making strategy based on traditional means of forecasting, the software startup defines a question, collects user input, categorizes the input into 'tasks' and eventually sorts these tasks into a list. By doing so, the startup replaces the fiction that individuals in a statistical sample utter preferences 'as if' they were a broader population with the fiction that the preferences of the actual users in the present remain stable into their future. Thereby the startup eliminates the risk of a flawed statistical representation, but at the same time keeps up the façade of 'calculative rationality' (Levinthal and March 1993, p.96). The unpredictability of the future is thereby not resolved, yet in a certain way imported into the present.

Inclusive Strategizing

The boundary between transparency and inclusion in strategizing is not entirely clear-cut. Transparency can be understood primarily as intentional acts of information disclosure, whereby inclusion refers primarily to feedback mechanisms that are meaningful in a sense that the feedback can, at least potentially, shape the evolution of an organization's strategy. It is this potential inclusion that is linked to the uncertainty of the future. Traditionally, academics and professionals understood strategizing as an elitist task that needs to be performed by a closed group of experts. This circle of 'elite staff' (Williamson 1970, p.125), trained in analytical tools, would be able to deliver the most rational decision advice (gathered through in-depth data analysis) to the top management. In this traditional perspective of strategy, the top management is able to perform strategic rationality by limiting inclusion to a small group of employees who devote their entire capacity to the strategy process. Open strategy has challenged this orthodoxy by widening strategy-making to a broader group of employees, each of whom would only devote a fraction of their entire capacity to the process. Besides strategy consultants, who have been included in strategy-making for decades, open strategy refers to the inclusion of, for example, civil society, consumers, suppliers or complementors.

Inclusive strategizing can help organizations to deal with the uncertainty of the future by increasing stakeholders' commitment to the organization. In the postmodern condition, in which actors are confronted with an 'exponential growth of *concurring* events' (Reckwitz 2016, p.49), employees are tempted to switch their employer more quickly than in the past. Organizations, on the other hand, require a certain degree of stability to function. It has been found that inclusive practices allow individual participants to reflect on their 'role, identity, and future in the organization' (Mantere and Vaara 2008, p.351), which in turn can lead to an increase in motivation and overall commitment to the organization (Antikainen et al. forthcoming; Dobusch 2012). By including a wider array of stakeholders from inside and outside the organization in the strategy process, organizations can increase the duration of these stakeholders' commitment to the organization when traditional instruments of remuneration seem unlikely to do so (Sheridan 1992).

Studies on inclusive practices in the strategy process are still relatively rare and oftentimes focus on 'alternative' organizations (e.g. Dobusch 2012; Luedicke et al. 2017). However, the relation between more inclusive strategizing and organizations' efforts to work with an increasingly uncertain future becomes particularly clear in corporations as the *locus classicus* of elitist and closed strategizing. A vivid example of this is the 'ValuesJam' organized by IBM 2003, a three-day discussion via the corporate intranet about the company's values (Palmisano 2004). 50,000 employees were estimated to have joined the jam, whereby 10,000 comments were posted. By the end of the process, analysts pored over the postings, mined the million-word text for key themes using a specially tailored 'jamalyzer' tool, and came up with a revised set of corporate values, which the CEO announced to employees in an intranet broadcast shortly afterwards (Palmisano 2004, p.5 et seq.). In an interview, CEO Sam Palmisano describes how he perceived the jam had changed IBM employees' perception of their future, from something that might be just a continuation of IBM's crisis-shaken past in the 1990s towards something shapeable:

> You lay out the opportunity to become a great company again—the greatest in the world, which is what IBM used to be. And you hope people feel the same need, the urgency you do, to get there. Well, I think IBMers today do feel that urgency. Maybe the jam's greatest contribution was to make that fact unambiguously clear to all of us, very visibly, in public. (2004, p.11).

Through more inclusive strategizing, organizations can not only import the uncertainty of stakeholder commitment from the future into the present, but can also actively try to reduce the risk of 'exit' (employees leaving the firm) by providing channels for employees to 'voice' their concerns (Hirschman 1970).

Discussion and Conclusion

In this chapter, we illustrated how far the two prominent bundles of organizational practices that are based on the organizing principle of openness – open innovation and open strategy – present future-oriented practices (Table 1).

Both examples of open innovation – crowdsourcing and corporate incubating – have in common their attempt to probe the future. Crowdsourcing attempts to capture the risk that present innovations might miss customer preferences in the future. The means to capture these preferences is the involvement of potential customers, which does not predict but rather co-creates future customer preferences. Corporate incubating probes the future by creating possible pathways an organization might take in the future. To achieve this, corporate incubators incorporate routinized trial-and-error processes that allow them to build a portfolio of innovative ideas. However, neither crowdsourcing nor corporate incubating allows organizations to absorb and overcome the uncertainty of the future. In each case, the decisions on which ideas to further develop and commercialize are not delegated to the crowd or the innovation intermediary. Both of these open innovation practices face limitations when it comes to addressing uncertainty. With crowdsourcing, organizations frequently face a large number of possible solutions that can be overwhelming and result in the paradoxical outcome that, despite their initial efforts to acquire solutions from distant and thus less familiar knowledge domains, ultimately more familiar solutions are chosen (Piezunka and Dahlander 2015). Also, in the case of innovation intermediaries, the key task of integrating the external knowledge into the innovation-seeking organization is not resolved but demands particular attention (Wallin and von Krogh 2010).

Table 1: Future-oriented practices based on openness

Bundle of practices and link to the future	**Exemplary practices**	**Implications for how organizations work with uncertainty**
Open innovation: Probing the future	Crowdsourcing	Capturing the risk that present innovations miss customer preferences in the future
	Corporate incubating	Generating multiple pathways from the present into the future
Open strategy: Importing the future	Transparent strategizing	Moving uncertainty about acceptance of future strategy decisions into the present
	Inclusive strategizing	Creating commitment in the present to avoid lack of commitment in the future

Both examples of open strategy – transparent and inclusive strategizing – attempt to import the future. Through transparent strategizing, organizations move the uncertainty about the acceptance of future strategy decisions into the present. This effect seems particularly strong when stakeholders do not only access strategy information but also provide feedback on it. Through this process of ‘dialoguing’ (Gegenhuber and Dobusch 2017), both organization and stakeholder become entangled in the performative illusion that a stakeholder’s attitude to a strategic idea in the present will be the same as in the future. Through inclusive strategizing, organizations create commitment in the present to avoid lack of commitment in the future. When including stakeholders in strategy decisions, organizations can import the uncertainty about an employee’s commitment in the future into the present and reduce it by providing room for reflection on role and identity (Mantere and Vaara 2008). There are also clear limitations to open strategy practices in addressing future uncertainty. Analogous to the idea that leadership requires not only leaders, but also a certain degree of cooperation from those who are led, organizations can only work with the future behaviour of other actors when these actors are willing to accept openness and engage with the organization in the present. For example, if potential customers refuse to share their opinions on the strategy ideas produced by an organization, the organization has no opportunity to influence the customer's future satisfaction with strategic decisions.

We have restricted our discussion of open innovation practices and open strategy practices to their positive effects as far as the future is concerned. However, there are also several potential downsides. On the one hand, the outputs of these future-oriented practices might be highly structured from the very beginning and thus are more closed than open. For example, Wenzel and Koch (forthcoming) argue that corporate incubating practice may be close to the strategic core of a firm and will therefore be unable to probe the future as we argued above. Conversely, organizations that fully expose their innovation and strategy process to externals may become dependent on these externals. Organizations in the sharing economy that depend on their online community to create value exemplify this argument (Reischauer and Mair forthcoming).

Recently, the media scholar Nathaniel Tkacz mused that 'the open is increasingly used to "look forward"' (2012, p.387). As we demonstrated, organizational practices of openness are also increasingly used to imagine and thereby work with the uncertainty of the future. In times of rising uncertainty and unpredictable shocks, realizing such imaginary power in the form of open innovation and open strategy practices seems to be a valuable organizational feature. It remains to be seen which other organizational functions might be opened up in the future and at which point organizations might reach the boundaries of openness.

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