

Organizational Contexts for Environmental Construction and Objectification Activity

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ABSTRACT This paper argues that organizations are the source of an adaptation–construction cycle. In that cycle, the consequences of organizational adaptations to current environmental states are constructed by the organization’s managers into new environmental states. Therefore organizational action in response to environmental conditions has both an adaptive component and an unintended environmental enactment component. The paper identifies attributes of adapting organizations that increase the level of managerial activity devoted to environmental construction and objectification. The theoretical logic of delineating these organizational attributes moves the paper beyond present versions of enactment theory, ‘social construction of reality’ theory, and structuration theory to focus on predictors of variation in concrete activity resulting in environmental construction and objectification. Based on the discussion of the organizational predictors, propositions to be tested in future empirical research are offered. Also, the propositions are used to suggest extensions to enactment theory, social construction of reality theory, structuration theory, and contemporary versions of neo-institutional theory. These extensions are detailed in the discussion section.

INTRODUCTION

The dominant logic in much contemporary organization theory holds that the environment drives organizational change and the development of new organizational forms. For example, in contingency theory, changing environmental states and contingencies create pressure for organizational adaptation, and that adaptation promotes an organizational equilibrium or ‘fit’ with the environment (Donaldson, 1995, 1999, 2001; Lawrence and Lorsch, 1967; Thompson, 1967). In the population ecology perspective, the environment is equally deterministic, but its effect is manifested through a selection process rather than an adaptation process (Baum and Shipilov, 2006; Hannan and Freeman, 1977, 1984). Environments ‘select’ certain organizations for survival and others for death based on a set of organizational attributes that characterizes each organization at birth and that determines its fit with environmental conditions.

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In neo-institutional theory, the environment is viewed as the location of a set of institutional rules that define good management, and those rules exert a deterministic influence on organization structure (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Scott and Meyer, 1983). Organizations design their structures to conform to the institutional rules embedded in institutional environments, and that conformity produces legitimacy and enhanced survival chances for the organization (Baum and Oliver, 1991; Singh et al., 1986).

Despite the logic of environmental determinism described above, some social scientists have developed models suggesting that organizations and their managers play a role in constructing the environmental states that constrain them. One example of such a model is Weick's (1969, 1979) enactment–selection–retention theory, which posits that managers engage in activity, impose schemas on that activity to select certain elements for attention, and then retain the selected elements as enacted environments. Those environments then influence the future behaviours of the originators of the activity (Weick, 1995). Weick (2003) recently defended this environmental enactment perspective, emphasizing that enactment theory is different from the mainstream schools of population ecology, neo-institutional theory, and transaction costs theory because enactment theory emphasizes managerial action and avoids reification. A number of other articles have used the metaphor of enactment to describe the ways that action in organizational settings helps construct the contexts that surround the actors (see, for example, Orlikowski, 2000; Saetre et al., 2003; Smircich and Stubbart, 1985; Weick et al., 2005).

A second model that suggests the possibility of organizational and managerial influence on the construction of environmental states is Berger and Luckmann's (1967) social construction of reality theory. Berger and Luckmann (1967) maintained that as patterns of human social activity become routinized, 'reciprocal typifications' of those patterns develop and are then objectified to a super-individual level as binding social institutions. Those institutions then regulate the future behaviour of the members of the social group whose predecessors initiated the routinized activity. Normally the current group members are not aware that the taken for granted institutions that govern their actions are the product of behavioural routines produced by past members of the group.

A third model that suggests organizational and managerial influence on the construction of environmental states is Giddens' (1976, 1979, 1984) structuration theory. Giddens attempted to bridge the gap between objectivist and interpretivist perspectives on social structure (Burrell and Morgan, 1979; Gioia and Pitre, 1990; Orlikowski, 1992). Giddens argued that human action and the social structures that guide it play a mutually constitutive role. Social structure constrains and guides action, but that action simultaneously instantiates the structure that binds it. This model has been imported from sociology into organization studies by a number of theorists whose goal is to specify how organizational and environmental contexts are constructed by the actors who inhabit them. The contexts that have been analysed by organizational researchers through the lens of Giddens' theory include technology (DeSanctis and Poole, 1994; Orlikowski, 1992), institutions (Barley and Tolbert, 1997), political culture (Riley, 1983), communication genres (Orlikowski and Yates, 1994; Yates and Orlikowski, 1992), and strategizing (Jarzabkowski, 2008). In addition, Ranson et al.'s (1980) theory of organizational

structuration drew on Giddens' (1979) recursive structure–action framework, as did Sewell's (1992) theory of social structure and Whittington's (1992) analysis of managerial agency. Similarly, Abolafia and Kilduff (1988) described how investors in the silver market unintentionally constructed a market crisis in their efforts to gain personal strategic advantage. Porac et al. (1989, 1995) also followed a structurationist logic in arguing that the structure of competitive rivalry in an industry both reflects and reinforces a cognitive schema of competitive positions shared by managers in the industry (see also Bogner and Barr, 2000; Hodgkinson, 2005).

While the work cited above shows how organizations and their managers can play a role in the construction of environmental states, there has been little attention to the specific attributes of organizations that influence the level of environmental construction and objectification activity engaged in by managers. Understanding such attributes and their effects on environmental construction and objectification activity is important because constructed and objectified environmental states form a critical reference point for managerial decision making, and may thus enhance organizational survival. To begin to understand variation in environmental construction and objectification activity, I first present a model that describes the construction and objectification of new environmental states from managers' perceptions of sense data associated with the consequences of their organizations' adaptations to current environmental states. Using this model as a foundation, I then describe one major condition that I argue will increase the level of managerial activity devoted to this environmental construction and objectification process. This condition is managerial unfamiliarity with the niche that the organization is occupying, where 'niche' is defined as 'the set of positions [tastes] for which [an organization's] offering has non-zero actual appeal' (Hannan et al., 2003, p. 320). I argue that unfamiliarity with an organization's niche gives the organization's managers an incentive to use sense data derived from the consequences of their organization's adaptations to construct and objectify environmental states that can guide the organization's decision making. Those environmental states limit the options that are seen as feasible, thus facilitating decision making and opening up a path for the organization into the future. Put slightly differently, when the niche an organization is operating in is unfamiliar to its managers, the managers will devote more time and effort to environmental construction and objectification activity in order to resolve the ambiguity that stems from unfamiliarity.

Drawing on the central idea of unfamiliarity, I then identify several organizational attributes that increase managerial unfamiliarity with the niche being occupied. These attributes include recent founding, diversification, an entrepreneurial orientation, and organizational crisis. Since each of these attributes stimulates the psychological condition of unfamiliarity, each is argued to act as a catalyst for environmental construction and objectification activity. Based on a discussion of the attributes, I derive propositions that specify the effects of each attribute on the degree of environmental construction and objectification activity an organization will exhibit. For example, I propose that the younger an organization, the greater its environmental construction and objectification activity. Also, the more recently an organization has diversified into a new niche, the larger the number of niches an organization is diversifying into at a given time, the stronger an organization's entrepreneurial orientation, or the greater the experience of

crisis in an organization, the greater its environmental construction and objectification activity.

In delineating organizational contexts for environmental construction and objectification activity, the propositions are intended to provide a platform for future empirical research. However, at the end of the paper, in the discussion section, I also return to the three theories summarized above – Weick's (1969, 1979) enactment–selection–retention theory, Berger and Luckmann's (1967) social construction of reality theory, and Giddens' (1976, 1979, 1984) structuration theory. I describe some implications of my framework for each of those theories, focusing on implications with direct relevance for organizational action. For example, I suggest that entrepreneurship in organizations and organizational crisis both stimulate the enactment–selection–retention cycle described by Weick (1969, 1979). Correspondingly, I posit that older organizations may dedicate less effort to the social construction of environmental reality than younger ones, because older organizations have well developed routines to generate and maintain such construction, just as older societies do (Berger and Luckmann, 1967). Finally, I argue that diversification is likely to be guided by the action–structure dialectic that Giddens (1979, 1984) described, thus suggesting that that dialectic will be particularly active when organizations are diversifying into new niches. In these ways, I press my theoretical framework and propositions into service to elaborate and enrich past efforts to portray the iterative process between human action and creation of organizational environments.

I also derive some implications of my theoretical framework for the newer versions of neo-institutional theory (e.g. Greenwood and Suddaby, 2006; Lawrence, 1999; Lawrence and Suddaby, 2006; Maguire et al., 2004), which are concerned with the ways in which human action changes institutions. While the environmental states that I discuss in this paper are not social institutions, I argue that the organizational attributes that stimulate environmental construction and objectification activity by managers can also encourage institutionalization of that activity by embedding it in routines. Thus the theoretical framework at the core of this paper carries some novel implications for understanding the contexts in which institutionalization may occur through repetitive managerial action.

In summary, this paper makes a unique contribution by specifying organizational attributes that catalyse environmental construction and objectification activity in an organization, and also stimulate the institutionalization of that activity. With the exception of Weick's (1979) discussion of the effects of organizational size on enactment, there has been little attention in prior literature to these issues. My theoretical analysis of non-size attributes that affect the level of managerial activity devoted to environmental construction and objectification therefore fills an important gap in the literature. As noted above, constructed and objectified environmental states serve as a point of reference for managerial decision making and managerial strategy building. Those decisions and strategies may determine whether or not an organization survives, so the level of activity devoted to environmental construction and objectification has critical implications for an organization's fate. Understanding the organizational contexts within which that activity is particularly likely to occur helps us grasp the causal chains through which managers navigate strategically and lower the probability of organizational death.

THE PROCESS OF ADAPTATION AND ENVIRONMENTAL CONSTRUCTION

Organizational Adaptation

Figure 1 displays the model depicting the cycle of organizational adaptation and environmental construction that I propose as a foundation. As shown on the left side of Figure 1, this cycle begins when managers of a focal organization form an initial impression of the state of the task environment in which they find themselves and then begin to adapt to it. While the environmental condition that evokes such a response is often an objectified construction of the consequences of past organizational action that has been externalized to the environmental level of analysis (see Berger and Luckmann, 1967; Porac et al., 1989, 1995), the environmental condition is generally perceived by managers as real. Nevertheless, at this state of the environmental construction and objectification process, environmental conditions may be indistinct. Thus this paper follows Weick (1995) in assuming that managers use adaptation to explore their environments and define them more clearly. Based on the consequences of those adaptations, the contours of the task environment become sharper and more externalized, as described in the paragraphs below.

The adaptations at issue here may include such actions as modification of the organization's core strategic domain (Miles and Cameron, 1982), innovation (Brown and Eisenhardt, 1997; Damanpour, 1991; Eisenhardt and Tabrizi, 1995), cost reduction and downsizing (McKinley et al., 2000), or any of a variety of other adaptations. These adaptations are usually directed towards the achievement of some anticipated consequences, or goals. However, Figure 1 also shows that any organizational adaptation will generate some unanticipated consequences as well. It is important to include these unanticipated consequences in order to avoid an overly rationalistic bias in this part of the model. Merton (1936, 1968) provided classic theoretical statements about the unanticipated consequences of purposive social action, and Rogers (1995) and Tenner (1996)

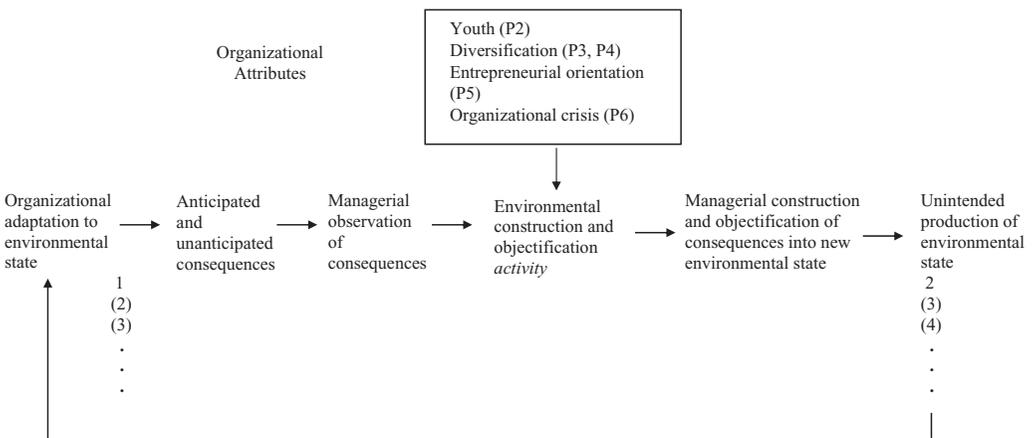


Figure 1. Construction and objectification of environmental states

The numbers on the left and right hand sides of the figure refer to successive environmental states.

built on Merton's insights to discuss the unanticipated consequences of technological innovation. More recently, Balogun and Johnson (2005) described the unanticipated consequences of middle manager sensemaking during an organizational restructuring, while Harris and Ogbonna (2002) identified a number of unanticipated consequences of culture change programs in organizations. Finally, McKinley and Scherer (2000), like Balogun and Johnson (2005), focused on unanticipated consequences of organizational restructuring, arguing that organizational restructuring has the unanticipated, paradoxical consequences of reducing uncertainty for top executives while simultaneously producing disorder in the restructuring organizations' task environments.

Environmental Construction

Thus far, the model in Figure 1 has portrayed organizations in classic contingency theory fashion, with an emphasis on adaptation (Donaldson, 1995, 2001; Lawrence and Lorsch, 1967; Thompson, 1967). But the model also predicts that the consequences of those adaptation initiatives will provide the raw material for the construction and objectification of new environmental states. I define the term 'construction' as the addition of meaning by humans that is not contained in raw empirical data. Thus to 'construct' an environmental state is to add meaning to a set of phenomena or observations and through that addition of meaning interpret them as an environmental state. I conceptualize 'objectification' as a process through which social phenomena attain, over time, the status of things. Thus the meaning of 'objectification' is close to that of 'reification' (Berger and Luckmann, 1967; Lane et al., 2006; McKinley et al., 2000; Thomason, 1982). Barley and Tolbert (1997, p. 112) have discussed objectification, remarking that 'although externalization and objectification may be beyond the purview of most studies, it remains a critical element for establishing closure in the study of action-institution links'. As Barley and Tolbert's (1997) remark implies, to be objectified and attain the status of things, social phenomena must be externalized and detached from their human origins (see also Lane et al., 2006; Zeitz, 1980). This is similar to Weick's (1979, p. 159) concept of 'efferent sense-making': sense-making that is conducted outward and projected into the world. Thus a constructed environmental state is objectified when it is externalized by managers and comes to be viewed as a coherent entity that encompasses and guides their actions.

I maintain that the process of construction and objectification of a new environmental state begins when an organization's managers perceive the consequences of their organization's adaptation efforts and begin to interpret them as an integrated state and objectify that state to the environmental level of analysis. This occurs at the stage represented by the third and fourth text boxes in Figure 1, counting from the left side of the figure. This parallels the process of social construction of reality described by Berger and Luckmann (1967), in which typifications of routinized human behaviour are externalized over time as social institutions. The institutions come to be seen as objective phenomena that 'confront the individual as undeniable facts. The institutions are there, external to him, persistent in their reality, whether he likes it or not' (Berger and Luckmann, 1967, p. 60). The humans constructing the institutions see them as external realities that are exogenously produced; thus the humans lose sight of their and their predecessors' roles in generating the institutions.

In the same way, I argue that the managers of adapting organizations often construct new environmental states from outcomes of their organizations' adaptations and objectify those environmental states. This construction and objectification process involves the cognitive integration of organization-level stimuli, their meaningful interpretation, and their externalization to the environmental level of analysis. These activities are captured in the text box titled 'environmental construction and objectification activity' (Figure 1). The construction and objectification process I am discussing is reinforced by the uncertainty reduction it produces for participants in the process. To take a set of observed adaptation consequences at the organizational level of analysis and aggregate and objectify them into a meaningful environmental state is to reduce complexity and create a seamless, seemingly objective external context. That context is then available to circumscribe the managers' future actions in an orderly manner. Environmental construction and objectification reduces managerial uncertainty, and that uncertainty reduction reinforces environmental construction and objectification.

The environmental construction and objectification process I am referring to often depends on the use of objectifying terminology that integrates the consequences of organizational adaptations. This argument is consistent with discourse analysis (e.g. Phillips et al., 2004) and rhetorical theory (e.g. Green, 2004), both of which emphasize the role of language in constructing reality. The objectifying terms or constructs that are relevant here tend to elevate disintegrated outcomes at the organizational level of analysis into integrated environmental states. For example, if suppliers to an industry adapt to perceived demand by customer organizations by increasing sales efforts and shipments to those organizations, the sales efforts and shipments may constitute a stimulus for the suppliers' managers to construct a state of 'environmental growth'. Here a set of activities and adaptation consequences attributable to managerial adaptation at the organizational level of analysis has been aggregated and consolidated by those same managers under the objectifying label 'environmental growth'. Although such terms have been used by scholars (e.g. Castrogiovanni, 1991), the objectified environmental states they describe would also be meaningful to managers.

As another example, continual restructuring by a set of organizations in an industry may have organizational consequences that are summarized by the organizations' managers under the objectifying label 'environmental turbulence'. McKinley and Scherer (2000) made a similar argument, stating that restructuring at the organizational level of analysis is often reconstructed by managers as turbulence at the environmental level of analysis. As managers adapt to current states of environmental turbulence by restructuring their organizations, and such restructuring spreads among the organizations inhabiting a particular environmental niche, the proliferation of organizational-level restructuring consequences such as the redistribution of assets and personnel becomes the occasion for construction and objectification of a new, more turbulent environmental state (McKinley and Scherer, 2000). Objectification masks the organization-level origins of this environmental construction, and over time it takes on the appearance of an objective reality at the environmental level of analysis. In this way the consequences of managerial adaptation at the organizational level drive the evolution of new environmental states, which themselves create pressures for additional organizational adaptation (see the feedback loop at the bottom of Figure 1). This further adaptation, by generating

new consequences, creates new occasions for environmental construction and further objectification and makes the entire process depicted in Figure 1 self-reinforcing.

As a final example, if managers in an industry perceive an environment that seems to be characterized by accelerating rates of competition, they may adapt through strategies designed to undercut their rivals' competitive advantages (D'Aveni, 1994). As the rivals respond to these initiatives in kind, competitive intensity increases and stable competitive positions become increasingly transitory (Rindova and Kotha, 2001; Volberda, 1996). All this strategic activity and its consequences unfold at the organizational level of analysis, but the managers of the competing firms may construct and objectify the aggregated organization-level consequences into an environmental state of 'hypercompetition'. Thus the managers may begin to speak of a 'hypercompetitive environment' (see Bogner and Barr, 2000) or a 'high-velocity environment' (Eisenhardt and Bourgeois, 1988), and come to believe in the objective reality of the construction. To integrate complex organization-level strategic responses and counter-responses and their consequences into a 'hypercompetitive environment', or a 'high-velocity environment', and to externalize that construction, is to simplify reality. The managers create a context in which the actions of individual organizations are more understandable and which can serve as a foundation for calculation of future strategic initiatives. In other words, I am suggesting that managers of competing organizations will collaborate in creating an environmental reality towards which future responses of their organizations can be oriented and in terms of which those responses acquire meaning.

My basic argument that consequences of organizational adaptations often get constructed and objectified into new environmental states is consistent with the work on managerial cognitions about competitive environments (see Hodgkinson and Sparrow, 2002 and Hodgkinson and Healey, 2008 for reviews). However, the content of the environmental states I am hypothesizing is different from the content of the environmental representations discussed in that body of work. The research on managerial cognitions about competitive environments refers to self-reinforcing representations of inter-organizational competitive structures, while my concept of 'environmental state' refers to a representation of an integrated environmental condition such as 'environmental growth' or 'environmental turbulence'. The cognitive representations studied by strategy scholars are the stimulus for competitive actions, some of them varying across firms, while the environmental representations I am theorizing about are points of integration that constitute a homogenous environmental condition for a firm or set of firms.

The environmental construction and objectification process I am describing also differs from Weick's (Weick, 2003; Weick et al., 2005) enacted sensemaking because environmental construction and objectification represents a prospective act rather than a retrospective sensemaking activity. That is, managers construct and objectify new environmental states as their organizations are moving into them. Also, my model is distinct from the structuration process described by Jarzabkowski (2008), because the latter refers to strategy solidification through stabilization of routines, rather than the solidification and externalization of new environmental states.

The general argument presented above can be summarized as a proposition that forms the foundation for theory development in the next section:

Proposition 1: As organizations adapt, the consequences of those adaptations occurring at the organizational level of analysis are constructed and objectified by the organizations' managers into new environmental states.

ORGANIZATIONAL CONTEXTS FOR ENVIRONMENTAL CONSTRUCTION AND OBJECTIFICATION ACTIVITY

While the environmental construction and objectification process described in Figure 1 is advanced as a foundational model, it does not give attention to possible variations in the level of environmental construction and objectification activity across organizations, and the organizational attributes that drive that variation. In this section I explore some of those attributes, focusing on the most important ones but not enumerating an exhaustive list. To supplement the description provided above, I define 'environmental construction and objectification activity' as the sum of management actions within an organization that result in construction and objectification of an integrated environmental state. These activities are not identical with the environmental construction and objectification *outcome*, but are organization-level activities that contribute to that outcome. These include the actions described in the previous section and represented by the fourth text box from the left in Figure 1 – interpreting the consequences of the organization's adaptations, encapsulating that sense data under objectifying labels, and seeking inter-subjective confirmation of the new reality as an environmental state. My assumption is that these actions are manifested in observable behaviours within an organization, such as meetings to discuss the state of the environment, hallway conversations, memos written to present interpretations of environmental states, and communications about the environment with managers in other organizations. The presence of these observable behaviours could be used in the future to measure different degrees of environmental construction and objectification activity. As stated in the introduction, this activity is key to the solidity and meaningfulness of the environmental states managers experience, and therefore the activity is essential to their ability to make decisions that navigate environments successfully.

As noted in the introduction, my position is that the incentive to engage in environmental construction and objectification activity is greater the more unfamiliar the niche being occupied by a focal organization. The abstract definition of 'niche' given in the introduction (Hannan et al., 2003) can be translated into more concrete terms by stating that a niche is the array of consumers for whom the organization's products or services have a positive appeal. The contours of a niche (the range of potential consumers) thus define a pool of resources that the organization can draw on to generate revenues and enhance its chances of survival (Hannan and Freeman, 1977). Discussion of the construct 'niche' has been extensive in the population ecology literature (Baum and Shipilov, 2006; Dobrev et al., 2003; Hannan and Freeman, 1977; Hannan et al., 2003).

The more unfamiliar an organization's managers are with the niche it occupies, the more difficult their decision making is, and the greater the pressure they will feel to find an external reference point to guide that decision making. That external reference point can be formed by a constructed and objectified environmental state, and

constructing environmental states, in the manner described in the previous section, can be a way of ameliorating the psychological state of unfamiliarity. Thus I propose that the greater an organization's unfamiliarity with the niche it is occupying, the greater the pressure to engage in the environmental construction and objectification activities described above.

In other words, managerial unfamiliarity with the niche occupied creates ambiguity, widening the number of feasible options for future action. Given a large enough number of options, the organization will tend to become paralysed with indecision. Constructing and objectifying an environmental state by using sense data based on observation of adaptation consequences limits feasible options, providing an external context towards which goal setting and decision making can be oriented. Therefore the organization in unfamiliar circumstances looks to its own adaptations and the reactions that those adaptations generate to construct a picture of the current state of the environment that can permit reasonably coherent decision making. This argument parallels Louis's (1980) depiction, on the individual level of analysis, of the sensemaking activities undertaken by new entrants into unfamiliar organizational settings.

But what organizational attributes cause managers to be unfamiliar with the niches their organizations are operating in? Potentially there are many, but in this paper I focus on four: youth, diversification, an entrepreneurial orientation, and the experience of crisis. I argue first that the managers of young, newly founded organizations are likely to be less familiar with the niches they occupy than the managers of older organizations that have been in their niches for a while, and therefore young organizations are particularly likely to increase environmental construction and objectification activity in an attempt to add coherence to their surroundings. Correspondingly, organizations diversifying into new niches are likely to encounter unfamiliarity, so I argue that the greater the diversification an organization is engaging in, the greater its environmental construction and objectification activity. Entrepreneurship, which is distinct from diversification because the latter can occur for defensive reasons rather than opportunity exploitation, is a third instigator of unfamiliarity, so I argue that the more entrepreneurial an organization, the greater its environmental construction and objectification activity. Finally, crisis makes occupied niches unfamiliar by alienating managers from the consumers that constitute the niche, so I argue that the greater an organization's experience of crisis, the greater its environmental construction and objectification activity.

This synopsis of my key theoretical arguments will now be developed, including citations to relevant literature and more detailed logic, resulting in the specification of five additional propositions. I organize the exposition by sections, with each section devoted to one of the four organizational attributes mentioned above. The attributes are also listed at the top of Figure 1. After describing the effects of each attribute on environmental construction and objectification activity, I will discuss the implications of my arguments for the three theories with which I began – enactment theory, social construction of reality theory, and structuration theory – as well as for recent research in neo-institutional theory. In each case the goal is to use the propositions and the underlying theoretical logic to augment the theoretical perspective at issue, making it a better developed explanation of organizational action.

Age

In the population ecology literature, years since founding, or organizational age, has received much attention as a predictor of organizational disbanding rates (Baum and Shipilov, 2006; Freeman et al., 1983; Hannan and Freeman, 1984). The most common argument is that youth involves a 'liability of newness' (Stinchcombe, 1965), so that younger organizations exhibit higher failure rates than older ones. This relationship has been documented in a number of studies (e.g. Carroll, 1983; Carroll and Delacroix, 1982; Freeman et al., 1983). The theoretical rationale for the relationship is that young organizations lack well-established routines that ensure reliability and accountability, and therefore young organizations are subject to negative selection pressure (Hannan and Freeman, 1984). However, some population ecologists have argued instead for a 'liability of adolescence' – the idea that very young organizations are buffered from failure by resource stocks acquired at founding, while 'adolescents' suffer higher mortality rates due to the erosion of those stocks (see, for example, Brüderl and Schüssler, 1990; Fichman and Levinthal, 1991). A third perspective on age dependence in organizational disbanding rates is the 'liability of aging', or 'liability of senescence', in which older organizations are thought to suffer the highest risk of death (Aldrich and Auster, 1986; Barron et al., 1994; Ranger-Moore, 1997).

Although organizational age has been the focus of numerous empirical studies linking it to the hazard of death, no work, to my knowledge, has explored the influence of organizational age on the degree of environmental construction and objectification activity. Consistent with the summary at the beginning of this section, I argue that young organizations tend to be more unfamiliar with the niches they occupy than older organizations are. This unfamiliarity can be disorienting for a young organization, and since the organization needs to begin making decisions about strategy and resource allocation as soon as it is founded, the organization's managers are likely to devote much attention to environmental construction and objectification activity of the type described above. Such activity, beginning with interpretation of the results of initial adaptations and continuing through the imposition of objectifying terminology on those results and externalization of the product as an integrated environmental state, can create a stable environmental reference point for decisions as well as helping to spur further action. Environmental construction and objectification is therefore not just an environment-building activity for young organizations, but also an essential stimulant for strategy. The adaptive probes that a young organization sends into unfamiliar niches reveal the location of resources and the tactics that can be used to exploit them.

I argue that young organizations have to devote more time and effort to environmental construction and objectification partly because they have spent less time in their niches and partly because they are less skilled at 'doing' environmental construction and objectification. An older, well established organization will have been through many iterations of the process portrayed in Figure 1, so its managers' skills at extracting cues from sense data generated by organizational adaptations and its capacity to integrate those cues into objectified environmental states will be refined. A younger organization, having travelled through fewer cycles of the environmental construction and objectification process depicted in Figure 1, will have less well developed routines (Nelson and

Winter, 1982) for doing it and will need to allocate more time to it. Managers of young organizations have to channel more effort into their environmental construction and objectification projects, and their behavioural involvement with the projects will be greater. All this activity may not protect a young organization from death, but I argue that it will nevertheless be a hallmark of youth. Based on this logic, I propose:

Proposition 2: The younger an organization, the greater its environmental construction and objectification activity.

Diversification

Diversification has been studied extensively by strategy researchers (e.g. Ginsberg, 1989; Hoskisson and Johnson, 1992; Pennings et al., 1994; Prahalad and Bettis, 1986; Ramanujam and Varadarajan, 1989; Tidd and Taurins, 1999). While most of this work has been directed towards understanding the consequences of diversification for financial performance (Ramanujam and Varadarajan, 1989), some of it has explored the cognitive representations that mediate between different types of diversification and their performance outcomes. For example, Prahalad and Bettis (1986) spoke of a 'dominant logic' that mediates the effects of diversification on financial performance, while Ginsberg (1989) described methodologies for representing managers' cognitions about diversification in their firms. Pennings et al. (1994) invoked the construct of 'learning' to explain their results, which showed that the longevity of past diversification projects in a corporation positively influenced the longevity of current projects. Despite this work on cognitive issues in diversification, no investigations, to my knowledge, have focused on the relationship between diversification and the level of environmental construction and objectification activity conducted by a firm.

I maintain that any organization diversifying into a new niche through acquisition, product modification, or new product introduction is embarking, at least temporarily, on unfamiliar territory. It is important to note that such diversification may be engaged in by either young or old organizations. The unfamiliarity of the new niche will create incentives for the organization to interpret its initial adaptations in the niche, the first of which may be the act of entering the niche itself. As fine-tunings of the product or service offerings follow entry, and feedback about customers' reactions to those adaptations begins to be received by the organization's managers, those managers will begin to build a representation of the environmental state that surrounds the organization. Efforts to elaborate and objectify that representation will be more intense the more recently an organization has embarked on the diversification initiative, because recent diversification initiatives leave more unfamiliarity to be resolved. This logic suggests the following proposition:

Proposition 3: The more recently an organization has diversified into a new niche, the greater its environmental construction and objectification activity.

While the time since entry into a new niche is important for the level of environmental construction and objectification activity, the overall amount of diversification being

pursued by an organization is also critical. The more different niches an organization is diversifying into at a given time, the more unfamiliar domains it is exposing itself to, and the greater the overall pressure for environmental construction and objectification experienced by the organization. This environmental construction and objectification activity may take the form of differentiated environment-building projects, each focused on defining the state of the environment in one of the new domains the organization is exposed to. Taken as an aggregate, this increase in the overall level of environmental construction and objectification activity should be manifested empirically by more meetings about task environment states, more activity directed towards attaining inter-subjective agreement about those environments both within the focal organization and across the organization's 'field' (DiMaggio and Powell, 1983), and more encapsulation of sense data under objectifying labels. This leads to another proposition, which is distinct from Proposition 3:

Proposition 4: The more niches an organization is diversifying into at a given time, the greater its environmental construction and objectification activity.

Entrepreneurial Orientation

A great deal of literature has been devoted to understanding entrepreneurship in organizations, and one of the central constructs in this research is the construct of 'entrepreneurial opportunity' (Alvarez and Barney, 2007; Shane, 2000; Shane and Venkataraman, 2000). Entrepreneurial opportunity has been defined by scholars with an objectivist bent as a market imperfection that can be discovered by the entrepreneur and exploited for profit (see, for example, Hayek, 1948; Kirzner, 1979; Shane, 2003). In contrast, researchers with a constructivist viewpoint have argued that opportunities are created by entrepreneurs rather than discovered, and therefore opportunities are the product of social processes that involve the entrepreneur (Baker and Nelson, 2005; Dimov, 2007, 2010; McMullen and Shepherd, 2006; Sarasvathy, 2001; Wood and McKinley, 2010). Whether one takes an objectivist or constructivist perspective on the construct of 'opportunity', it is safe to say that entrepreneurially oriented organizations exploit or create more opportunities than organizations with less of an entrepreneurial orientation. It is also noteworthy that in their extensive review of the literature on the construct of 'entrepreneurial orientation', Lumpkin and Dess (1996) cited no evidence that entrepreneurial orientation is correlated either with the age of an organization or its level of diversification.

An entrepreneurially oriented organization discovering or enacting many opportunities becomes involved in many niches that are unfamiliar to the organization's managers – in fact, part of the meaning of entrepreneurship is the exploration of unfamiliar niches and the development of those niches through product or service offerings. I contend that environmental construction and objectification activity of the type referred to in this paper is an essential component of the niche exploration process for entrepreneurial firms. Upon identifying a new opportunity and entering the niche thought to correspond to it, an entrepreneurial organization begins to adapt through product introductions, while observing consumers' reactions to those introductions. The sense data thus

received by the organization's managers is given meaning and objectified outward to form an environmental state that provides a point of reference for future organizational decisions and actions. Indeed, extensive environmental construction and objectification activity is helpful for the survival of an entrepreneurial organization as it explores new niches, though it does not of course guarantee survival. Thus managers of entrepreneurial organizations will have a strong incentive to devote much time and effort to environmental construction and objectification. This logic suggests yet another proposition:

Proposition 5: The more entrepreneurial an organization, the greater its environmental construction and objectification activity.

Organizational Crisis

The construct of 'crisis' has captured the attention of organizational scholars since the early days of organization theory. For example, Hermann (1963) argued that the construct has three major components – threat to organizational values, surprise, and time pressure. Hermann (1963) emphasized the frequency of withdrawal behaviour during political and organizational crises: employees and administrators appeared to withdraw and become isolated from one another during the organizational and political crises he discussed. Holsti (1971) and Hall and Mansfield (1971) described the stress that is associated with organizational crises and with concomitant resource scarcity, while Smart and Vertinsky (1977) focused on decision making pathologies that tend to occur during crisis. Billings et al. (1980) developed a model to represent the determinants of crisis perceptions, suggesting that those determinants include the perceived value of possible loss, the perceived probability of loss, and perceived time pressure. Billings et al. (1980) tested their model with survey data from a study of Ohio organizations subject to a natural gas curtailment in winter. In additional work on the causes of organizational crisis, Nystrom and Starbuck (1984) noted that organizations often get caught in crises because their past successes have imprisoned them in outmoded routines (see also Hodgkinson, 1997; Hodgkinson and Wright, 2002; Tripsas and Gavetti, 2000). Nystrom and Starbuck (1984) recommended continuous 'unlearning' of the past as a remedy for this problem, raising the possibility that construction and objectification of new environmental states might be an important part of this unlearning. Finally, Weick (1988) emphasized the potential feedback effects of adaptations to crisis on the crisis itself, raising the possibility that some organizational crises may be self-reinforcing.

Building on these contributions, I argue that crisis in an organization will be a stimulus for environmental construction and objectification activity, no matter whether that activity is conducive to the success or failure of the organization. When an organization experiences crisis, the niche that it occupies becomes unfamiliar, even if the organization has occupied that niche for a long time. This is consistent with the idea of withdrawal described by Hermann (1963), and I suggest that the individual withdrawal he mentioned has a counterpart on the organizational level of analysis. Thus, in a crisis, an organization's managers withdraw from the consumers that make up its niche, and the niche becomes strange. This can also be characterized as a state of anomie (Merton, 1938) or meaninglessness – well-understood customer relationships become hard to understand in a crisis,

the preferences of customers become obscure, and interdependent relationships with resource providers that were once taken for granted become objects of uncertainty. In cognitive terms, crisis leads to alienation from the cognitive representations that managers have used in the past to understand their niche (Pearson and Clair, 1998), and this process is abetted by the threat-rigidity effects documented by Staw et al. (1981).

Although threat-rigidity can reduce information processing (Hodgkinson and Wright, 2002; Staw et al., 1981), crisis also gives managers a strong incentive to rebuild a meaningful environmental state through environmental construction and objectification activity. I argue that this rebuilding process will be precipitated by organizational crisis, even given possible delays caused by threat-rigidity. The consequences of organizational action will be closely observed by the organization's managers, and there will be pressure to impose meaning on the sense data associated with those consequences and objectify the data outward as an integrated environmental state. This permits the organization to create a stable reference point, thus facilitating the emergence from anomie and offering the possibility of a path out of the crisis. Increased environmental construction and objectification activity following organizational crisis is consistent with Dutton's (1986) argument that more resources are devoted to the processing of crisis than non-crisis strategic issues, and that the former generate a larger volume of causal explanation.

A good example of the phenomenon I am referring to here is the financial crises that gripped some lending institutions in global credit markets in the late autumn of 2008 (Stewart, 2009). As these institutions became embroiled in their individual crises, they withdrew from interdependence with one another and with their corporate customers, curtailing lending and hoarding cash (Cassidy, 2009). These actions seem to have been fuelled by a sense of mistrust and meaninglessness that took hold as the contours of the niches the banks had occupied became transformed in ways the banks had never anticipated. As Stewart (2009) relates, inconceivable events had followed one another in quick succession: apparently solid financial institutions had failed virtually overnight, inter-bank lending rates had risen to unprecedented levels, and national governments had implemented unanticipated interventions that at least temporarily transformed the financial services industry into a quasi-socialist entity. For the managers of lending institutions in crisis, it was truly a world turned upside down. Given the loss of meaning that accompanied these crises, it would be surprising not to find elevated levels of environmental construction and objectification activity in the financial institutions and government agencies experiencing crisis. Some of these activities have been documented in detailed journalistic retrospectives (Cassidy, 2009; Stewart, 2009), and in those accounts it is apparent that the US Federal Reserve and the Treasury Department collaborated with the banks in reconstructing a viable, meaningful financial services industry. Interpreted via the theoretical framework presented here, the managers of organizations in crisis were reconstituting meaning by looking close to home, isolating sense data on the consequences of their adaptations, and integrating those sense data into a meaningful environmental state that could be projected outward and objectified. While not all threatening events are as severe and consuming as the bank crises of late 2008, I believe that these crises provide important insights into the organizational consequences of situations that threaten loss and appear to have short resolution windows. Based on the discussion above, I propose:

Proposition 6: The greater the crisis an organization is experiencing, the greater its environmental construction and objectification activity.

DISCUSSION

I have argued above that managers construct new environmental states by observing adaptation consequences generated when their organizations react to current environmental states. The consequences may be anticipated or unanticipated, but I suggested that their observation by managers often leads to integration of the associated sense data, the attribution of meaning to that data, and the objectification and externalization of the cognitive representation of the data to the environmental level of analysis. Based on this foundational model, I then characterized environmental construction and objectification activity as the activity that results in environmental construction and objectification, cautioning that that activity is not synonymous with the environmental construction and objectification outcome. I specified that activity in terms that would make it observable in future empirical studies, and identified several organizational attributes that I argue increase the level of environmental construction and objectification activity exhibited by an organization. This resulted in formal propositions that capture the influence of each organizational attribute on the level of environmental construction and objectification activity.

In the remainder of this paper, I would like to return to the three theories with which I began: enactment theory (Weick, 1969, 1979), social construction of reality theory (Berger and Luckmann, 1967), and structuration theory (Giddens, 1984). The propositions and accompanying theoretical arguments above have significant implications for these theories, particularly for those elements of the theories that apply to organizational action. I believe my theoretical arguments also have interesting implications for recent attempts by neo-institutional theorists (e.g. Greenwood and Suddaby, 2006; Lawrence, 1999; Lawrence and Suddaby, 2006; Maguire et al., 2004) to explain the institutionalization of specific practices through the behaviour of agents in organizational settings.

First, in the case of enactment theory, the framework developed in this paper suggests that the enactment–selection–retention sequence described by Weick (1969, 1979) will entail a greater investment of cognitive resources in situations that are unfamiliar to managers. By ‘cognitive resources’, I mean the total human information processing capacity available for a task. This is consistent with the model presented by Louis (1980), but my framework goes beyond Louis and Weick in specifying that situations of unfamiliarity will include entrepreneurial initiatives and crisis episodes. For example, managers exploring entrepreneurial opportunities that put them in unfamiliar niches are likely to allocate more cognitive resources to the enactment–selection–retention cycle than managers involved in more routine situations. An intense dedication of cognitive resources to the enactment–selection–retention cycle will help managers investigating entrepreneurial opportunities puzzle out the unfamiliar by building an objectified environment to guide and constrain their exploration. Though cognitive resources are limited in organizations, they can be expanded by additional hiring or by redirection of the workflow of existing staff. The implication is that such restructurings, mediated by the enactment–selection–retention process, will occur in the region of new opportunities

in entrepreneurial organizations. Managers may build up staff in areas where they are exploring new opportunities, drawing down staff or staff time in other areas, in order to obtain the cognitive resources needed in the exploration process. The theoretical linkage between entrepreneurship, the enactment–selection–retention cycle, and the possible build-up of organizational staff in the neighbourhood of entrepreneurial opportunities is a novel insight that has not, to my knowledge, been discussed in previous literature.

In the same way, crisis can throw managers into an unfamiliar situation by causing withdrawal from the state of interdependence that constitutes normal social interaction (Hermann, 1963). Thus one would expect that managers experiencing financial or performance crisis in their organizations would initially truncate the ongoing enactment–selection–retention cycle, as suggested by the literature on threat-rigidity (Staw et al., 1981) and also by Weick's (1993) description of the reaction of a smokejumper team to wildfire-induced crisis in Mann Gulch. However, after that initial truncation, the enactment–selection–retention cycle is likely to be regenerated, at least if managers and their organizations survive the initial phases of the crisis. Indeed, such regeneration is probably a key factor in the emergence from crisis (Weick, 1993). This raises the possibility of a U-shaped relationship between the duration of crisis and the level of cognitive resources devoted to enactment–selection–retention. Resource allocation to enactment–selection–retention will first decrease as threat-rigidity kicks in, and then later increase in organizations that find a path out of the crisis. This projected U-shaped relationship between time in crisis and cognitive resources devoted to the enactment process envisioned by Weick (1969, 1979) is also novel. It may be accompanied by fluctuations in the workforce as a crisis unfolds, so that, for example, an organization first downsizes (Budros, 1999; McKinley et al., 2000) during the initial phases of a crisis, and then builds up staff at the end of the crisis to facilitate necessary enactment.

These elaborations of enactment theory suggest some intriguing questions for future empirical research. If one could identify employees specializing in enactment–selection–retention tasks such as environmental scanning (Daft et al., 1988), one could compare the number of such employees in entrepreneurial organizations vs. non-entrepreneurial ones, and in organizations at different stages of an ongoing crisis. One would predict that the percentage of employees devoted to enactment–selection–retention would be significantly greater in the entrepreneurial than the non-entrepreneurial firms. In the case of organizational crisis, one would predict the aforementioned U-shaped relationship between the duration of a crisis and the percentage of employees dedicated to enactment–selection–retention tasks. These predictions could be explored with a paradigm that draws on field observations of entrepreneurial organizations or organizations enduring crises. The identification of employees specializing in enactment–selection–retention tasks would be tricky, but standard occupational categories such as those used by the US Equal Employment Opportunity Commission might be helpful. The overall point is that by integrating the framework developed in this paper with Weick's (1969, 1979) enactment–selection–retention model, the latter could be developed empirically in productive ways.

Social construction of reality theory (Berger and Luckmann, 1967) was originally developed as a theory of societies, but I suggest that the logic underlying the current

theoretical framework also has some implications for understanding the social construction of reality in organizations. This is particularly evident when one considers the attribute of age, and thinks about the effect that the age of an organization has on its ability to socially construct the environmental reality that surrounds it. While I have proposed that young organizations will exhibit more managerial activity devoted to environmental construction and objectification, I have suggested that this is due to the relative underdevelopment of routines (Nelson and Winter, 1982) for accomplishing this activity in young organizations. This implies that the social construction of environmental reality may become routinized, and those routines may become better established and more efficient as organizations age. Thus managers in older organizations may spend less time than their counterparts in younger organizations in the social construction of reality, but they may do a more complete job that is backed by more intraorganizational consensus. Therefore old organizations may live in more solidly constructed and objectified environmental states than their younger counterparts, which is actually consistent with Berger and Luckmann's (1967) position that social construction of reality becomes solidified in older societies. The more firmly constructed and objectified environmental states in which old organizations may live may help account for their lower death rates (Carroll, 1983; Carroll and Delacroix, 1982; Freeman et al., 1983; Hannan and Freeman, 1984). Here again, the assumption is that firmly constructed and objectified environmental states are an important reference point for strategizing, and may therefore promote the survival of organizations that inhabit them. It should be noted that this contrasts with the argument that firmly constructed and objectified environmental states achieved through learning may pose dangers for organizations (e.g. Levinthal and March, 1993).

This juxtaposition of the theoretical framework in this paper with social construction of reality theory suggests additional possibilities for future research, and that research might be pursued using the modelling logic of the population ecologists (see, for example, Hannan and Freeman, 1989; Tuma and Hannan, 1984). For example, does the degree to which environmental reality has been effectively constructed mediate between the age of an organization and its hazard of mortality? Does the potentially more complete construction of environmental reality accomplished by older organizations provide them a selection advantage, despite all the activity allocated to attempted environmental construction and objectification by young organizations? Hannan and Freeman (1984) have posited that reliability and accountability give organizations selection advantages, and these authors have observed that reliability and accountability depend on reproducibility of structure. Perhaps the better developed social construction of reality achievable in older organizations facilitates reproducibility of structure, again helping to explain declining death rates with age. Field researchers' or organizational participants' assessments of the degree to which environmental states are effectively constructed might be used to empirically explore the relationships between organizational age, the social construction of environmental reality in organizations, and the hazard of organizational death.

The arguments offered in this paper also suggest some elaborations of Giddens' (1984) theory of structuration and its explanation of organizational action (e.g. Jarzabkowski, 2008). Though this theory has been an inspiration for much recent work in organization

studies, there has been little attention to the conditions under which the structure–action dialectic that is at the heart of Giddens’ (1984) theory is likely to be most prevalent. The framework developed in this paper suggests that one such condition may be diversification by organizations: the reciprocal influence of action and structure may be salient when managers are attempting to make sense of the unfamiliar niches they encounter during diversification. In those circumstances, an initial managerial representation of the contours of a new niche may become objectified and then influence subsequent behaviour of the organization’s managers, including the decision to complete the act of diversification. Thus we begin to perceive the possibility of a sequence in which initial diversification initiatives function as Giddensian action, instantiating the structure of the niche into which the organization is moving, and encouraging (or discouraging) further diversification action. This dialectical process conceptualizes diversification as a temporal act, rather than a fixed state of organizations. Longitudinal field studies of diversification might be used to trace the action–structure dialectic involved in the exploration of new niches by diversifying organizations. This would link Giddens’ (1979, 1984) structuration theory with a component of the strategy literature that has not been enriched by that theory, and the result might lead to productive elaboration of both Giddens and business strategy scholarship.

The action–structure dialectic described by Giddens (1979, 1984) may also be prevalent when small groups of managers are acting entrepreneurially or dealing with crisis, and one might predict variation in structuration activity across groups characterized by varying levels of entrepreneurial activity or varying exposure to crisis. The general lesson for organization studies researchers seeking to capitalize on the action–structure dialectic in Giddens’ (1984) theory is that while the dialectic may be common in organizational life, the cognitive and behavioural investment in producing it may vary with some of the attributes identified in this paper. High levels of diversification, a strong entrepreneurial orientation in an organization, and exposure to crisis may all increase the effort and cognitive resources allocated to structuration, whether individuals making those allocations arrive at a firm consensus about the environment that encompasses them or not. Studying these relationships empirically could extend Giddens’ (1984) structuration theory in interesting ways, and provide a stronger empirical foundation for the theory.

Finally, although the environmental states discussed in this paper are not social institutions, the framework presented here has some potential implications for recent work in neo-institutional theory (e.g. Greenwood and Suddaby, 2006; Hardy and Maguire, 2008; Lawrence, 1999; Lawrence and Suddaby, 2006; Lawrence et al., 2009). As mentioned above, this work is concerned with how agents’ actions create, recreate, or deconstruct institutionalized practices. If, as argued above, environmental construction and objectification activity in organizations is stimulated by diversification, an entrepreneurial orientation, or crisis, the activity may become routinized under those conditions. Such routinization will stabilize the activity, particularly if it is captured in procedures that are made part of the organization’s rule complex. Stabilization of environmental construction and objectification activity through routines and procedures may lead to the institutionalization of the activity (Jarzabkowski, 2008). This is not to be confused with the socially constructed environmental reality we were discussing in our earlier elaboration of Berger and Luckmann’s (1967) perspective. Here we refer to

the institutionalization of the practices that sometimes lead to such realities – interpreting environmental data, discussing them with other managers, and encapsulating them under objectifying labels. If such practices are institutionalized through stable repetition, they will become taken for granted. At that point the practices will be considered ends in themselves, and positively sanctioned. This leads to the expectation that the conditions of diversification, entrepreneurship, and crisis may promote the institutionalization of environmental construction and objectification practices that become permanent features of the way things are done.

Researchers might test such an expectation by examining whether entrepreneurial organizations, organizations that habitually diversify, and organizations that frequently experience crisis have more strongly institutionalized routines for environmental construction and objectification, and stronger norms favouring such activity, than non-entrepreneurial organizations, non-diversifiers, or organizations with little experience of crisis. Such research might benefit neo-institutional theory by identifying some predictors that cause variation in the degree of institutionalization of an important class of management activity. A focus on such predictors would be a step towards the inductive or deductive establishment of empirically substantiated relationships within the corpus of neo-institutional theory.

CONCLUSION

This paper has sought to explore some of the organizational attributes that determine the level of activity devoted to environmental construction and objectification by managers seeking to understand what is emerging in their organizations' task environments. The central argument is that activity devoted to environmental construction and objectification is stimulated by managerial unfamiliarity – being a stranger to the niche one occupies generates environmental construction and objectification activity. The true stranger cannot look to known contours of the niche to begin action; instead the stranger must begin to act, observe the consequences of that action, and then make inferences, based on those observations, about the state of the environment that is emerging. Organizational attributes that increase the psychological condition of unfamiliarity, such as youth, diversification, heavy involvement in entrepreneurship, and organizational crisis are therefore stimuli for environmental construction and objectification activity. That activity, while not inevitably leading to a clear environmental construction that is shared by all organizational participants, is nevertheless a necessary condition for organizational survival under conditions of uncertainty. In summary, this paper frames constructivist work in organization studies as an endeavour that must be sensitive to the organizational contexts in which social construction and enactment unfold. My hope is that attention to those contexts will result in improved knowledge of the causes of change in organizations' environments and the role of managers' construction and objectification efforts in creating such change.

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