

Opening the Black Box: The Microfoundations of Institutions

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Introduction

In the first edition of this handbook, Powell and Colyvas (2008) argued that there was much to be gained by making the microfoundations of institutional theory more explicit. They argued that the standard macro accounts associated with institutional theory needed an accompanying argument at the micro level. This essay represents such a journey, with stops along the way at several ports of call. We wend our way through such themes as enactment, interpretation, sensemaking, and transposition. The central message of this voyage is that institutions are sustained, altered, and extinguished as they are enacted by collections of individuals in everyday situations. We expand on the earlier chapter by building on Pierre Bourdieu's argument that to understand important aspects of French society, investigators need to look into daily affairs and the people who conduct them (Bourdieu, 1984). In this respect, we embrace Jim March's (2008) observation that "history is not produced by the dramatic actions and postures of leaders, but by complex combinations of large numbers of small actions by unimportant people."

From a micro perspective, institutions are reproduced through the routine activities of ensembles of individuals. Members of organizations go about their daily practices, discover puzzles or anomalies in their work, problematize these questions, posit theories, and develop answers to them, drawing on their existing stock of knowledge. In turn, participants ascribe meaning to their solutions, and in so doing, develop rules of thumb, or more abstractly theories, and reproduce new understandings that become taken-for-granted. When the established routines for conducting everyday life prove limiting, people begin to search and perhaps even experiment with new lines of activity. Seen in this light, institutional transformation is often rather subtle, not particularly abrupt, and apparent only after a considerable period of time. Rather than embrace perspectives that highlight either blind replication or heroic change agents, we stress that most micro activities are fairly mundane, aimed at sense making, alignment, and muddling through. As groups of individuals engage in such actions and

resist others' attempts as well, they may well transform practices and theories and alter personal identities.

We argue that institutional analysis can benefit from more attention to everyday processes and actions, as opposed to exogenous events and shocks. In the same vein, more focus on the less powerful members of organizations instead of only leaders or champions would be welcome, as would more emphasis on the cultural and cognitive aspects of organizational life (Howard-Grenville et al., 2011). Institutional influences shape both organizational and individual interests and desires, often framing the possibilities for action and influencing whether behaviors result in persistence or change. Institutional forces are instantiated in and carried by individuals through their actions, tools, and technologies (Orlikowski and Scott, 2008). Some actions reinforce existing practices, while others will reframe or alter them. Ideas can be picked up in one setting and transposed to another. Tools can be multipurpose, and some settings are rife with multiple interpretations and points of view. Such situations afford latitude for human agency.

The various members of an organization often view situations quite differently and thus push competing points of view and divergent responses. Rather than thinking of such diverse opinions as merely noise, or regard the everyday affairs of organizations as simple routines, we stress that habit and routine often involve mindful reflection, effort, and maneuvering to accomplish ordinary work. In building on this observation, we underscore a distinction between effortful and emergent accomplishments (Feldman and Orlikowski, 2011: 1245). The first form emphasizes agency that continues an already established pattern, deepening the ruts in the road, so to speak; whereas the second highlights agency that initiates a new or altered pattern of activity, turning onto a new road, as it were (Feldman, 2016). Emirbayer and Mische (1998: 980) make this point nicely:

“While repertoires are limited by individual and collective histories and may be more or less extensive and flexible, they do require a certain degree of maneuverability in order to assure the appropriateness

of the response to the situation at hand. ... In unproblematic situations, this maneuvering is semiconscious or taken for granted, the result of an incorporation of schemas of action into one's embodied practical activity. On the other hand, the application of such repertoires remains intentional insofar as it allows one to get things done through habitual interactions or negotiation. ... There may be much ingenuity and resourcefulness to the selection of responses from practical repertoires, even when this contributes to the reproduction of a given structure."

A decade ago, our survey of the literature on microfoundations was admittedly eclectic and sparse. Today, there has been a good deal of progress both in sociology (Jepperson and Meyer, 2011) and management (Felin, Foss, and Ployhart, 2015) in developing theoretical arguments about how micro-level explanations provide depth and texture to accounts of macro-level events and relationships. At the same time, we need to understand how macro forces are interpreted at the local level. We continue to believe that it is a mistake to solely equate change with the micro level and persistence with the macro. Individuals frequently "pull down" larger, societally approved justifications for their actions, just as on-the-ground practices can "build up" into broader institutional patterns. Our goal is to develop multilevel explanations that account for these recursive influences.

Our overview of the current literature is wide ranging. We find building blocks in a variety of literatures that have previously developed separately. We begin with recent work under the umbrella of practice theory, as it highlights our arguments about the micro and the mundane. We then revisit the central contributions of the Carnegie School, with its focus on cognition and routines, and update the Carnegie approach by reference to more recent scholarship. We turn next to another valuable older literature, ethnomethodology, which is often overlooked in mainstream research. We then engage with research on sensemaking, pioneered by Karl Weick and now pursued by many scholars. To illustrate the relationship between everyday activities and organizational transformation, we offer four short cases from different settings as empirical examples that depict how micro actions are linked to long-term institutional change. We conclude with a discussion of the implications of our arguments for future research.

Practice theory.

Practice theory consists of a family of approaches that subscribe to the idea that social and organization life is enacted through everyday activities or practices (Feldman and Orlikowski, 2011; Feldman and Woreline, 2016; Nicolini and Monteiro, 2016). With its focus on performances, processes, and dynamics, practice theory is oriented towards unpacking social reality, which entails reducing the grain size of analysis from abstract social structures to concrete pixels of actions performed by specific people. For Theodore Schatzki (2012: 13), practices are “an organized constellation of different people’s activities.” To Michel de Certeau (1998: xi), a practice is the “microbe-like operations proliferating within technocratic structure and deflecting their functioning by means of a multitude of ‘tactics’ articulated in the details of everyday life.” Clearly, practice theorists foreground human agency but some also put action on the same footing as structure. Giddens (1984), for example, argues that practices are the everyday situational actions that recursively generate and regenerate the structures that restrict and facilitate human endeavors.

Three elements are central to the current practice turn in the social sciences, including the “what,” “who,” and “how” (Jarzabkowski et al., 2015). The “what” element captures the particular practices that organizations adopt and start to use to accomplish work. But practice and practitioners are entangled. As a result, it is important to also focus on “who” is enacting the specific practices within an organization, including the concrete roles and positions of individuals. Finally, practices are not performed the same way in every context. An espoused practice may vary substantially from an enacted practice, which suggests that it is important to also focus on “how” a practice is performed. Practice theory has been used as a lens to study a wide range of phenomena, including communities of practice (Lave and Wenger, 1991), technology use (Orlikowski, 2000), business strategy (Whittington, 1992), and routines (Feldman and Pentland, 2003). Seen in this light, ideas, routines, technologies, and institutions

do not take on meaning as a result of their innate features but through the relationality of mutual constitution (Emirbayer, 1997).

Over the past 15 years, empirical studies of organizational routines have used a practice lens to unpack their internal dynamics (Howard-Grenville and Rerup, 2016). To facilitate this push, scholars engaged in several conceptual and empirical moves. Conceptually, Feldman and Pentland (2003) made a distinction between the performative and the ostensive aspects of organizational routines. The former refers to patterns of actions by distinct people at specific times in particular places, whereas the latter refers to the abstract patterning of a routine that emerge through repeated performances of it. Ostensive is never a homogeneous, singular 'thing' because multiple participants always have different points of view. By following the recursive relationship between ostensive and performative aspects, it is possible to trace how stability and change in routines is an accomplishment that takes effort (Pentland and Reuter, 1994).

Rerup and Feldman (2011) used this distinction to analyze the hiring routines in a new public venture, Learning Lab Denmark. They unpacked the internal dynamics of hiring, showing how both performative and ostensive aspects were linked to higher-level structures such as LLD's interpretive schema and the public university context in which LLD was housed. Initially, the founders of LLD espoused a view that it was an entrepreneurial, non-bureaucratic organization that operated on a private sector model. In line with this schema, LLD started to hire people, offering private-sector salaries. These performances created an ostensive patterning of the hiring routine, highlighting that private sector hiring required high salaries and swift offers. Because the salaries for equivalent jobs were 30-40% higher in LLD than in the Danish Pedagogical University (DPU) where LLD was housed, DPU's HR department began to reject the job contracts that were forwarded by LLD. The Lab took several creative actions to side-step DPU and continue hiring people at high salaries. Eventually, both LLD's schema and the ostensive aspects of the hiring routine changed to be more aligned with the public sector context in

which it operated. These shifts happened over several years through actions carried out by a number of people across LLD. By documenting how an ecology of observable actions morphed over a three-year period, Rerup and Feldman showed how the mundane tasks of hiring gradually changed and how these performative changes altered the ostensive aspects of the employment process.

Orlikowski (2000) used a practice lens to study how Notes software technology was enacted by consultants and technologists in Alpha, a large multinational consulting company with offices around the world. In the late 1980s, the chief information officer CIO believed that Notes could help Alpha share knowledge quickly across its offices, and prevent consultants working on similar projects from reinventing the wheel. He ordered the 40 technologists working in his department to buy and install thousands of copies of Notes to build a network for sharing knowledge. Notes was also installed on the technologists' computers, and they used it to send emails and frequently contributed to building data bases to create shared solutions to recurrent technical problems. The consultants, however, utilized the technology in a different way because they rarely used it to send email, and they almost never contributed any knowledge to the shared database. Why did the practice of using Notes differ so sharply in the two communities of professionals? The work culture for the technologists was collaborative and characterized by knowledge sharing and helping behaviors that motivated them to use Notes to further their collective performance. In contrast, the work culture for the consultants was competitive and strongly influenced by an 'up or out' career structure that made the individual consultants reluctant to share knowledge because it might give colleagues a competitive edge. This example shows that "who" and "how" a technology is enacted matters a great deal.

In a study of strategy making by top managers at three British universities, Jarzabkowski (2008) documented how senior managers did not have comparable influences on practice. The same practice ("what") may have different performance implications in disparate organizations because the executives implementing strategy have varying social skills and operate in different contexts. The social skills

("how") of senior managers ("who") matter because universities are characterized by diffuse power relationships and an empowered workforce. As a result, academic leaders cannot simply implement new programs but must actively engage in persuading knowledge workers to use new technologies or practices.

Although practice theory has had some previous contact with institutional theory (Barley and Tolbert, 1997), most institutional research has largely focused on how the creation of organizational fields shapes individual action and cognition. Powell and Colyvas (2008: 277) lamented that the individuals that frequently populate institutional analysis are portrayed as either "cultural dopes" (Garfinkel, 1967:68-75) or heroic "change agents" (Strang and Sine, 2002: 503-07). Surely, heroic actors and cultural dopes are a poor representation of the gamut of human behavior. Practice theory offers students of institutional analysis a perspective of the social world as a web of actions knitted together by ordinary people "in such a way that the result of one performance becomes the resource for another" (Nicolini, 2012: 2).

The Carnegie School.

The Carnegie School is identified with a series of path breaking books and papers written by Herbert Simon, James G. March, and Richard Cyert. The debt of institutional theory to Carnegie work is large, although not often recognized (for discussion, see Powell and DiMaggio, 1991: 18-20). In the 1950s and early 1960s, a group of interdisciplinary social scientists at the newly founded Graduate School of Industrial Administration at Carnegie Mellon University set about trying to develop a behavioral approach to understand how individuals and organizations act and make decisions in the real world. They developed a menu of insights that students of organizations now take as foundational ingredients. Concepts such as bounded rationality, satisficing, premises, aspiration levels, and standard operating procedures were developed to describe individuals and organizations acting in the face of the

“uncertainties and ambiguities of life” (March and Simon, 1958: 2). The Carnegie School developed a rich, process-oriented understanding of how decision making takes place in organizations, drawing on ideas from cognitive science, economics, psychology, and sociology.

This line of work emphasizes how uncertainty is managed through the creation of organizational routines; therefore the allocation of attention is central to how decisions are made. Most decisions are made under conditions of ambiguity about preferences; consequently the decision making process is often a political one involving multiple groups and coalitions with inconsistent preferences (Cyert and March, 1963). The behavioral project of Simon, March, and Cyert was oriented at capturing how individuals and organizations behave in a diverse set of tasks, from pricing, budgeting and accounting to information gathering and purchasing. They found that neoclassical economics paid little attention to the institutional and cognitive constraints on organizational behavior, and thus allowed scant room for human mistakes, foolishness, and divided attention on the part of individuals. And even though the focus of the Carnegie work was primarily on the limits of human knowledge and computation, the implications of this view for how organizations operate were profound. For example, Simon’s (1945: 88-90) early work on habit recognized that habitual behavior is not passive, but rather a means by which attention is directed to selected aspects of a situation, so that one might rule out competing aspects. His rich discussion of the role of premises captures how perceptions in organizations are selectively shaped by those in charge and by the execution of routines (Simon, 1945: 79-109). Indeed, March and Simon (1958) and Cyert and March (1963) emphasized that much organizational behavior involves rule following more than the calculation of consequences. And Simon’s view of bounded rationality as both an input to, and learned outcome of, decision processes has stood the test of time, and earned him a Nobel prize in the discipline, economics, that he so enjoyed criticizing for its unrealistic assumptions (Simon, 1978).

The Carnegie perspective highlights that decision makers are often confronted by the need to balance several, sometimes incompatible goals, and that instead of assuming a fixed set of choices, decision makers often search for alternatives, following implicit rules about aspiration levels. This type of search is guided by variations in organizational resources, referred to as slack. Organizations and the individuals within them typically rely on routines or rules of thumb learned from experience or based on the premises set by others, rather than an attempt to calculate the consequences of their alternatives. Organizational learning consists of adapting to feedback; positive feedback, however, can lead to myopia and superstition, whereas negative feedback can lead to endless search. Learning, in the Carnegie sense, can be a double-edged sword (March, 2010).

The Carnegie program has perhaps had its deepest influence on evolutionary economics (Nelson and Winter, 1982), but it has also shaped behavioral economics, and work in strategy on capabilities. We do not go into these rich veins of work here, instead we focus on how a set of ideas about routines can be valuable for institutional analysis. Although the Carnegie School opened the door to daily life inside organizations, the theories treated the workplace as if it were largely inhabited by top managers. To be sure, most management research has an executive bias, and some current work under the neo-Carnegie rubric continues this selective focus. For example, Gavetti et al (2012: 15) state: "A key determinant of organizational attention is the power of key players, particularly the CEO and the senior executives." The language is telling, the message conveyed is that top managers control the keys, with little voice or agency for the troops. Most executives wish that life were so simple!

To make the Carnegie School more useful as a micro-foundation for institutional analysis, two steps are needed. One, the routines need to be inhabited; too often they are presented as people-less "black-boxes" or else the dictates of senior managers (Feldman, 2000). Organizational routines are not algorithms that run the same way with every enactment. Moreover, a good deal of skill and effort is involved in performing a routine the same way. This is a point that Michael Cohen (2007; 2012; Cohen et

al 2006) emphasized in his work on replication, and one also underscored by ethnomethodologists (see below). Agency is often more critical in execution than in the orders or programs. The question of where routines reside - in the organization's rules and memory or in the individuals who carrying them out - is crucial (for overviews see Parmigiani and Howard-Grenville, 2011; Salvato and Rerup, 2011). Cohen (2007) and Winter (2013) both draw on Dewey's (1922) ideas to emphasize how the enactment of routines are based in part on deliberation. Winter (2013: 131) offers especially rich imagery here; invoking Dewey he suggests that ordinary decision making is like a: "kaleidoscope offering innumerable complex and different patterns, featuring the three primary colors of habit, impulse, and deliberation. If you ask why such a complex picture is not simply confusing, ... it is largely because habit steadies both the real picture and the hand that holds the kaleidoscope, and sometimes the external environment also cooperates in sustaining the picture that is that steadied."

In work underway at the time of his unfortunate passing, Cohen was studying the critical role of routines in health care. Within medical organizations, mundane social processes—such as socialization into roles and the routines of problem-solving—allow for the coordination of complex and difficult tasks. Consider the delicate interplay among surgical teams or in hospital emergency rooms; all these coordinated efforts are made possible because the routine participants are *socialized* into performing particular patterns of the routines. Nevertheless, fumbles during "simple" performances of patient handoffs between medical shifts are, sadly, a leading cause of death in hospitals, and they indicate deficient enactments of routines by the involved participants (Cohen and Hilligoss, 2010; Vogus and Hilligoss, 2015). This work on highly professional medical staff underscores that routines, in order to be successful and save lives, must be effortful accomplishments rather than mere replication (Levinthal and Rerup, 2006).

A second step needed in bridging Carnegie work and institutional analysis is greater recognition of the ways that premises, routines, and standard operating procedures are "pulled down" from the

larger environment. Routines have often been described as unitary ‘things’ that float around in time and space. When an organization finds out that its performance of a task falls short of its aspiration level, it usually selects a routine from the ‘environment’ to solve the problem. If the routine is not working, a new routine is selected and tried out until the problem has been addressed (Cyert and March, 1963). Theories that conceptualize routines as uninhabited ‘things’ provide few details on how such replacement and selection happens. These missing details create an “important challenge for micro research” (Greve, 2008: 199).

The heightened attention to benchmarking, metrics or evaluations, and rankings in many contexts provides a context for exemplifying why more micro research is needed. The current contention over the lack of diversity at largely male Silicon Valley tech firms offers a vivid illustration of how a wider societal concern becomes instantiated in local hiring criteria. The process by which universities, especially professional schools of law and business, became slaves to external rankings, is another, all too familiar, example (Espeland and Sauder, 2007; Sauder and Espeland, 2009). It is remarkable that a profession that is supposed to make up the best minds in the country allowed its admission routines to be shaped by magazine and newspaper rankings based on thin data. Such “pulling down” or selection of wider fashions and dictates can alter how organizations conduct their daily affairs as well as how they represent themselves to their publics.

Responses to external debates are not, however, mere window dressing. Institutionalized expectations in the wider environment may constrain organizational behavior by becoming incarnate in both individuals and organizational culture. An apt example is Hallett’s (2010) ethnographic study of teachers’ compliance with purported accountability reforms at a public elementary school. Hallett (2010: 53) observes a dynamic that he calls recoupling, “creating tight couplings where loose couplings were once in place.” Put simply, the ceremonial accountability structures that enhance public school legitimacy became manifest in the daily practices of the people inhabiting a school. In his case, the hiring

of a determined, reform-minded school principal transformed a previously ceremonial commitment to accountability into a new classroom reality. The disruption of teachers' autonomy and teaching routines led to uncertainty, turmoil, and even political mobilization. By focusing on the local, micro-level dynamics of wider movements for reform in schools, Hallett showed that recoupling of institutionalized myths created resistance and ultimately altered the legitimacy of reform endeavors. What began as reform momentum ended up in a morass of ambiguity and frustration, underscoring that the pulling down of higher-order reforms is not done seamlessly.

Ethnomethodology.

In the 1960s, Harold Garfinkel at UCLA, along with his students and colleagues, developed a distinctive line of inquiry that stressed how interactive skills emerge from everyday encounters, and in turn generate sociability and reproduce the social order. His ethnomethodological approach, with its focus on practice as “[c]ontingent on ongoing accomplishments” (Garfinkel, 1967: 11), provided tantalizing insights for institutional theory, most clearly in Zucker’s (1977) work, where she argues that many taken-for-granted understandings are “built up” from the ground level by participants in interactions, and in DiMaggio and Powell’s (1991:22-27) outline of a theory of practical action. Ethnomethodology never developed into an expansive subfield, and given both its cult-like approach and the controversies it provoked, perhaps it never had the chance.¹ Nevertheless, Garfinkel’s focus on practical reasoning and the role of “accounts” in normalizing and legitimating the social order offers considerable insight into the implicit and contested assumptions that make organizational life possible. Rather than find social order in cultural norms or social roles, ethnomethodologists examine the cognitive work that individuals do to demonstrate that their behavior is appropriate. Simply put, ethnomethodology asks what kind of knowledge does it take to get by in the world.

¹ See the review symposium on Garfinkel’s *Studies in Ethnomethodology* in the Jan. 1968 *American Sociological Review*, notably Coleman’s (1968) critique. Lewis Coser (1974) used his presidential address at the ASA meetings to argue that ethnomethodology was a “method in search of a theory.”

There are several compelling reasons to revisit this line of work. Contemporary scholars are largely unaware of just how much of this research focused on work and organizations. Garfinkel and colleagues understand that “everyday reasoning” requires that individuals negotiate organizational rules and procedures reflexively to assure themselves and others around them that their behavior is sensible. Meticulous studies of record-keeping procedures in juvenile justice facilities (Cicourel, 1968), high mortality wards in hospitals (Sudnow, 1967), and psychiatric clinics (Garfinkel and Bittner, 1967) reveal how counting, reporting, and legal requirements are often highly improvised, as veteran staff draw on deep, tacit knowledge of how reports ought to be assembled. Other work examined case files, folders, and dockets to ascertain the classification schemes used in psychiatry or a public welfare agency, where documents could be treated either as “plain facts” or the opportunity to construct an account that provides grounds for accepting the testimony of the document against the testimony of the welfare applicant (Zimmerman, 1969).

Bittner’s (1967) studies of policing on skid row illuminate how officers performed complicated and demanding work with relative ease, without any real personal or peer recognition of their skills. Given that the destitute and mentally ill were often the objects of police work on skid row, perhaps the lack of high regard is to be expected. But Bittner underscored how strongly a powerful sense of craftsmanship among the police was rendered routine, even as it went unacknowledged. Similarly, Sudnow (1965) analyzed how the penal code was used by public defenders with great facility. Lawyers took into account a welter of “facts”—the ecological characteristics of a community, the biographies of criminals and victims, and past records of criminal activity. They transformed a criminal action into a shorthand representation that was intelligible to attorneys and judges. Sudnow’s brilliant analysis revealed how delicate teamwork between the offices of public defender and public prosecutor in the face of a demanding organizational calendar jointly facilitated the construction of “normal crimes,” a proverbial characterization that certain kinds of illegal actions were typically committed by particular

types of people. Once such categorizations were made, plea bargaining ensued, based on unstated recipes for reducing original charges to lesser defenses to avoid the costs of trial.

In ethnomethodological studies, categories and classifications become interpretive schema that members of organizations draw on. Over time, these schemas become a repository of organizational knowledge. Particular schemas become routinized through repeated application and use, they develop a habitual, taken-for-granted character. As Berger and Luckman (1967) emphasized, once joint activities are habitualized and reciprocally interpreted, patterns both harden and deepen as they are transmitted to others, particularly newcomers. When schemas become perceived as objective, exteriorized facts, their contingent origins are obscured. Organizations do have rich and varied repertoires, however, and multiple schemas are available. The possibility of mixing or combining practices in alternative or novel ways to produce different patterns is ever present.

Throughout this rich vein of research, ethnomethodologists demonstrate how classifications and categorizations are invoked on the fly by skilled actors to keep peace on the streets, in the courts, in hospital wards, and welfare agencies. Consider the contrast of this view with the conception of organization found in many other lines of organization theory. Rather than struggling with or coping with uncertainty, the practical reasoning view emphasizes how situations are rendered comprehensible, and sees such efforts as an on-going, contingent accomplishment. In contrast, ever since Weber, most students of organizations regard formal structures and procedures as “ideally possible, but practically unattainable” (Bittner, 1965). Selznick (1949), for example, attributed these limitations to the recalcitrance of the tools of action; while Weber conceived of the typical bureaucracy more as a target or an idealization. For the ethnomethodologists, however, bureaucracy is neither a rarified nor lofty goal, but deeply embedded in common-sense routines of everyday life. Organization is a formula to which all sorts of problems can be brought for solution (Bittner, 1965).

This focus on practical reasoning as a routine accomplishment emphasizes how people in organizations both make and find a reasonable world. Garfinkel (1968) described this accomplishment aptly: “how jurors know what they are doing when they do the work of jurors.” Organizational life entails constant doing and achieving. Social order is created on the ground floor, through situated local practices. As practices are reproduced over time and across settings, macro categories emerge from these interactions and negotiations.

Sense-making.

Sensemaking is a social process that is activated when cues interrupt ongoing activities. It is a fundamentally social process where people “interpret their environment in and through interactions with each other” to retrospectively elaborate plausible meanings that rationalize what they should be doing (Maitlis, 2005: 21). Through this process, people convert situated circumstances into action through the reciprocal interpretation of who they are and how they understand their environment (Weick, 1995; Reinecke and Ansari, 2015). In situations where existing mental frames no longer provide guidance, people ask: “What’s the story?” and “Now what?” (Weick et al., 2005). People ask these questions because they are “attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn” (Maitlis and Christianson, 2014: 13).

Sensemaking scholars draw on many strands of microsociology, including Garfinkel’s (1967) insight that rationality is constructed through commonplace interactions, and Goffman’s (1974) use of frames as providing a structure to social context. As pointed out in reviews by Maitlis and Christianson (2014) and Sandberg and Tsoukas (2015), sensemaking is not a homogenous or monolithic block of ideas, but a lens made up of various theoretical orientations, including cognitive psychology,

phenomenology, and discursive orientations. These various orientations conceptualize sensemaking quite differently. We will not go into these details here, as we mainly draw on Karl Weick's work.

Sensemaking analyses share with ethnomethodology a methodological stance of privileging cases that reveal rather than represent. But there are notable distinctions as well. Whereas ethnomethodologists highlight the cognitive work of individuals in creating social order, sensemaking attends to the contingent influences of norms and role structures (Weick and Roberts, 1993). In the sensemaking perspective, conceptions of identity and logics of action are relational, constructed not only through projections of self and others' perceptions, but also through expectations and scripted interactions in relation to what others are "supposed to do." Individuals are enmeshed in a structure of relationships, taking cues from both situations and others, and these guideposts provide substance for them to enact their environments. For instance, in an ethnographic study conducted at a local U.S. television station, Patriotta and Gruber (2015) explored how workers in the news department plan their stories on a daily basis and adjust their plans when new stories break. They found that the making of news is molded by frameworks that set expectations about what is going to happen during the day, and typifications that make it possible for the newsmakers to classify emerging stories based on their importance. In the world of newsmaking, expectancy frameworks and typifications are crucial sensemaking resources that allow news workers to respond to the flow of unexpected events.

In his analysis of the 1948 Mann Gulch fire disaster in Montana, Weick (1993) demonstrates how a breakdown in sensemaking unfolds in a trained smoke-jumping crew. The inability of the crew to comprehend "What's the story?" and "Now what?" in the face of unexpected conditions impeded the firefighters' ability to draw on their stock of experiences to generate a novel means of survival, or to comply with their leader who did. Weick attributes the tragic deaths of these skilled men to three features: a breakdown in role structure among members of the team; a stalwart adherence to a less critical categorization of the fire; and practical challenges to their identities as firefighters. All of these

features are reflected in the difficulties that the firefighters faced to make sense of who they were, the situation they encountered, and the repertoire of actions they should take. Because the stock of knowledge of the firefighters did not match their less critical categorization of the fire when they arrived on the scene, the situation was rendered meaningless, as “less and less of what they saw made sense” (Weick 1993: 635). Cues from other firefighters, e.g. stopping for dinner and taking pictures, reinforced a spurious categorization of the fire, and impeded the firemen’s ability to activate a different course of action. When the leader of the crew, confronted with looming disaster, lit a fire in the only escape route, laid down in its ashes, and called on his crew to drop their tools and join him, the team disintegrated. The firefighter’s identities hindered their ability to comprehend an order to drop the very materials that defined who they were and comprehend the practicality of a solution that would have saved their lives. Weick’s (1993: 633) analysis demonstrates how teams can falter when “the sense of what is occurring and the means to rebuild that sense collapse together.”

Because sensemaking is triggered by interruptions of expectations, most studies capture sensemaking in crisis or unexpected, non-routine situations (Maitlis and Sonenshein, 2010). But the study of only crises can lead to oversimplified models (Weick, 2010). From a sensemaking view, many features of organizational life are uncertain, which relates to ignorance or the inability to estimate future consequences to present actions. Organization life is generally wrought with ambiguity, which reflects the inability to attribute clear, mutually exclusive categories, codes or specifications. These distinctions are important because although information can provide a remedy for uncertainty, it can also further ambiguity as evidenced by the Mann Gulch fire, when new information did not fit preconceived categories. Weick also draws on Garfinkel to emphasize that equivocality is present when numerous or disputed interpretations exist. As with Garfinkel’s jurors, individuals may justify multiple, incompatible accounts, often with the same evidence. Weick argues that uncertainty, ambiguity, and equivocality may occasion different triggers to, and remedies for, sensemaking.

The majority of sensemaking studies have been inspired by Weick's (1995) influential attention to how events disrupt ongoing cognition and practice, and trigger efforts at sensemaking. This focus, however, is somewhat puzzling because Weick has also argued that most organizations experience a multitude of mundane disturbances of their ongoing routine activities, rather than major breakdowns of day-to-day practice. In fact, Weick (2009: 225) has pondered, "Why does the extensive literature on organizational change focus on how to create change rather than how to cease change?" A similar question could be redirected at the sensemaking research, that is, why does the literature attend to episodes that create sensemaking rather than how it is a continuous process? To address this question, some have called for considering more routine situations because the predominant focus on disruptive episodes at the expense of more mundane and continuous forms implicated in routine activities might lead to over-simplified models (Sandberg and Tsoukas, 2015). Weick has, to some degree, already started to address this imbalance in work on mindful organizing in so-called "high-reliability organizations" (HROs) such as aircraft carrier flight decks and nuclear power control rooms that experience consistently error-free performance despite operating under trying circumstances (Weick and Roberts, 1993; Schulman, 1993). HROs sustain reliable performance through frontline processes of mindful organizing, a type of collective sensemaking focused on detecting and correcting the unexpected (Weick and Sutcliffe, 2007). As such, mindful organizing is oriented towards ongoing revisions of day-to-day activities because high-reliability is not a constant, but an effortful accomplishment that must be continually renewed by the everyday work of ordinary people.

Most sensemaking studies have been conducted at the team or organizational level. Because sensemaking is largely a theory of local practice, it has not been studied at the macro level, although many have made calls for pursuing such work (Weick et al., 2005; Maitlis and Christianson, 2014; Sandberg and Tsoukas, 2015). Specifically, Weber and Glynn (2006) argued that Weick's perspective on sensemaking "overlooks the role of larger social, historical or institutional contexts in explaining

cognition” and “appears to neglect, or at least lack an explicit account of, the embeddedness of sensemaking in social space and time.” Most research has focused on how sensemaking unfolds *within* a boundary (e.g., a team or organization) and has not examined how it also might unfold *across* boundaries (Strike and Rerup, 2016).

Today, scholars assume that larger social systems edit and constrain local sensemaking, but we also need to consider how institutions facilitate and enable as well. For example, how do new or updated bottom-up accounts of what is going on become shared and eventually institutionalized? Sensemaking is an issue of talk and communication, and individual accounts become collective accounts when doubts are turned into belief. Social movements take hold when individuals doubt a settled aspect of the world that is taken for granted. “Doubts ...aris[e] when... continuance is interrupted, represent[ing] a potential inadequacy in [our] habitual ways of understanding and acting.” (Locke, Golden-Biddle, and Feldman, 2008: 908). As such, doubt might rupture the frames that currently provide the foundation for interpretation and reality construction. As they act, both doubters and believers can shape the enactment of a new account by nudging “the sensemaking and meaning construction of others toward a preferred redefinition of ... reality” (Gioia and Chittipeddi, 1991: 442).

In sum, research has yet to explore how sensemaking scales up, despite its criticality to the institutionalization and deinstitutionalization of various phenomena (Gray, Purdy, and Ansari, 2015). This topic strikes us as the next research frontier. As one illustration, Plourde and Rerup (2016) captured the multi-year attempts by Greenpeace International to influence the adoption of genetic modifications in the food system. They traced how Greenpeace brought forward cues to generate doubt among politicians and decision makers in the broader context to influence public opinion about the ethics and utility of genetically engineered crops. Similarly, they traced how the manufactures of genetically modified crops and other organizations planted cues to influence public perceptions. In her work on framing contests, Kaplan (2008) explored the way in which people turn individual frames into collective

frames. She traced how individuals from different functional groups within an organization attempted to sway each other to adopt competing frames. In Kaplan's model, framing contests end when the coalition supporting one frame dominate people who support alternatives. Studying how dominant frames and interpretations are successfully imbricated in organizations and public life is an important area for future research. We take up that challenge in the next section.

Institutional change viewed through a micro lens.

We turn now to a discussion of several cases that involve important organizational transformations that have typically been analyzed by reference to broader social and political transformations. In such accounts, external forces are given primacy in explaining organizational change. Indeed, when discussion of these changes is directed at the organizational level, most reports emphasize the agency of risk-taking entrepreneurs. In contrast, our aim is to demonstrate how much explanatory purchase can be gained by examining the micro-level processes that underpinned these important changes. We emphasize that the purported entrepreneurs did not even consider that they were taking risks, but instead were responding to everyday, unanticipated situations.

Universities and academic entrepreneurship. Today it is widely assumed that universities function as engines of economic development, generating valuable intellectual property in the form of patents and marketable discoveries for local and national economies. The third mission of universities, the transfer of knowledge, is now firmly established alongside teaching and research. Indeed some worry that this entrepreneurial focus monopolizes more faculty and administrative time than teaching. It was not always this way; indeed the initial steps in this direction, taken back in the 1970s, were met with considerable resistance and surprise. At that time, scientific breakthroughs in molecular biology and genetics were transforming the biological sciences. As Ron Cape, a cofounder of the first bioengineering company, Cetus, noted in regards to the pent-up feelings of the era: "It was like maybe a

dam waiting to burst or an egg waiting to hatch, but the fact is there were a lot of Nobel Prizes but no practical applications” (Cape, 2006.) Science journalist Stephen Hall (1987: 21) captured the tumult that recombinant DNA research brought to biology in the 1970s with a memorable line: “It was like the microscope had been reinvented. Everything had to be reexamined, and the molecular biologists roared like Huns through the other scientists’ turf.” Hall noted that the young molecular biologists “had the reputation of being opportunistic, of trespassing onto other scientists’ intellectual turf in search of answers.”

But when the first Director of the new Office of Technology Licensing at Stanford University, Nils Reimers, approached faculty in the early 1970s about commercializing breakthroughs in DNA technology, he was met with surprise and shock. Professor Stanley Cohen, a co-author of a foundational DNA paper, initially responded, “Gee, this can’t be patented. This is basic research. How can you patent basic research? And besides, it’s dependent on all these findings that have occurred for the past fifteen to twenty years” (Chemical Heritage Foundation, 1997: 133). Professor Paul Berg, who subsequently was co-winner of the Nobel Prize for his work on recombinant DNA, had an even stronger adverse reaction to the idea of patenting: “Hey wait a minute! I mean, where does Stanford and the University of California get the entitlement to this whole thing?” (Chemical Heritage Foundation, 1997: 129).

The company most associated with the transformation of basic research ideas into new biomedical products was Genentech, a South San Francisco firm legally formed in 1976. It forged a recombination of scientific and commercial cultures, leading to the creation of new organizational practices and forms of discovery. Genentech broke the mold on restricting publishing, transposing an academic invisible college model into a new business model (Powell and Sandlots, 2012). As co-founder Bob Swanson (2001: 56-57), commented: “It was always clear that we were going to publish our results. Everybody wanted to publish in *Nature* and *Science*, and so what we did had to be of a quality that it would be published. So we said, let’s publish the results; let’s make sure we get the patents and we’ll

make the patent attorneys work overtime to get them filed before you actually get the papers out.”

Genentech’s philosophy spread to other companies, and rebounded back into universities, such that now it is commonplace for faculty to think of publishing and commercial application simultaneously. As but one illustration, the esteemed scientist Marc Tessier-Lavigne, who headed research and development at Genentech from 2003-11, overseeing 1,400 scientists, was recently named the 11th president of Stanford University.

In looking back retrospectively, many think of the origins of these new organizational models as profoundly creative and entrepreneurial. The story of this era has been well-chronicled by both science journalists and academics (Berman, 2012; Colyvas, 2007; Colyvas and Powell, 2006; Gambardella, 1995; Hughes, 2001; Kenney, 1986; Orsenigo, 1989; Teitelman, 1989; Vettel, 2006). But viewed up close, with a careful historical lens on the time, such actions were hardly inventive; they were profoundly mundane. Today there is enormous attention to the new CRISPR technology, and media coverage asks if we can now engineer the human race. The US scientific community is responding to the excitement and furor with meetings on the ethics and use of gene editing, amid speculation that science is moving too fast. Back in 1975, at a meeting at the Asilomar Conference Grounds in Pacific Grove, California, biologists gathered to discuss the hazards of their research as the age of modern genetics was dawning (Frederickson, 2001). At Asilomar, which itself has become a storied place for such meetings, there was a decision to pause gene splicing with mammalian cells and to focus work on mice, which was seen as much less controversial.

Out of that meeting came the rather unusual origins of the company Genentech. A young struggling investor, named Bob Swanson, acquired the list of names of attendees of the meeting. He started cold calling them to ask if the scientists thought there was a possibility of commercializing the research. Swanson, then only 28 years old, was unemployed. He was an MIT graduate, who had worked at Citibank’s venture investment group and briefly at the new venture capital firm, Kleiner

Perkins. He was living on a \$410 monthly unemployment check. But he had been reading scientific journals and was intrigued by the burgeoning research on recombinant DNA, and he had vague ideas of forming a bioscience venture. As he recalls: “So what triggered this idea of starting a company was I needed to get a job. I probably had three job interviews a day for three or four months. This was a pretty scary period” (Swanson, 2001: 10). He took the list of names associated with the Asilomar meeting and went through it alphabetically. The first scientist who actually talked with him at any length was Herbert Boyer at the University of California, San Francisco. Boyer was coauthor with Stanford’s Stanley Cohen on the 1973 papers that specified the methods for making recombinant DNA. He was an associate professor, who had recently had a grant turned down by the NIH for his work to produce a human protein in *ecoli* bacteria because reviewers thought it would take too long to do this.

Boyer asked Swanson how he had gotten his name. Swanson replied that he took a list of names associated with Asilomar and went through it alphabetically. Boyer said that means Stanford’s Paul Berg must have turned you down, I suppose I am next on the list. Swanson wanted to talk with Boyer, and Boyer told him to come by his lab on a Friday afternoon at a quarter until five. Powell has used this story in lectures around the world, to flesh out the ideas on transposition and recombination in the Padgett and Powell volume (2012). The wide array of responses to the question he puts to the audiences – what does a quarter to five mean? – suggests this moment was pregnant with possibilities. Some audience members say it is a clear sign this wasn’t important and Boyer was going to give Swanson very little time. Others wonder if Boyer did not want his colleagues seeing Swanson, and so had him come at the end of the day. Still others say a quarter before five shows the primacy of academic science; thinking about commercial applications is something done only at day’s end. Others wonder if it is a test of Swanson’s moxie to see if he can find parking and actually get to the building at the end of the work week late on a Friday. Some see the opportunity to go for drinks if the discussion goes well. For Boyer, all of these thoughts were probably running through his mind, and there was no

preconceived plan. As it turned out, Swanson “introduced himself, talked about what he wanted to do, did I think the technology was ready to be commercialized? He said he had access to some money, and I thought it would be a good way to fund some postdocs and some work in my laboratory, because we needed money to do that. We spent a good deal of time that evening talking about it” (Boyer, 2001: 71). Out of that Friday evening discussion, Genentech was born, even though for its first two years the startup “existed” at UC San Francisco and City of Hope Hospital in Los Angeles (see discussion of its history in Padgett and Powell, 2012:418-20). The rest, as they say, was history, as the science-based company was born out of this meeting.

Commercial engagement by nonprofit organizations. In the nonprofit world, discussions of commercialization are often heated ones. Some portray the clash between mission and finance as a debate between “love and money” (Binder, 2007). Many more nonprofits are pursuing a wide array of commercial activities to secure funding, and some have turned to earned-income activities to enhance their budgets (Weisbrod, 1998). Not only are the fiscal challenges faced by nonprofits considerable, many external funding sources require and support entrepreneurial efforts. Indeed, there are a growing array of courses, programs, and elite entrepreneurs that proselytize about the benefits of importing business-minded entrepreneurship into the nonprofit sector. And some in the sector prefer to deliver goods and services in a fashion that does not create dependency, as they view heavy reliance on donors as a sign of vulnerability. For these social sector leaders, entrepreneurial activities can generate autonomy and build capabilities (Dees, 1998).

Most of the literature on commercial activities follows two themes. One argument stresses the need to augment the social sector with practices from the business world, and focuses attention on the individuals and organizations involved in the transfer and circulation of ideas across sectors (Letts et al, 1997). To these analysts, entrepreneurial ventures have become the hallmark of a successful nonprofit. A contrary argument is made by a chorus of scholars and practitioners who worry that earned income

initiatives are particularly difficult for nonprofit organizations and fraught with challenges (Foster and Bradach, 2005). Some worry that too much attention to earned income draws organizations away from their core missions. In general, these debates are healthy, as they highlight not only the tension between making profits and staying true to mission, but also emphasize that basing decisions solely on mission can threaten financial survival, whereas putting business concerns ahead of mission can have negative long-term consequences (Minkoff and Powell, 2006).

The rival pulls of mission and business can lead to internal strife within nonprofit organizations. For example, these tensions are often manifest in art museums, between curators who are the traditional guardians of art, and museum directors who are responsible for the financial viability of the organization. But debates over the benefits or disadvantages of earned income activities do not typically examine how these challenges are played out in day-to-day operations. Close analysis of the rather rare, successful cases of revenue generation reveal how local action has often emerged as a necessity in response to unexpected conditions. Pragmatic responses triggered steps that eventually led to significant organizational changes, which subsequently became linked to larger debates and discussions, but were not prompted by them. We find, instead, maneuverability on the part of flexible managers who found that mixing practices could prompt surprise and even novelty.

A notable case of successful nonprofit entrepreneurship is Minnesota Public Radio (MPR), one of the nation's largest and richest public radio stations. MPR is known for its award winning documentaries, innovative programs, and today, its extraordinary success at income generation. Between 1986 and 2000, MPR's for-profit ventures generated 175 million dollars in earned income for the radio station, including a 90 million dollar contribution to an endowment (Phills and Chang, 2005).

The origins of this success illuminate how innovative organizational behavior is often constructed on the fly, and the extent to which surprise and necessity can drive entrepreneurship.²

In the late 1970s and early 1980s, MPR developed a satirical show called *A Prairie Home Companion*. They offered this show to National Public Radio, but NPR declined, saying it wasn't a show that would have nationwide appeal. It is possible that MPR was peeved by National Public Radio's decision to decline the show, and that fueled their desire to make the show successful. By the early 1980s, *A Prairie Home Companion* had generated a healthy audience. In 1981, Garrison Keillor, the show's highly popular host, offered listeners a free poster of his mythical sponsor, Powder Milk Biscuits. The fictitious sponsor was part of a regular ongoing gag on the show. To everyone's surprise, more than 50,000 listeners requested a copy of the poster. MPR faced a \$60,000.00 printing bill. In such circumstances of surprise, sensemaking efforts often spring into action. And so MPR continued the tradition of the fictitious sponsor by turning it into a real commercial product. To avert financial calamity, MPR President William King recalled, "We decided to print on the back of a poster an offer for other products you could buy, like a Powder Milk Biscuit t-shirt. The idea worked. I think we netted off that poster, which was really our first catalog fifteen or twenty thousand dollars." (William Kling, quoted in Phills and Chang, 2005, p. 65). "It instantly became clear that there were things like that you could do," (Kling, quoted in Khan, 1995).

To tap the popularity of *A Prairie Home Companion*, MPR created the Rivertown Trading Company, a mail order business that sold coffee mugs, t-shirts, novelties, and kitschy Nordic-themed products related to Keillor's radio show. This new entity grew rapidly, to everyone's surprise. By 1986, it was reorganized as a separate, for-profit subsidiary of MPR in order to remove any legitimacy

² The Center for Social Innovation at the Stanford Graduate School of Business and National Arts Strategies, a nonprofit consultancy for the arts, jointly developed a case on Minnesota Public Radio for classroom use. The case has been taught numerous times in MBA classes and with arts administrators. James Phills and Ed Martenson were the primary contributors to the case's development. We draw on the case, the article in the *Stanford Social Innovation Review*, and a video interview with William Kling by Martenson for this extended example.

questions, as well as tax issues related to a nonprofit organization owning a highly profitable business. By 1994, Rivertown Trading's capabilities with catalogs led it to distribute five different catalogs, including *Wireless*, *Signals*, *Seasons*, *Circa*, and *Classica*. And it also ran the US Golf Association's catalog. Now the product selection extended well beyond the original focus on gifts associated with *A Prairie Home Companion*. MPR subsequently exited the catalog business, selling it for a hefty sum, only a few years before the internet disrupted the mail-order business. MPR's timing was fortuitous.

In December 1995, MPR asked a handful of employees to assist Rivertown Trading on a voluntary basis to fulfill numerous backlogged holiday orders. MPR employees were told that Rivertown would make donations to their favorite charities or contribute to a holiday party for those who volunteered. Nine employees pitched in, working two to three hours each, earning \$350.00 each for their favorite charities. The expectation at MPR was that employees at the nonprofit radio station and the for-profit catalog company should come from common backgrounds. Indeed, Kling, the general counsel, and other key staff were executives at both companies. "We didn't want to hire people who work for Land's End or Williams Sonoma," William Kling commented. "We wanted people who held the values of the nonprofit." This decision, however, led to a firestorm of protest and controversy.

Politicians in Minnesota, newspaper reporters, and other public broadcasting officials were highly critical that employees of the nonprofit radio station also worked with the for-profit Rivertown Trading, and received considerably higher wages to boot. Instead of seeing standard routines and organizational continuity, critics saw a pattern of insider dealing, conflict of interest, and public funding for an entrepreneurial effort. They raised concerns about unfair compensation and a lack of transparency. It is not our task here to assess the merits of these criticisms, we note instead that Kling and colleagues response was to stress that the interests of the radio station and the catalog company were compatible. Kling emphasized that the \$4 million in annual support given by Rivertown to MPR over two decades exceeded the budgets of the great majority of public radio stations, and the \$90

million endowment that the sale of Rivertown produced secured MPRs future. “We could have done a lot of things with MPR, but suffice to say the \$170 million contribution made it possible to do things we could not have been able to otherwise. It allowed us to paint on a larger canvas.” Rather than engage with or respond to critics or assume the role of entrepreneurial champion, Kling focused on the daily activities of a radio broadcaster: more reporters, better signal coverage, more investigative journalism, and the ability to acquire struggling public radio stations in other parts of the country.

MPR is not the only nonprofit that has generated earned income through new or alternative means in recent years. In recent years we have seen all manner of activities pursued by organizations as diverse as the Girl Scouts, choral groups, zoos and aquaria, and art museums. As government support has declined or stagnated, nonprofits have increasingly turned to revenue generation. But such efforts are most likely to be successful - - financially, organizationally, and politically - - when they flow from existing operations. In the MPR context, success at the catalog business built upon Garrison Keillor’s performances. Although critics opined that “if Garrison Keillor ever gets laryngitis, Bill Kling is out of business!”,³ Kling commented, “My fear is that there are too many nonprofits seeing the holy grail...if it doesn’t come naturally to you, you shouldn’t do it.”⁴

In response to public criticisms in the late 1990s over the large sums generated by the for-profit operation and the financial rewards that Kling and colleagues reaped from the sale of the catalog business, Kling invoked a political account of the activity: that entrepreneurial efforts with Riverside Trading were enhanced by the “imprimatur from the Reagan administration; that it is OK to go out and think that way, indeed we encourage you to think this way.”⁵ Interestingly, none of the dozens of reports, newspaper columns, and magazine articles written in the 1980s or early 1990s employed a

³ Ron Russell, “Public Radio’s Darth Vader invades L.A. by gobbling up a sleepy Pasadena college station.” *New Times Los Angeles*, June 29, 2000.

⁴ Interview with William Kling by Ed Martenson.

⁵ Interview with William Kling by Ed Martenson.

political mandate as a rationale. More than a decade after the fact, the signature of the Reagan era was “pulled down” to retrospectively justify the entrepreneurial effort.

The story of MPR is notable for both accomplishment and controversy. Few other nonprofits have been so successful at revenue generation or as agile in securing a sizeable endowment to guarantee a sustainable future. But rather than linking their efforts to broader trends in social entrepreneurship, MPR’s leadership responded modestly to critics, emphasizing how earned income activities were initially a response to an unexpected emergency. One might say that MPR learned to perform as entrepreneurs, rather than “strategize” about this performance. Moreover, actions that critics interpreted as inherently conflictual and questionable stemmed from an organizational practice that executives should oversee the actions of both the station and the company in order to ensure continuity between them. This choice clearly reflected a managerial desire to routinize the efforts of both branches of the organization, and to engage in sensemaking around for-profit activities in service of nonprofit goals.

Mediated sensemaking in family firms. Family firms balance the dual goals of business and family and make up 80-90% of firms worldwide, but in the academic literature, scholars typically study widely-held firms and family firms are seen as outliers (Salvato and Aldrich, 2012; Peterson-Withorn, 2015). This focus is perhaps puzzling, given that in the U.S. 35% of S&P 500 companies and 60% of all publicly-held firms are family-controlled (Astrachan and Shanker, 2003). Family-firms represent an untapped context for studying how non-family members influence the sensemaking process of members of the family, and eventually the direction of the firm (Strike, 2012; 2013).

In many contexts, people are vulnerable to overvaluing past experience as a guide to new situations. The smoke jumpers in Weick’s (1993) study of the Mann Gulch disaster were entrapped by the view that they would be able to put out any fire by 10 o’clock the next morning. Similarly, workers at

the Bhopal methyl isocyanate plant had concluded that “nothing serious could happen in a factory when all the installations were turned off” (Lapierre and Moro, 2002: 279–80). This frame turned out to be false because on December 2-3, 1984 the factory leaked deadly gas that killed thousands of people.

Adaptive sensemaking occurs when one or more individuals begin to doubt the sense that has already been made (Christianson, 2009). When people engage in such questioning they incorporate more cues and available data; they edit and update their story of what is going on, and what is expected to happen. In more technical language, adaptive sensemaking refers to puncturing an entrapped frame (Cornelissen, Mantere and Vaara, 2014). In previous studies, such updating always took place within a bounded context, such as the cockpit (Weick, 1990), plant control room (Weick, 2010) or emergency room (Christianson, 2009). In a longitudinal study of six family firms and their Most Trusted Advisor’s (MTA), Strike and Rerup (2016) explored whether “outsiders” to the family potentially could influence the adaptive sensemaking process among core family members. They found that in entrepreneurial family firms, the Family Business Entrepreneur (FBE) moves quickly, often without considering input from other family members. FBEs can move fast because they often have sole or majority ownership, and do not need approval from a board or major shareholders (Strike, 2013). Like many entrepreneurs, FBE’s are driven and believe that fast action is needed to pursue new opportunities; consensus building and listening to other family members can interfere with the pace of the entrepreneurial process. But such urgency runs the risk of binding themselves in early commitments. To counter this and slow them down, Strike and Rerup found that FBEs often employ a Most Trusted Advisor (MTA) who plants seeds of patience and doubt to invite the entrepreneur to consider an issue or opportunity from a different point of view, and thereby engage in a broader process of adaptive sensemaking.

As pointed out by Strike (2012; 2013), MTAs are well-rounded individuals who counsel wealthy families that own and operate a business. A popular image of the MTA is the consigliere to the mob boss in the 1972 motion picture *The Godfather*. In the movie, the Consigliere, played marvelously by Robert

Duvall, was a close and trusted confidant, but neither family nor Sicilian. The Consigliere has rare access to the ear of the boss, and is one of the few people who can challenge him. Another image of the MTA is the statesman, a person with deep knowledge of how to be just and who looks after the best interests of the citizens. Strike and Rerup (2016) found that the MTAs in the firms they studied occupied dual roles. Formally, they were members of the board of the holding company of the family. Informally, they operated across boundaries that most other people could not cross. For instance, they were trusted by family members who often did not trust one another. They were equally liked and respected by different generations of the family because they were able to see an issue from multiple points of view. Consequently, although the MTA were not ordinarily part of the biological family, their relationships with members ran very deep. Some of them had been with the family for more than 30 years. In sum, “As a mediator, the MTA inhabits intersecting social worlds and can thus create circumstances rich with potential in which cues in one world are made available to be coupled with entrapped frames in another world” (Strike and Rerup, 2016: 4).

Mediated sensemaking is the process through which a mediator brings forward cues and points of view to generate pause, doubt and inquiry among people who operate within prescribed boundaries. The MTA in family firms sets the pace in a series of steps. First, because the FBE often had bracketed off certain cues, the MTA induces pause into the FBEs sensemaking to create an opportunity to attend more carefully to cues in the wider environment. Slowing down the FBE often required multiple conversations or subtle nudges. Second, the MTA introduced doubt into the process by asking questions or raising red flags. Slowly, questions about the viability of projects, decisions or ideas lowered the FBE’s commitment to a particular frame. Third, once the FBE was less committed to a particular line of action, the MTA mediated different voices and perspectives to expose the FBE to more complex information and expand his/her frame. For instance, ideas from family members that the FBE would otherwise have ignored were introduced. Often, these voices would lead the FBE to raise his own questions, which further

lowered commitment to a particular frame. On other occasions, the MTA motivated different individuals – board members, family members, other advisors – to voice their opinions. Multiple voices rather than a lone voice would more likely cause the FBE to consider alternatives and engage in an expanded process of sensemaking.

The subtle influence of the MTA on the FBE's sensemaking is easy to miss because it is difficult to gain access to what occurs behind the scene (Goffman, 1974). Further, social scientists are often advised to focus on phenomena that are "transparently observable" (Eisenhardt, 1989: 537). Nevertheless, to capture the micro-foundation of institutions it is necessary to attend to phenomena that are more spread out over time and space and thus less available for instantaneous observation. For example, to understand why and how change is either occurring or not, it might be valuable to zoom-in and focus on individuals within a narrow context, but it might also be necessary to zoom-out and consider how individuals on the fringes influence the center. As such, mediated sensemaking incorporates micro and macro contextual features, thereby demonstrating subtle effects of the broader social context on local sensemaking. Strike and Rerup (2016) reminds us that people within the boundary of an institution may be greatly influenced by those who are able to straddle multiple positions.

Balancing multiple goals in innovation. Work is accomplished through organizational routines, but the role of routines in balancing contradictory organizational goals has largely been overlooked. The reasons are twofold. First, most theories focus on how a single routine is performed by participants to accomplish one organizational goal (March and Simon, 1958; Cyert and March, 1963; Feldman and Pentland, 2003). Second, scholars often conceptualize routines as inert entities that are poorly responsive to competing goals. Consequently, we know very little about how routines can be a potential source for managing opposing goals. Such knowledge, however, could be important for accommodating opposing organizational goals in innovative, dynamic or competitive contexts.

March and Simon's (1958) classic account of organizations portrays a routine as a "performance program"—a stable action pattern performed predictably to accomplish a single, specific organizational goal. When organizations are viewed as coalitions representing various interests, routines are one means to manage conflict resolution because accomplishing even a single organizational goal can invoke conflict among participants and the vested interests they support (Cyert and March, 1963: 164). Further, in situations where participants need to accomplish conflicting organizational goals, the Carnegie School suggests conflicts can be resolved in one of two ways. First, managers can create a new routine that incorporates and resolves a conflict. Second, managers can sequentially separate the performance of conflicting goals in space or time. Although resolving conflict through these managerial steps can be valuable, this perspective does not address how the front-lines of an organization responds to the simultaneous pursuit of competing organizational goals.

Building on the Carnegie School, Nelson and Winter (1982) proposed that conflicts are rarely completely transparent between conflicting participants, in part because routines represent implicit organizational "truces" that effectively ease conflicts for a specified period of time. When the participants enact a routine as a truce they take a step back and agree to perform their part without requesting that solid changes are made to the enactment of the routine. The truce does not entirely subdue the conflicting interests and goals between members. Rather, they become latent and unobservable: "where once upon a time there was overt conflict ... in most cases it is largely over when the observer comes to the scene" (Cohen et al. 1996: 662). The routine as truce view underlines how organizations reduce conflict and contradiction between organizational goals by keeping "areas of behavioral discretion" within the routine, in which participants perform a specific routine with some flexibility (Nelson and Winter, 1982: 109). These areas of discretion work to keep minor disagreements in check. In a study of a pricing routine in a manufacturing company, Zbaracki and Bergen (2010) found that for small changes the truce would keep the peace between the sales and marketing departments.

With larger changes, however, the truce would break down, and senior management had to step in to keep the organization running. The routine as truce argument reveals how stability is maintained within routines, but it offers limited insight into the dynamics and flexibility of truces.

Over the past 15 years, researchers have investigated how organizational routines are flexible, living processes that require constant enactment. Scholars are exploring how multiple goals can be accomplished through the performance of organizational routines (Birnholtz et al., 2007; Turner and Rindova, 2012; D’Adderio, 2014). An emerging theme is that by performing different types of mundane actions, participants are able to flexibly enact different patterns of the same routine to accommodate replication and change, as well as multiple goals. Despite this progress, the current literature has not fully articulated the types of actions that allow the same group of individuals to repeatedly balance contrasting routine goals over time.

To address this gap, Salvato and Rerup (2016) conducted a longitudinal inductive study (1970-2006) of how members of a storied Italian design company, Alessi, simultaneously achieved the competing goals of new product development (NPD) and affordable commercial acceptance. Alessi was founded in 1921, and in 1970 it started to create design products. From 1970 to 1990, Alessi produced expensive design objects in stainless steel on a small scale. From 1991, it started to also manufacture less expensive and mass produced toy-like products in plastic. Members of Alessi referred to products in the more expensive line as “The Design Factory” whereas products in the mass-produced line were known as “The Efficient Factory.” The empirical puzzle is that throughout Alessi’s history it has only used a single NPD routine to accomplish the competing goals of design and efficiency.

Salvato and Rerup (2016) identified different types of observable micro actions that allowed routine participants distributed across the rank and file to flexibly enact contrasting goals. They noted the importance of breaking the category “action” into types of action because only by doing so is it

possible to capture the details of how stability or change is performed into specific routines. And it is by capturing these details that observers are able to understand how an organization balances competing goals by performing routines. First, various *mundane actions* accomplished the myriad tasks involved in product development. Second, *trials* -- experimental actions through which the participants responded to relational conflicts or “problems” -- emerged as they were trying to enact the two contrasting routine goals. Gradually, the problems turned into relational contention over how to perform the NPD routine that prompted people to experiment with actions. The trials were initiated by routine participants at different positions and levels in the organizational hierarchy and aimed to create opportunities – junctures – for the various team members supporting the Dream and the Efficient Factory to collaborate and recreate a truce for performing the competing goals (Quick and Feldman, 2014). Third, *regulatory actions* emerged through trials and were routine actions that allowed participants to flexibly enact contrasting organizational goals by creating junctures between the participants, and provided them with opportunities to experience differently the conflict between enacting the contrasting organizational goals. Three types of regulatory actions were performed: (a) Alternative splicing recombined activities and participants; (b) Activating switched on particular actions to deal with NPD projects that were particularly complex and controversial; and (c) Repressing switched off particular actions in the NPD routine to reduce complexity.

This ecology of actions accomplished the two competing goals, and created a more dynamic truce. Specifically, from 1995 to 2006, members of Alessi were not enacting a stable and predictable pattern of the NPD routine that accomplished a single goal. Instead, they flexibly enacted the NPD routine as a dynamic, living system that allowed them to pursue both the Dream and the Efficient Factory goals. But the NPD routine as truce disintegrated during the years from 1991 to 1995, hence a new, more flexible truce was created as participants engaged in trials that later turned into regulatory actions. In past research, a truce was stitched together through zones of discretion in which one or more

participants had some autonomy to perform the routine and other groups mutually agreed not to interfere (Nelson and Winter, 1982: 108). Zones of discretion create islands of stability that keep a truce intact and unchanging. The truce that emerged at Alessi in the period between 1995 and 2006 was stitched together through an ecology of actions, most notably regulatory ones.

Routine regulation and the idea that truces are actively constructed and maintained through experimental trials and other forms of fairly mundane actions distributed across the rank and file suggest that it is important to link the performances of routines more closely to the micro foundations of institutions. Specifically, the findings from Alessi ask whether the same mechanisms and processes might operate at different levels of analysis. Regulatory routine actions at the level of the organization create and maintain a flexible truce where participants balance contradictory goals through a single routine. Could regulatory actions also create flexible and dynamic institutions? Are regulatory routines at the organizational level linked to higher-level institutions? Evidence suggests that we might be able to understand stability and change in higher-level structures by tracing lower-level micro actions taken to accomplish routines. In a study of a greenfield organization, Rerup and Feldman (2011) traced the connection between organizational routines and firm-level organizational interpretive schema, defined as a set of shared assumptions and values that give meaning to everyday activities and guide the actions of organizational members. They showed how the actions taken to enact organizational routines connected the organizational routines and the schema. By extension, we propose that regulatory actions and other actions taken to accomplish organizational routines as flexible truces might be connected to the stability or flexibility of higher-level structures such as institutions.

Implications and Conclusion.

These four cases illuminate how activities take form through micro-processes of organizational development, and how mundane routine actions can have much larger consequences and become more

broadly institutionalized. Drawing on simple scripts, such as going down a list of names alphabetically, or deciding to respond to unanticipated audience demand, had unanticipated, out-sized consequences. These instances of practical reasoning were subsequently ascribed larger meaning and purpose as they crystallized into organizational practices and models that became widely scrutinized and emulated. In the case of family firms, the mediator role balances the dual interests of family and fortune and subtly influences the sensemaking of family members, crossing boundaries that individuals rooted in one world find difficult. At the noted Italian design firm Alessi, regulatory routine actions partitioned conflicting interests, allowing participants to toggle between the challenges of new product design and affordable consumer products.

A common mechanism in the cases was transposition, that is, using the typical coin of the realm in one domain in a different one, to fresh effects. Such moves can overcome the “inherent lethargy of social life” and open up possibilities by creating traffic across social worlds (White 2008, 279–83). In order to effect transpositions, individuals often violate institutional boundaries, repurposing old tools or recombining past practices in an unusual manner. Such people have been termed “moral entrepreneurs” or “rule creators” by the sociologist Howard Becker (1963). In these cases, participants create new social spaces and synthesize existing cultural practices in unfamiliar circumstances, sometimes resulting in marked departures from the past. In the example of the founding of Genentech, the transposition was born out of chance and naivete; it was neither deliberative nor visionary, instead pragmatic agency brought two strangers with common interests together (Powell and Sandholtz, 2012). In the case of family business advisors, trust looms large in importance but again the social skill to move between the worlds of family and business is what gives the *Consiglieres* their influence (Strike and Rerup, 2016).

The cases we have used are admittedly unusual in several respects. Several involve organizations that eventually became highly successful at activities that were initially regarded as novel and unusual, even questionable. As the new practices and identities became institutionalized, the organizations were held up for attention and debate, and then veneration and emulation (Colyvas and Powell, 2006). The Italian design firm Alessi has become internationally recognized for its combination of style and affordability. One advantage of studying such hallmark cases is the rich documentary trail that can be analyzed. But it is also possible to analyze sensemaking as it occurs, provided one uses a sufficiently wide lens and has deep engagement with practitioners over a period of time. Reinecke and Ansari (2015) studied price-setting for coffee, tea, and cotton products at Fairtrade International, observing how organizational members engaged with the complex idea of what is a fair price. Rather than focus on how accounts were settled after the fact, or routines explained and made sense to others, research done in the here and now reveals how participants make practical judgments in response to the ongoing demands of organizational life.

In sum, a focus on the who, the what, and the how points researchers toward the creation of the everyday knowledge needed for organizations to function. Such efforts are always influenced by institutionalized expectations, as participants extract cues and scripts from the larger environment. But it is also the case that arguments, practices, and routines emerge from daily interactions among ensembles of people and these solutions to mundane exigencies may have larger consequences, reverberating across social worlds and becoming more general abstract “packages or solutions”.

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