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Organizing Practice and Practicing Organization: An Outline of Translational Mobilization Theory

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Abstract

Understanding the relationship between emergent social phenomena and the stabilizing mechanisms that make collective action possible is a long-standing concern in social science, but remains an inadequately theorized area. This article sets out a middle range theory—translational mobilization theory—to address this challenge. Adopting a practice-based approach, we connect interactionist perspectives on social order, analyses of sociotechnical networks, and theories of strategic action fields, to describe and explain how projects of institutionally sanctioned collective action are progressed by actors interacting with and through socially constructed objects. Investigating these mechanisms is a prerequisite to advancing empirical and theoretical understanding of the complex organizational processes and structures that characterize contemporary society.

Keywords

organizational behavior, management, social sciences, organizational studies, collective behavior/social movements, social change and modernization, sociology, sociological theory, organizational research methods

Introduction

The publication of the *Psychiatric Ideologies and Institutions* (Strauss, Schatzman, Bucher, Ehrlich, & Sabshin, 1964) and the *Social Psychology of Organizing* (Weick, 1969) were important landmarks in advancing understanding of the relationship between social structure and social action in formal organizations. Both highlighted the processual qualities of organizational life and laid down an important counterbalance to the structural emphasis that characterized the then dominant functionalist view. Having brought the fluidity of organizations to the fore, however, more than 50 years later, the relationship between emergent social phenomena and the stabilizing mechanisms that make collective action possible remains an inadequately theorized area. This limits the potential for sociological insights that might inform the challenges of organization and organizing in contemporary society. In a context in which classic bureaucratic models (Gerth & Mills, 1946) are being replaced by more networked organizational forms (Castells, 2009), there is growing recognition that social orders of all kinds are produced through shifting patterns of heterogeneous elements (Law, 2008) and fluidity in organizational processes (Hernes, 2014). Substantive examples include health care (Allen, 2015b), offshore software development (Boden, Nett, & Wulf, 2008), global engineering (Pernille & Christensen, 2011), and marketing (Kellogg, Orlikowski, & Yates, 2006). Understanding collective action of this kind is an important sociological and practical concern (Farjoun, 2010; Tsoukas & Chia, 2002), but it is not easy to investigate these processes and their complexity makes rigorous case study and comparative analysis difficult.

In this article, we introduce translational mobilization theory (TMT), a new conceptual framework for understanding the relationship between organizing processes and formal organizational structures. TMT is a practice-based theory (Nicolini, 2012) that connects interactionist perspectives on negotiated social orders (Strauss et al., 1964) with analyses of sociotechnical networks (Latour, 2005) and theories of strategic action fields (Fligstein & McAdam, 2011). Taking social projects as its unit of analysis, TMT facilitates understanding and systematic investigation of the mechanisms through which institutionally sanctioned collective action around socially constructed objects both mobilize projects and perform organization.

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Background

Toward a Process View of Organization

The "Negotiated Order Perspective" was developed by Strauss and colleagues (1964) to conceptualize the patterned flux found in their research on two North American psychiatric hospitals. Drawing on the domain assumptions of symbolic interactionism, the negotiated order perspective attempted to show how negotiation contributes to the constitution of social orders, and how social orders give rise to interaction processes.

> The realm of rules could . . . be usefully pictured as a tiny island of structured stability around which swirled and beat a vast ocean of negotiation. (Strauss et al., 1964, p. 313)

The approach was an important attempt to transcend the micro–macro distinction (Berger & Luckmann, 1967; Giddens, 1984) underlying the structure-agency debates within sociological theory. Critics of the approach argued that by discarding the notion of formal structure, negotiated order theorists found it difficult to cope with the limiting factors in organizational settings (Benson, 1977a, 1977b, 1978; Day & Day, 1977, 1978; Dingwall & Strong, 1985). There are certainly passages in the original formulation that justify these concerns. Strauss responded to this challenge by developing the concepts of 'negotiation context' and 'structural context' (Strauss, 1978, pp. 247-258), the former referring to the properties of the local interaction context that condition the possibilities for action, and the latter referring to the wider context in which all local interactions took place. Nevertheless, debates about structural constraints and agentic negotiation processes continued, suggesting that researchers had difficulty in applying the concepts in practice.

From within organizational studies, and taking his point of departure from social psychology, Weick also advanced a process view of organization, but whereas Strauss et al. (1964) underscored the importance of negotiation processes, Weick foregrounded organizing.

> Organization is fluid, continually changing, continually in need of reaccomplishment, and it appears to be an entity only when this fluidity is frozen at some moment in time. This means that we must define organization in terms of organizing. (Weick, 1969, pp. 90-91)

Weick is concerned with the cognitive and social processes through which organizational actors create order in conditions of complexity, which is encapsulated in the concept of sensemaking. Here, organizations take on a collective meaning in the interactions between the raw data of experience and the shared interpretative maps through which actors make sense of these experiences. This focuses attention on interaction, communication, and discourses as the sites in which organization is enacted. As with the negotiated order perspective, however, many remained uncomfortable about the displacement of the material reality of organization engendered by an idealist understanding founded on conceptual and symbolic phenomena (Robichaud & Cooren, 2013).

In offering a process view of organization, these works laid down an important challenge to classic understandings of organizations and brought to the fore the question of how to connect the fluidity of day-to-day activity with the institutional structures that make concerted action possible. While there have been several attempts to conceptualize this relationship in the intervening period, progress has been stymied by the historical evolution of the field in which the study of organizations became separated from the work that goes on within them. Barley and Kunda (2001), Dingwall (2015), and McGinty (2014) have described the conditions responsible for this and the next section draws on these accounts.

Connecting Structure and Process in Organizational Studies

Conditioning Influences

Any theory of collective action must be linked in some way to the concrete activities that it seeks to explain, and most early organizational theories were grounded in empirical investigations of work (Blau, 1955; Dalton, 1950; Fensham & Hooper, 1964; Gouldner, 1954; Lewin, 1951; Roethlisberger & Dickson, 1939; Taylor, 1911; Trist & Bamford, 1951; Walker & Guest, 1952; Warner, 1947; Whyte, 1979). Detailed comparative case studies provided the empirical foundations for classic theories of bureaucratic organizing. During the 1960s and 1970s, however, several trends led to a breakdown in this relationship. Tracing these developments, Barley and Kunda (2001) describe how organizational studies increasingly became focused on the relationship of organizations with their external environment, drifting away from concrete studies of work toward more abstract conceptualizations of organizational forms. In parallel with this, qualitative research began to fall out of favor and the discipline underwent a shift away from observational studies toward a preference for quantitative approaches, thereby distancing researchers from the real-life situated practices of the people populating the organizations they sought to understand. These trends were reinforced by the splitting of industrial sociology into "organization theory" and "work and occupations," each with a distinctive academic infrastructure and focal concerns. Scholars and researchers in organization theory migrated from departments of sociology into the newly established business schools, where they largely focused on organizational performance, strategy, and structure. Barley and Kunda conclude that by the 1990s academic interest in situated work practices was largely confined to sociologists of work, industrial engineers (Konz & Johnson, 2000), industrial psychologists (Fleishman & Reilly, 1992; Peterson & Jeanneret,

1997), industrial relations scholars (Batt, 1999; MacDuffie, 1995), and research on computer supported collaborative work (Button, 1993; Heath & Luff, 1992; Heath, Luff, & Svensson, 2002; Suchman, 1996). In effect, organizational studies stopped generating its own understanding of work.

A further consequence of these trends was to promote the idea that organizations constituted distinctive social phenomena that should be set apart from other institutionalized forms of social life. Coupled with the disciplinary divisions outlined above, this constrained cross-fertilization between organizational studies and developments in symbolic interactionism on the practical accomplishment of social order. As Abbott (2009) argues, much of the work of the early interactionists was concerned with the social production of order, but they did not distinguish formal organization from other social institutions.

> Organizations play a small role in the canonical image of Chicago sociology. This absence did not involve any lack of interest in social organization more broadly, about which the Chicagoans wrote a great deal: but by "social organization" they meant the "organizing of social life": a gerund rather than a noun, a process rather than a thing. (Abbott, 2009, p. 2, cited by McGinty, p. 157)

Thus, although interactionists engaged in studies of the social production of organization, they did so in a manner that was inconsistent with the language of the wider discipline and dominant form of organizational analysis.

Connecting Organization and Organizing

An early attempt to connect formal organization with organizing processes came in the so-called "New Organization Theory" (Meyer & Rowan, 1977). Meyer and Rowan argued that organizational forms should be treated as legitimating myths rather than literal descriptions of institutional relations. Considered in this way, structures do not determine action, but their constraining effects arise from the requirement for organizational members to account for their activities in terms that align with the prevailing normative maxims. It is possible to read Myer and Rowan as advancing a program of research into the interactional construction of organization (Dingwall & Strong, 1985); they define institutional rules in relation to Berger and Luckmann's (1967) ideas on reciprocated typifications, and connect institutions with Scott and Lyman's (1968) ethnomethodological insights on accounts. However, as the perspective developed, these micro-sociological concerns receded into the background (Barley, 2008) while its proponents focused on an institution's capacity to constrain.

From within symbolic interaction, Dingwall and Strong (1985) linked the neo-institutionalist insights of Meyer and Rowan (1977) to a broadly ethnomethodological understanding of formal organizational structures and combined this with insights from Erving Goffman and Everett C. Hughes to develop a vision of formal organization based on the notions of "charters" and "missions." A charter is the concept to which organization members orient in their interactions with one another and nonmembers, and which establish the limits of legitimate action. Alongside charters, missions represent members' own notions of "what we are here for." These concepts parallel Hughes' ideas about "licence" and "mandate" in the study of occupations; just as actions become occupational-relevant insofar as members can be seen to be oriented toward a specific license, actions in organizations can be analyzed in the same fashion. Despite its promise, this work had limited impact on theoretical or methodological developments in organizational analysis, a fate shared with other interactionist sociologists who have attempted to progress theories of organizing outside of the dominant paradigm (Clarke, 1991; Maines, 1988; for a detailed examination of these trends see McGinty, 2014).

Two later programs of work emerged from organizational studies in response to DiMaggio's (1988) critique of neo-institutionalism's inability to understand agency. The first focused on "institutional entrepreneurship," as exemplified in Oliver's (1991) classic article on how organizations respond to organizational pressures. The second, "Inhabited Institutionalism," a more recent development, is articulated most clearly in Hallett and Ventresca's (2006) discussion of Gouldner's *Patterns of Industrial Bureaucracy* (1954) and Hallett's (2010) account of a moment in an elementary school in which a new principal is appointed to introduce a different accountability regime and which became the focus of an intense struggle between the principal and the teachers. While representing important advances in the theory, however, neither body of work gets us very much closer to understanding the production of organization "as the outcome of action by people pursuing their own strategies and logics in response to an environment" (Dingwall, 2015, p. 24). In the case of institutional entrepreneurialism, "the valorization of change [is] the preferred outcome, without any effort to appreciate or understand the complex and often invisible processes by which actors work to maintain institutions or to create at least the appearance of stability" (Suddaby, 2010, p. 15). In the case of inhabited institutionalism, while highlighting the interaction between institutions and social action, both studies are overlaid with the politics of class struggle, with the effect that the main focus is the competition for control rather than the constitution of the organization (Dingwall, 2015).

Other important contributions have emerged from the field of computer supported collaborative work that has generated valuable concepts for the study of situated organizing practices—distributed cognition (Hutchins, 1995), common information space (Bannon, 2000), boundary objects (Star & Griesemer, 1989)—but these have not been developed into broader theories of organizing. This is partly because much of this work draws on activity theory, actor network theory

(ANT), and ethnomethodology, the proponents of which eschew the development of formal organizational theories on epistemological grounds, and partly because the underlying driver for the research is to inform technical solutions to specific organizational challenges.

In addition, the practice-turn (Ortner, 1984; Schatzki, Knorr-Cetina, & Von Savigny, 2001) in organizational studies has spawned a new generation of ethnographies of work (Bechky, 2003, 2006; Kellogg et al., 2006; Orlikowski, 2002) that, inter alia, have advanced understanding of organizational routines (Feldman, 2000; Feldman & Pentland, 2003; Pentland et al., 2012; Pentland & Feldman, 2008; Pentland, Haerem, & Hillison, 2011), knowledge boundaries (Carlile, 2004), knowledge mobilization (Gherardi & Nicolini, 2000), action nets (Czarniawska, 2008), and the emergence of organization from work processes (Bechky, 2006). Drawing variously on insights from ANT (Latour, 2005), ethnomethodology (Garfinkel, 1967), structuration theory (Giddens, 1984), and praxeology (Bourdieu, 1977), this work is underpinned by an understanding of organizations as enacted sociotechnical networks distributed across social time and space and converges on the question of how these shifting alliances are stabilized. While there have been theoretical and methodological advances in the study of practice at different organizational levels (Nicolini, 2010), the field has yet to generate the broader theories or frameworks necessary for studying the production of organization arising from the interplay between institutional contexts and the actions of people who inhabit them.

There is an emerging consensus about the value of new syntheses that retain some of the precepts of neo-institutionalism but which ground these in stronger accounts of the practical construction of organizations by drawing in insights from practice-based approaches and ANT (see, for example, Barley, 2008; Lawrence & Suddaby, 2006; Lawrence, Suddaby, & Leca, 2009; Lounsbury & Crumley, 2007; Lounsbury & Ventresca, 2003; Nicolini, 2010; Suddaby, 2010). Taking social projects of collective action as the primary unit of analysis, TMT responds to this call. It offers a theoretical framework that supports research in the space between formal organization and everyday organizing practices. In the next part of our paper we describe the origins of TMT and outline its core components.

TMT

Empirical Foundations of TMT

TMT has two points of origin. First, it builds on the cumulative analysis of a longstanding programme of ethnographic research on the social organization of healthcare work (Allen, 1997; 2000a, 2000b; 2001; 2004; 2009), which is crystallized in an examination of the work hospital nurses do to make the socio-material connections necessary to progress patient care (Allen, 2015a, 2015b). This study concluded that nurses function as 'obligatory passage points' in healthcare systems to funnel, refract and shape the activities and materials contributing to patients' pathways through the service. 'Translational Mobilization' is the term coined to refer to the constellation of practices (object formation, reflexive monitoring, translation, articulation, sense-making) and resources (organizational and clinical knowledge, material and immaterial artefacts) through which nurses fulfil this function. Second, it draws on conceptual insights derived from Normalization Process Theory (NPT) (May & Finch, 2009; May, 2013a, 2013b). NPT emphasizes the central importance of sense-making, collective action and reflexive monitoring as agentic mechanisms in shaping implementation and integration processes within broader contexts of socio-technical and organizational change. The interaction between these two programmes of work formed around a shared interest in the social organization of acts of *object formation, articulation* (Strauss, 1988) and *translation* (Latour, 2005).

These foci provided the foundations for the development of TMT, which is concerned with *projects* and the *objects of practice*, their *trajectories*, and *mobilization* within *a strategic action field* (Fligstein & McAdam, 2011). TMT is a grounded theory (Glaser & Strauss, 1967) in as much as it grows out of a substantial body of empirical research. It also represents a new theoretical synthesis, as it connects and reworks resources deployed in the analyses of these empirical materials.

The Propositions of TMT

TMT draws on and reworks elements of the negotiated order perspective (Strauss et al., 1964) and ecological approaches to the division of labor (Strauss, Fagerhaugh, Suczet, & Wiener, 1985), insights from computer supported cooperative work (Engeström, 2000), ideas about actor networks (Latour, 2005), Weick's (1995) notion of sensemaking, and the conceptualization of strategic action fields laid out by Fligstein and McAdam (2011). By engaging with these currents of thought, we seek to elucidate the mechanisms through which projects of social action are mobilized and to explain the relationship between these practices and the institutional contexts in which they are accomplished. The social phenomena we are concerned with are characterized by organization and goal-directedness. Following Strauss (1988), our first formal proposition is as follows:

> **Proposition 1:** Collective strategic action in institutional settings is mobilized through "projects."

Strauss introduced the notion of "projects" in his studies of the social organization of work as a vehicle for developing ideas around articulation (see below) and accountability (Strauss, 1988). Comprised of the totality of activities arrayed both sequentially and simultaneously along a trajectory of action (an arc of work), projects are simultaneously goal-oriented and emergent.

> At least some of the arc is planned for, designed, foreseen; but almost inevitably there are unexpected contingencies which alter the tasks, the cluster of tasks, and much of the overall task organization. Hence the arc cannot be known in all its details—except in very standard, contingency-minimal projects—until and if the actors look back and review the entire course they have traversed. (Strauss, 1985, p. 4)

Strauss focuses on project structure and its implications for the social organization of work. Here, we augment this framing with insights from computer supported cooperative work, specifically cultural historical activity theory (Engeström, 2000). The major contribution of this perspective is the insistence that social practice is always mediated through artifacts. These may be material—surgical instruments, checklists, or algorithms—or cognitive—categories, concepts, or heuristics. Artifacts do rather more than support action, however; they change the nature of the task and the sociotechnical distribution of work. Thus, objects of practice can only be understood within the constraints and affordances of artifacts. From this synthesis, then, we arrive at an understanding of a "project" as an emergent, goal-oriented enterprise, constructed by the interests of those that gather around it, and which has an associated division of labor, tools, technologies, practices, norms, rules, and conventions. This leads to our second formal proposition:

> **Proposition 2:** Projects follow trajectories through social time and space when they travel through institutional contexts.

In their studies of health care, Strauss et al. (1985) introduced the concept of an illness trajectory to refer to the physiological unfolding of a disease, the total organization of work associated with its management, and its impact on those involved in the work and its organization. The notion of a trajectory can be extended to any project—a research proposal, an innovation, new regulation—and prompts questions about the practices through which action is mobilized across time and space and the relationships between these processes and the context in which they are negotiated. Strauss et al. linked trajectories of care with the "thick context of organizational possibilities, constraints, and contingencies." To explore this relationship, we turn to the reworking of field theory by Fligstein and McAdam (2011), which leads to the third formal proposition of TMT:

> **Proposition 3:** Projects generate, and are generated by, strategic action fields.

The concept of a strategic action field was developed by Fligstein and McAdam (2011) and is a synthesis of ideas drawn from scholarship in economic sociology, organization studies, and the sociology of social movements. They point to growing intellectual exchange and cross-fertilization between these bodies of work, with social movement scholars increasingly looking to organizational studies in favor of a "rationalist" view of social movements as forms of organization, and scholars studying organizations increasingly looking to social movement studies to explain organizational change. They propose a synthesis of these currents of thought, arguing that at a fundamental level, scholars of organizations and social movements or any institutional actor in society, are concerned with the same thing: collective strategic action. They lay the foundations for a formal theory of strategic action fields to conceptualize this phenomenon. For our purposes, this work defines the social contexts in which projects are mobilized. Strategic action fields are formed

> where actors (individual or collective) interact with knowledge of one another under a common set of understandings about the purposes of the field, the relationships in the field (including who has power and why), and the field's rules. (Fligstein & McAdam, 2011, p. 3)

Conceptualized as meso-level social orders, constructed on a situational basis around a salient concern, Fligstein and McAdam (2011) highlight four aspects of the meaning underlying strategic action fields.

a. While acting with a shared understanding about what is going on, actors within a strategic action field can operate with diffuse understandings of what it at stake.
b. Within a strategic action field, some actors are generally regarded as having more or less power and field actors have a general understanding of who occupies those roles in a given field.
c. Actors within a strategic action field have a shared cultural understanding about the rules of the field and what tactics are legitimate for each of the roles in the field.
d. The degree to which actors share the same interpretative frame for making sense of action is an empirical question.

Fligstein and McAdam argue that people are always acting strategically to create and maintain stable social worlds by securing the cooperation of others. Strategic action fields always operate in a larger political, economic, and social context; like a Russian doll, open one up and it contains other strategic action fields. This leads to our next proposition:

> **Proposition 4:** Strategic action takes place within particular institutional contexts that furnish the structures and interpretative resources (actors, norms, roles, identities, discourses, scripts, rules, artifacts, routines, materials, events, processes, and practices) through which social action proceeds, is made sense of, and is accounted for.

The concept of "institution" has come to be associated with formal organizations, but here we use the notion in its widest

sense to refer to any recognizable social form that is a pattern of, and a pattern for, behavior (Hughes, 1936). Institutions have different reach; some cover the actions of a large part of society—such as family—others are relatively local. Whatever their scope, institutions furnish the meaning structures—the conventions, normative assumptions, classifications (Cicourel, 1964), logics (Alford & Friedland, 1985), and interpretative repertoires—that shape legitimate action in a given social space. These common maxims are the resources through which the ordering of activities is achieved and at the same time they are themselves in a continuous state of becoming as a result of these processes. Thus, while normative conventions shape action, they may also be negotiated, interpreted, and stretched by participants. Moreover, it is not unusual to find competing or alternative interpretative frames and contradictory institutional logics in everyday life that must be reconciled (Dodier, 1998). It is through interactions with these local stocks of knowledge that objects of practice are imbued with identities and meanings that make possible concerted action. This leads to our fifth proposition:

> **Proposition 5:** An object of practice is a sociomaterial ensemble that is the focus of action by individuals and groups enrolled in a particular project.

There is a growing acknowledgment in a number of intellectual traditions (e.g., ANT, activity theory, distributed cognition models) that, far from being concrete entities or things around which work is coordinated, objects of practice have to be understood as emergent sociomaterial ensembles (see also, May & Finch, 2009). Not only are the objects of practice always in the process of becoming, they are regularly fragmented across a field of action, with their identities constructed in different ways according to actors' purposes, the artifacts with which they work, or the situation at hand. Mol (2002) illustrates this point clearly in her study of the multiple enactments through which a diagnosis of atherosclerosis is accomplished. She reveals how the "atherosclerosis" that is achieved in the vascular laboratory, differs from the "atherosclerosis" observed in clinic, which is different again from the "atherosclerosis" performed in the operating theater. Mol suggests that if we accept that reality is performed through a diversity of practices, then a central concern is how concerted action is made possible. Following from Strauss (1985), this leads to our next proposition:

> **Proposition 6:** Articulation is a secondary work process through which agents align their activities around a shared object of practice.

Articulation is one of a number of categories of work identified by Strauss et al. (1985) in *The Social Organization of Medical Work*. It refers to the actions, knowledge, and resources necessary to enable collaboration around a shared work object and was later developed into a generic theory of articulation (Corbin & Strauss, 1993; Strauss, 1988). Despite having limited impact on mainstream organizational studies, articulation has been a central orienting concept in computer supported cooperative work (Fjuk, Nurminen, & Smordal, 1997; Schmidt & Bannon, 1992) where, through cross-fertilization with activity theory, ideas around distributed cognition, and ANT, it has generated a rich vein of research on the sociomaterial accomplishment of cooperative action in a wide range of organizational fields: the oil industry (Rolland, HepsØ, & Monteiro, 2006), health care interfaces (Symond, Long, & Ellis, 1996), emergency work (Raraj & Xiao, 2006), London Underground (Heath et al., 2002), and navigation bridges (Hutchins, 1995). Articulation work can be of different kinds: Temporal articulation work aims to guarantee things happen at the appropriate time and in the right order (Bardram, 2000), material articulation work aims to ensure the availability of the materials to support action (Allen, 2015b), and integrative articulation work aims to safeguard the coherence of different components of project work (Allen, 2015b). Articulation work can also be embodied; Hindmarsh and Pilnick (2002), for example, use of video data to illustrate the importance of "intercorporeal knowing" in real-time coordination in anesthetic teams.

A key concern in computer supported cooperative work is how different organizational contexts influence articulation. For example, articulation in settings, such as control centers (Heath et al., 2002), navigation bridges (Hutchins, 1995), or anesthetic rooms (Hindmarsh & Pilnick, 2002, 2007), proceeds because participants coordinate their respective actions by monitoring the field of work and each other's behavior, and adjust their respective contributions accordingly. The articulation challenges are quite different in complex organizations, where projects may include many spatially distributed actors, a large number of intertwined activities, actors or resources, different areas of competence with different conceptualizations of goals, or work carried out over a long time span (Færgemann, Schilder-Knudsen, & Cartensen, 2005). In such circumstances, it cannot be assumed that organization will emerge from the work process; it must be intentionally accomplished or produced. A core concern, then, has been with developing an understanding of the requirements of distributed and complex fields of activity to inform the development of technologies to support concerted action. Our next proposition follows from the work of Latour (2005) and reflects on this problem.

> **Proposition 7:** Translation is the mechanism through which agents reconfigure the objects that are the focus of their action.

For Strauss, articulation was concerned with the adjustment and alignment of activity around a shared work object. When practice objects are conceptualized as emergent sociomaterial ensembles, however, then progressing project trajectories entails *translation* of the objects of those practices. Derived from ANT, translation refers to the mechanisms through which components of a sociotechnical network are held together, either through the alignment of goals and concerns, or by keeping contradictory elements apart. The concept has both a geometric and a semiotic referent and relates to the movement of an entity in time and space as well as its translation from one context to another. This

second sense is analogous to language translation with all the attendant transformation in meaning this implies (Gherardi & Nicolini, 2005). For our purposes, it entails processes of formation in which objects are imbued with identity and meaning by agents, the transformation of the practice object of one actor into the practice object of another, and the negotiation of "stabilizations," that is, settlements on the status of an object about which all can agree (see, for example, Allen, 2015b). In certain circumstances, stabilizations may be distilled or crystallized into "immutable mobiles," such as standards, protocols, or prototypes, which can be easily transported between people and have a degree of permanence. In other circumstances, stabilizations are relatively ephemeral and temporally bounded by the requirements of the situation. It is also the case that under certain conditions mobilization proceeds because objects are sufficiently vaguely defined—termed: "boundary" (Star & Griesemer, 1989), "quasi" (Serres, 1982/1995), "blank" (Hetherington & Lee, 2000), or "virtual" objects (Middleton & Brown, 2005)—to align the interests of a diverse constellation of actors across time and space, while retaining enough solidity to provide the basis for concerted action (see also Granovetter, 1973; Löwy, 1992). Whereas a range of formal organizational artifacts, such as standards, plans, and protocols, operate as "intermediaries," enabling objects to travel without transformation, mobilization often depends on the work of "mediators" that act to translate objects to facilitate their movement from one context to another (see, for example, Allen, 2015b; Gherardi & Nicolini, 2000). Translation entails transformational chains in which one ordering or stabilization is enfolded into another. This leads to our next proposition:

Proposition 8: Here, reflexive monitoring is the mechanism through which project trajectories are evaluated and appraised.

Reflexive monitoring refers to the processes by which actors individually or collectively appraise and review activity. In NPT (May & Finch, 2009), it refers specifically to implementation processes, but these observations hold equally for processes of translational mobilization and they are integral to articulation work. In a distributed field of action, reflexive monitoring is the mechanism through which participants accomplish situational awareness (Gilson, 1995) of an overall project trajectory, including information on short-term tasks—action awareness (Hindmarsh & Pilnick, 2007), the relationship between project elements—coordinative awareness (Cabitza, Sarini, & Simone, 2007); knowledge of the evolving activity over time—activity awareness (Paul & Reddy, 2010); where the project fits into the wider field of action—what we might think of as contextual awareness; and where their own role fits into the larger network of action—we can call this self awareness. Reflexive monitoring can be formal and informal; the formality and intensity of reflexive monitoring processes in a given project varies, and is conditioned by the wider institutional context and its associated structures, technologies and interpretative repertoires. Here, Weick's (1995) conceptualization of sensemaking in organizations opens up a further and final proposition:

Proposition 9: Practices of sensemaking mediate the relationship between the production and reproduction of institutionally sanctioned agency and the production and reproduction of institutionally framed objects.

Subjects and objects in translational mobilization processes are intertwined; they are not only organized by institutions but also organize institutions (Law, 1994). Sensemaking refers to the processes through which agents create order in conditions of emergence. Not to be confused with interpretation, sensemaking is performative; it entails enactment or authorship, and is located in the material and discursive activities through which members organize their work, account for their actions (Mills, 1940; Scott & Lyman, 1968), and construct the objects of their practice. It can be informal—threaded through the ongoing chains of everyday social interactions, or formal—such as in meetings, appraisals, and the creation of organizational records. Sensemaking links practice and organization; it is simultaneously a mechanism of mobilization and institutionalization.

Summary Statement of TMT

Contemporary studies of work and organization focus attention on projects as emergent sociotechnical and sociomaterial practices, and on organizations as relational and institutional processes—continuous social accomplishments that are built and sustained over time. TMT connects these domains of projects, practice, and organization, by providing a framework for understanding movement between them. TMT does this because it characterizes and explains the mechanisms through which participants in emergent social contexts are enrolled in goal-oriented activity, construct institutional identities for the objects of their practice (human or nonhuman) to accomplish their movement through time and space, and, in so doing, perform and produce the institutions in which they are reflexively enrolled. The central elements of TMT are the *project* (what is done in collective action), the organizing logics and meaning structures of *strategic action fields* (*where* it is done), and the mechanisms of *mobilization* and *institutionalization* (*how* it is done).

Core Components of TMT

Projects are the primary unit of analysis in TMT. They can be defined thus:

1. **Project**: A sociotechnical ensemble of institutionally sanctioned strategic activity mobilized across a distributed action field.

Projects take many forms and can be framed at different levels of granularity depending in one's purpose. They may represent *strategic impulses*, like those that have produced and reproduced large-scale regulatory frameworks for

pharmaceutical products (Abraham & Lewis, 2002; Abraham & Sheppard, 1999). They may be formed through loosely tied and *temporary assemblages* of clinicians, scientists, and engineers organized around the adoption and diffusion of new medical technologies (Burri, 2008). They may link highly *contextualized practices*, like those of Australian community midwives screening their clients for intimate partner violence (Spangaro, Poulos, & Zwi, 2011). Whatever their form, projects are constituted through institutionally sanctioned sociotechnical networks of distributed action (regulation, adoption, practice) and actors (states, professions, practitioners), and they follow trajectories through social time and institutional space (jurisdictions, health care services, homes). These networks of action and actors, and the trajectories that projects follow, are bounded by strategic action fields, that is, the meso-level social orders proposed by Fligstein and McAdam (2011). Strategic action fields are defined as follows.

2. **Strategic Action Field**: The institutional context in which projects emerge and are progressed and which provide the normative and relational frame for collective action.

Such frames have four further elements.

a. **Organizing logics**: Elements of a strategic action field that provide a set of normative conventions that define the scope of possible action and shape its purpose;
b. **Structures:** Elements of a strategic action field that differentiate social actors (divisions of labor, social worlds, hierarchies, departments, units, teams);
c. **Materials/technologies:** Elements of a strategic action field that provide agents with the materials and technologies to support their practice; and
d. **Interpretative repertoires**: Elements of a strategic action field that provide agents with a set of cognitive artifacts and relational resources for sensemaking (classifications, scripts, categories, discourses, routines).

Strategic action fields furnish the normative and relational resources that enable and give shape to practices of mobilization, and the mechanisms of articulation, translation, sensemaking, and reflexive monitoring, that are played out through, and drive, collective action. In pharmaceutical regulation, these include the formulation of legislation. In new medical technologies, they can be found in policies about their adoption. In screening for partner violence, they are evident in the identification and management of risk. It is through these mechanisms that objects of practice and organization are given logic and meaning: Controls are placed on corporations, the users and uses of new machines are negotiated, and the vulnerable woman and child discovered. We can specify these in more detail.

3. **Mechanisms of Mobilization and Institutionalization**: Processes through which agents operating within a strategic action field mobilize projects, drive action, and perform institutions through the interactions between
   a. **Object formation:** Practices that fabricate and configure the objects of knowledge and practice and enroll them into an actor network;
   b. **Articulation work:** Practices that assemble and align the diverse actors (people, knowledge, materials, technologies, bodies) through which object trajectories are mobilized;
   c. **Translation:** Practices that enable practice objects to be shared and differing viewpoints, local contingencies, and multiple interests to be accommodated to enable concerted action;
   d. **Reflexive monitoring:** Practices through which actors evaluate a field of action to generate situational awareness of project trajectories; and
   e. **Sensemaking:** Practices though which actors order, construct, and mobilize projects and enact institutions.

These constructs describe and explain the practices and processes through which projects of collective action are mobilized in strategic action fields and identify the distinctive mechanisms that connect practice and organization and agency and structure. We lay out these possibilities in Box 1. In specifying these processes, TMT brings the relationship between fluidity and stabilization to the fore to explain the reciprocal mechanisms of project mobilization and institutionalization.

Box 1. Precepts of translational mobilization theory.

1. Collective, goal-oriented action in institutional settings is mobilized through projects that have contingent outcomes.
2. A project is an institutionally sanctioned sociotechnical network of distributed action and actors that follows a trajectory through time and space.
3. Projects are generated by, and generative of, strategic action fields.
4. Strategic action fields are located in institutional contexts, which create the resources that enable, and the conditions that shape, project mobilization.
5. Projects in complex social systems are mobilized through the mechanisms of object formation, articulation, translation, reflexive monitoring, and sensemaking.
6. The mechanisms of project mobilization connect the domains of practice and the domains of organization through processes of sensemaking.
7. There is a reciprocal relationship between the production and reproduction of institutionally sanctioned agency and the production and reproduction of institutionally framed objects.

Application of TMT

TMT offers a structure for rigorously describing the organization of practice and the production of organization and makes possible systematic explanation and prediction. In the final section of the article, we demonstrate the application of this framework to a health care trajectory and a research project.

Box 2. Case Study 1: A health care trajectory.

The management of pathways of care through modern health services is a profoundly complex enterprise. Health care is a work of "many hands" (Aveling, Parker, & Dixon-Woods, 2016): Patients receive input from a range of providers and specialists, and they may also be required to move between different departments and organizations. While professionals and policy makers use the language of teamwork to describe practice, much of everyday service provision is characterized by action and knowledge that is distributed across time and space, fragmented and multiple understandings of the patient, and largely independent staff contributions.

Understanding these processes, their interrelationships, and impacts is challenging. In even the simplest of cases, the strategic action field framing an inpatient care trajectory will involve different departments (service directorate, portering, catering, laboratories, administration, procurement) each with its own staff and internal divisions of labor (nurses, doctors, allied health professionals, clerks, porters, caterers, technicians). While all might agree on the higher order goal of ensuring the patient's recovery, actors' enrollment in the care of a particular patient is shaped by different concerns, reflecting the organizing logics that drive their activity. Doctors are concerned with diagnosis and treatment, nurses with care and comfort, allied health professionals with rehabilitation, and managers with patient care episodes and organizational efficiency.

Initial mobilization of health care trajectories is typically generated through multiple processes of object formation. This is achieved through the deployment of a range of materials (equipment, laboratories, information) and interpretative repertoires (diagnostic categories, assessment tools, mental models, guidelines, administrative codes) through which different actors make sense of and translate the qualities of individuals into categories that enable them to do their work. While this looks like repetition to patients, the configuration of the case that emerges for the purposes of reaching a medical diagnosis is different from that generated by nursing staff assessing care needs or the allied health professionals planning rehabilitation, and different again from the patient data created by service managers. These practices are embedded in established organizational routines and formal procedures that are important mechanisms of mobilization in a context in which project members must be interchangeable to provide 24×7 ongoing care.

For certain parts of the care trajectory, progress is possible because goals are sufficiently broadly defined to enable parallel paths of action. Take preparation of an individual for surgery, for example. Nurses can ensure that the patient has received information about his or her operation and what is expected in the postoperative period, doctors can mark the operation site and obtain informed consent, and the laboratory technicians can group and crossmatch blood without the requirement for interaction. At certain junctures, however, it is necessary for these different versions of the patient to be articulated to enable concerted action to progress. In some instances, this can be achieved through formal coordinating mechanisms, such as the preoperative checklist that functions to ensure that the work of nursing, medical, and laboratory staff in preparing a patient for surgery is accomplished at the point that the individual goes to the theater. In other instances, mobilizing health care depends on more than the alignment of activity; it requires patients to be translated from an object of practice of one actor to that of another. An obvious example is hospital discharge, where understanding of the patient's needs in the acute setting has to be reassessed in the light of the new context for care and aligned with the work of community team that, unlike the 24-hr hospital service, can offer only intermittent support. A whole host of arrangements exist through which this can be achieved in different combinations depending on the complexity of the case: specialist discharge management nurses, case review meetings, home visits, discharge summary letters, formal referral pathways, and interprofessional negotiations. Trajectory mobilization involving transfers of care across organizational interfaces often entails the negotiation and renegotiation of both the "needs" of the case and the "work" of the receiving agency to secure a match (Allen, 2015a) and brings into sharp relief the relationship between mobilization and institutionalization processes.

The hospital setting is characterized by multiple processes of formal and informal reflexive monitoring, reflecting its complex division of labor, the unpredictability of individual trajectories of care, and the need for staff to manage competing priorities, which can create disarticulation and drift (Berg, 1997). First, individual staff and teams review their workload and respective contributions by checking case notes, making sense of different kinds of information, holding discussions with colleagues, and participating in formal handover processes. Second, actors need to maintain an overview of the whole case and to understand where their contribution fits in with that of others. Hospital life is punctuated with ward rounds and team meetings designed for this purpose although compared with the speed that trajectories evolve, these are relatively infrequent occurrences and rarely, if ever, attended by all actors involved in given case. As Allen (2015b) has shown, nurses have an important role in supplementing these formal coordination events, through the generation and circulation of "trajectory narratives" that encapsulate the status of a patient's overall care and can be shared in different formats according to the needs of the recipient. Third, another facet of reflexive monitoring in health care entails keeping oversight on the whole system of care to effectively deploy resources and staff. Visual management techniques—such as white boards—are increasingly common and particularly important for monitoring organizational or departmental status in fast flowing environments such as Emergency Units although their utility depends on the quality and currency of the information they display.

Trajectories and health care organizations are bound together with sensemaking processes as staff draw together resources to construct a case, plan care and treatment, negotiate patient transfers, and account for their actions, and in doing so they give meaning and substance to the institutional context and structures that shape activity and condition future action.

Box 3. Case Study 2: A multidisciplinary research project.

In the field of health services research, there is a growing trend toward large-scale applied studies that involve multidisciplinary research teams (trialists, statisticians, social scientists, qualitative and quantitative experts, implementation scientists) working in partnership with clinicians and service users. Project members are ordinarily drawn from different departments and/or institutions that may span international boundaries and the research itself must be progressed in multiple research sites. Research projects typically begin with a lengthy planning phase in which members must agree on study design and roles and responsibilities. It is not unusual for the research protocol to require adjustments as the work proceeds, however, and maintaining alignment of all actors in interdisciplinary projects can be challenging.

The strategic action field framing a research project will comprise of the different higher education institutions, academic departments, and health care organizations represented by immediate team members; the research funding body; regulatory frameworks relating to ethics and research governance; the potential users of the research (patients, public, and providers); as well as the wider research communities. These generate the institutional context—the structures, organizing logics, materials, and interpretative repertoires—that condition the possibilities for action. Most research is driven by common logics relating to the requirements of methodological and scientific rigor, research ethics and governance frameworks, and the relevance and transferability of the study findings to clinical practice. Within this overarching framework, however, different disciplines have their own discourses, canons, and interpretative repertoires. The qualitative social scientists are concerned with the depth of understanding, accessing a full range of perspectives, and the generation of empirically grounded concepts and theories; the health economists are concerned with accurate costing of all inputs; and the statisticians are concerned to identify appropriate and reliable outcome measures and generate robust data sets with sufficient power to undertake predictive modeling. Whereas academic team members' overriding focus may lie with the quality of the science, clinical team members may be more concerned with the practical implications and transferability of the research. The success of an applied project hinges on the management of these different frameworks. Projects are also shaped by the availability of materials and resources that condition the possibilities for action, for example, the funding envelope, access to technology, and the type and volume of data that can be generated.

The mobilization of a research study typically begins with a collective act of object formation through the development of a funding application. This begins the process of enrolling relevant actors into the project, agreeing to the research question and study design, negotiating roles and responsibilities (chief investigator, principal investigators, research managers, workstream leads, clinicians, researchers, and patient/public representative—and advisory and/or steering group membership), and identifying the resources required and how these are distributed. While methodologies and techniques are to some extent standardized, these must be adapted in response to the technical and logistical requirements of the project, the relationship between elements of the research must be formalized, and research aims must be aligned with the possibilities for investigation. Communicating across disciplinary boundaries can be challenging and there is a need to develop understanding among team members. This may not simply be a case of finding a common language, but thinking about a problem in an entirely different way and working through the logic of this reformulation for the study. Actors may have different degrees of interpersonal familiarity; some may have worked together on previous projects, for others these relationships need to be developed de novo. These connections take time to develop and maintain, a factor rarely taken into account by research funding bodies.

Research projects typically require considerable start-up time to ensure that all the structures necessary to proceed are in place. This involves the creation of new objects of practice: data analysis plans and associated artifacts (data extraction templates, interview schedules, coding frames), research ethics materials (research protocol, study information sheets, consent forms), and communication resources (project website, business cards, news letters, media launch, and conference presentations). Each of these examples represents a sensemaking practice in which the meaning of the protocol is negotiated and translated into the tools and materials designed to accomplish the work. These are important mechanisms through which projects are articulated across the research team and study sites although rarely do they act alone. Additional effort by human agents is necessary to enable them to work as intended and keep action in alignment with project goals.

Another mechanism of research project articulation is through the designation of clearly defined workstreams. Holding network elements apart in this way is an important translational technique; as long as they remain in alignment with the study protocol, they can be mobilized in parallel. Of course, this separation may be time-bounded, with some form of synthesis across project workstreams required in the final analysis, necessitating other kinds of translational work. For example, qualitative data might be deployed to make sense of quantitative outcomes; quantitative modeling might be applied to test qualitative propositions. Funding bodies often seek assurances that such syntheses will be forthcoming.

While proposal writing and study setup are important moments of object formation that enroll actors, resources, materials, and interpretative repertoires into a network, these are rarely one-off events. Research is an emergent activity, necessitating adjustments and revisions to the original plans and a renegotiation of practice objects. This is an acknowledged challenge for health services researchers, as the institutional context in which research projects are mobilized is predicated on a biomedical model of science, and demands high degrees of stability and centralization. Any changes to the study necessitate a restatement and approval of new structures and standards to bring these in line with the emerging nature of the research. Unsurprisingly, then, much of the reflexive monitoring, in the context of research projects, is driven by the need to ensure alignment with the formal study protocol and hinges on formal processes of mapping progress against an agreed plan of activity and reviewing efforts across different elements of the study to ensure coherence. The funding body and steering group have a role here in monitoring progress against objectives and making critical decisions about the study's continuation in the face of delays in progress.

The cases were selected because of our familiarity with these areas of practice and described here in broad terms because of the limitations of space. Nevertheless, they illustrate the value of TMT for the systematic analysis and description of complex organizational processes and its potential for comparative purposes. Thus, whereas health care trajectories commence swiftly through parallel projects of object formation in which actors working within a clear division of labor deploy established routines and practices inscribed in a range of sensemaking artifacts, research projects depend on significant initial investment in agreeing to study aims, structures and standards, and roles and responsibilities. Whereas the exercise of professional judgment in health care enables standards and protocols to be interpreted flexibly in individual cases, in research projects, standards and operating procedures must be revised to bring them in line with amendments to the study design, and is an acknowledged bureaucratic burden that can inhibit progress. In both cases, mechanisms enable the parallel mobilization of project elements. In health care, where trajectories of care exhibit high degrees of fragmentation and fluidity, mobilization is made possible because of the work of nurses in mediating these interrelationships. Whereas in research, the relationship between project elements is more typically embedded in the research design and mediated through adherence to study protocols. While we have focused here on clearly defined institutional frameworks, TMT takes a broad understanding of institutions and does not equate this term with formal organizations. It is particularly well suited to the study of innovation and implementation processes given the close relationship with NPT. TMT and NPT share a common orientation to collective action and reflexive monitoring as social action that takes place within the parameters of strategic action fields. TMT characterizes mechanisms by which action may be made to cohere and move within fields, while NPT characterizes the mechanisms that motivate and shape the embedding of these mechanisms.

Conclusion

TMT has theoretical and empirical implications. Its distinctive contribution is that it takes *projects* as its unit of analysis, and this makes it possible to interrogate both the contexts of collective action and the concrete practices through which social action is structured and mobilized. Earlier in the article, we pointed to the way that contemporary theories of organization and organizing have become decoupled. In this context, middle range theories like TMT support bridge building between different higher order theories—like neo-institutionalism and ANT—because they provide opportunities for federation (Boudon, 1991). We have proposed some core mechanisms that link organization and practice, and these are important units of analysis. Investigating the dynamics of these mechanisms helps us address a central social science problem of understanding both action *in* its organizational contexts, and relations *between* action and context. This shifts attention from narratives about organizational structures and their meanings, to inquiries about actors and their actions in different environments. It is the operation of these mechanisms, and the projects that are formed through them, that become the focus of analysis for further empirical investigation. The value of such approaches is that they permit prospective, cumulative, and synthetic analyses. This enables studies of all kinds to be linked together, not by methodology, but by the activation of theoretical constructs. In turn, this enables comparative studies across the intersections between institutional contexts. This is necessary to better understand the relationship between organizing practices and the practices of organization in the complex emergent social contexts that have become the hallmark of late modernity.

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