GRASPING THE LOGIC OF PRACTICE: THEORIZING THROUGH PRACTICAL RATIONALITY

JÖRGEN SANDBERG
University of Queensland

HARIDIMOS TSOUKAS
University of Cyprus and University of Warwick

There is an increasing concern that management theories are not relevant to practice. In this article we contend that the overall problem is that most management theories are unable to capture the logic of practice because they are developed within the framework of scientific rationality. We elaborate practical rationality as an alternative framework and show how it enables development of theories that grasp the logic of practice and, thus, are more relevant to management practice.

Practice has a logic which is not that of the logician (Bourdieu,1990: 86).

The gap between theory and practice has been a persistent concern in the applied social sciences (Argyris & Schön, 1974; Lawler et al., 1999; Lindblom & Cohen, 1979; Lupton, 1983; Shapiro & Wagner DeCew, 1995). In organization and management science, in particular, there has been an increasing dissatisfaction with management theories' capacity to be relevant to management practice (Bartunek, Rynes, & Ireland, 2006; Ghoshal, 2005; Markides, 2007; McGahan, 2007; Starbuck, 2006; Tushman & O'Reilly, 2007; Van de Ven, 2007; Van de Ven & Johnson, 2006; Vermeulen, 2007). Growing evidence suggests that organizational and management research produces knowledge that is distant from management practice, rather than knowledge that helps advance that practice (Bennis & O'Toole, 2005; Ghoshal, 2005; Hambrick, 2007; Mintzberg, 2004; Rynes, Giluk, & Brown, 2007; Schön, 1983; Van de Ven & Johnson, 2006). Repeated calls have been made to bridge the gap between the formal knowledge produced by management scholars and the applied knowledge practition-

ers need (Cohen, 2007; Pfeffer, 2007; Saari, 2007; Van de Ven, 2007).

Except for the researchers who believe the theory-practice gap cannot be bridged because the system of scholarly knowledge production is radically different from business organizations (Kieser & Leiner, 2009) or it ought to remain different (Grey, 2001), there are two main explanations for the gap (Shapiro, Kirkman, & Courtney, 2007; Van de Ven & Johnson, 2006): the "knowledge transfer problem" explanation and the "knowledge production problem" explanation. The former claims that the theory-practice gap can be reduced via better ways of communicating between academia and practice. The latter contends that the gap can be mitigated via more collaborative forms of research between scholars and practitioners (Hodgkinson & Rousseau, 2009; Novotony, Scott, & Gibbons, 2001; Van de Ven, 2007), better research designs (Lawler et al., 1999), and appropriate academic career incentives and editorial policies (Pfeffer, 2007).

While these explanations and the ensuing recommendations are insightful and useful, they do not question the basic ontological-cum-epistemological (hereafter "onto-epistemological") premises underpinning the framework of scientific rationality within which most organization and management theories have been developed. This is problematic, because if the theories we develop do not resonate with practitioners, what does this tell us

about our theories and the ways we develop them? What do practitioners experience "out in the real world" (John Reed, former CEO of Citigroup; quoted in Weick, 2003: 453) that we fail to reflect in our theories (Chia & Holt, 2008; Mintzberg, 2005)? Could it be that the onto-epistemological assumptions we make about the phenomena we investigate "artificialize" (Bruner, 1990: xiii) our objects of study, "strip out most of what matters" (Weick, 2007: 18), and lead to sterile research outcomes, typically in the form of "mainstream journal articles [that] are written as if they apply to some disembodied abstracted realm" (Zald, 1996: 256; see also Starbuck, 2006)? If so, why and how does this happen? More important, how can this problem be overcome?

In light of the above, our purpose in this article is to explore the following question: How can organizational and management theories be developed so they better reflect the way actors enact their practice and, thus, are more relevant to practice? To do this we first identify the key onto-epistemological assumptions that have guided mainstream theory development in organization and management science. Those assumptions, we argue, derive from the framework of scientific rationality, which we describe and critique. In particular, we show that the scientific rationality framework prevents researchers from developing theories that capture "the logic of practice" (Bourdieu, 1990). The result is that theories generated within the scientific rationality framework (what we call here "scientific rationality theories") are not able to connect with organizational practice and its practitioners.

Second, and more significant, we provide the alternative framework of practical rationality, which is largely based on the existential ontology of Heidegger (1996/1927) and those philosophers who broadly follow his line of thinking, such as Taylor (1985a,b), Dreyfus (1991), Polt (1999), and Schatzki (2002, 2005), together with insights from the practice turn that is taking place in organization and management science and the social sciences more broadly (Bourdieu, 1990; Orlikowski, in press; Polkinghorne, 2004; Reckwitz, 2002; Sandberg & Dall'Alba, 2009; Schatzki, 2005). Practical rationality offers a coherent onto-epistemological framework for generating what we call "practical rationality theories"—namely, theories that, insofar as they

explore how organizational practices are constituted and enacted by actors, capture essential aspects of the logic of practice. Practical rationality theories, therefore, make it possible to significantly reduce the theory-practice gap within management and organization science. Moreover, the framework of practical rationality provides fresh insights into how recent practice-based organizational and management theorizing (Gherardi, 2000, 2006; Jarzabkowski, Balogun, & Seidl, 2007; Nicolini, Gherardi, & Yanow, 2003; Orlikowski, in press; Tsoukas, 2005; Whittington, 2006) may be further developed.

It should be noted that contrary to the possible impression that scientific rationality is merely concerned with theory (ignoring practice) and practical rationality merely with practice (ignoring theory), they are equally concerned with *both* theory and practice. Where the two frameworks differ is in their assumptions about how theory and practice are related. If practical rationality better captures the logic of practice, as we will show in this article, it is not because practical rationality deals with practice while scientific rationality allegedly does not (that would be a tautological argument to make). Instead, it is because practical rationality, by making particular onto-epistemological assumptions concerning the relationship between theory and practice, makes theory a derivative of practice and, thus, more reflective of the "richness" of practice (Weick, 2007: 14). In contrast, scientific rationality, by making distinctly different onto-epistemological assumptions about the theory-practice relation, makes practice derivative of theory and, thus, practical relevance more abstract and less rich.

The paper is organized as follows. We begin by outlining the main onto-epistemological assumptions underlying modern scientific rationality and show why management theorizing that is predicated on those assumptions fails to connect with practitioners. Thereafter, we elaborate practical rationality as an alternative framework for theory development and show how it enables the development of theories that stay close to practice. We do so by presenting two main strategies for developing theories through practical rationality: the search for entwinement and the search for temporary breakdowns. Each strategy is illustrated with examples from management research. We then discuss what contributions the practical ratio-

nality framework makes to organization and management research, its implications for theory development, and the benefits theorizing through practical rationality offers organizational practice and theory. Finally, we conclude with a brief comparison between scientific rationality theories and practical rationality theories.

THE FRAMEWORK OF MODERN SCIENTIFIC RATIONALITY

The scientific ideal of attaining objective and valid knowledge about the world through detached observation and analysis (what Bourdieu called "the scholastic attitude" [1998: 127–140]) has been the driving force of modern science for most of its history (Mirowski, 1991; Rorty, 1989, 1991; Taylor, 1985b; Toulmin, 1982, 1990). From such a perspective, the task of the researcher is to observe and theoretically represent the world of objects, and to do so "from outside it" (Toulmin, 1982: 238). Specifically, modern scientific rationality can be seen as consisting of three interconnected core assumptions that have historically underpinned scientific inquiries, including theory development in organization and management research: (1) human reality is constituted by discrete entities with distinct properties; (2) the subject-object relation is the most basic form of developing knowledge about the world; and (3) the logic of practice is constituted by the epistemological subject-object relation. Below we unpack these three assumptions further.

First, human reality is thought to be made up of *discrete entities* with certain pregiven properties. The entity assumption forms a cornerstone in the conventional Greek-Western philosophy tradition, in which reality or, to be more specific, being is conceptualized as the *is* of things (Chia & Holt, 2008: 474; Inwagen, 2001; King, 2001). As King put it, "When Greek-Western philosophy speaks of *to be*, it thinks of the *is* of a thing" (2001: 12). Saying that a thing *is* typically means that "things" such as trees, computers, organizations, culture, leadership, and so forth possess pregiven properties and exist independently of an observer but can be captured (i.e., represented) by the human mind (Rorty, 1991; Varela, Thompson, & Rosch, 1991).

Second, from regarding reality as made up of discrete entities follows the assumption that the most basic form of knowing is the epistemological *subject-object relation*. There are we, as subjects, on the one side and the world on the other. As Bartky remarked, the subject is seen as "originally wordless and isolated from the object, somehow leaps out of its domain and is able, through its own intellectual activity, to appropriate, certify or otherwise 'master' the object" (1979: 217; see also Varela et al., 1991: Chapter 7).

Third, the epistemological subject-object relation is thought to constitute the *logic* underlying practice. That logic is representational: practitioners face a world of discrete objects whose pregiven features they represent through cognitive activity (Varela et al., 1991: 134–135) and, on the basis of those representations, undertake action (Chia & Holt, 2008: 474). Hence, what matters most for practitioners to improve their ability to get by in the world is how accurately the knowledge they develop represents "what is outside the mind" (Rorty, 1979: 3). Likewise, researchers face a world of contingently linked behaviors, inner mental states, and objects, which they seek to scientifically represent in order to ascertain certain regularities (Taylor, 1985b: Chapter 1; Tsoukas, 1998: 790).

However, because of their closeness to practice, it is assumed that practitioners' representational knowledge about organizational practices is biased, subjective, and judgmental and, thus, rather imprecise and nonrational (cf. Bruner, 1990: 14). In contrast, the representational knowledge about organizational practice developed by researchers following the canons of scientific method is typically seen as less subjective and, thus, more exact, precise, and rational (Robbins, 1989: 8–9; cf. Schön, 1983: 21). It is therefore believed that organizational and, more generally, human practices can be made more rigorous and will be substantially improved if they are based on—derived from—scientific knowledge developed through the epistemological subject-object relation.

For example, Hrebiniak and Joyce (2001: 612–613) argued that for research on strategy implementation to be useful to managers, theoretical models, as well as being logical and parsimonious, need to include "manipulable variables," which are contingently linked in specific ways, thus telling managers what to do. A contingency model is seen to be intellectually isomorphic with lay managerial think-

ing: it represents at a higher (scientific) level how managers represent their world at the action level. According to this view, both theorists and managers deal with variables. Unlike managers, however, who are compelled to act without having formally tested their variables, management theorists can test the content and the interrelationships of the variables they study and, thus, offer scientifically validated knowledge to practitioners for successful implementation (Chia & Holt, 2008). Hence, it is assumed that the more accurate scientific representations of a practice domain are, the better chances practitioners have to improve their action in it (cf. Pfeffer & Sutton, 2006; Rorty, 1979: 3).

DEBUNKING SCIENTIFIC RATIONALITY AS A FRAMEWORK FOR THEORIZING PRACTICE

The fundamental assumptions underlying modern scientific rationality have been subjected to heavy criticism over the years, from the phenomenological and hermeneutical critique of treating subject and world as two separate entities (Gadamer, 1994/1960; Heidegger, 1996/1927; Husserl, 1970/1900–1901, 1970/1936; Merleau-Ponty, 1962/1945), Wittgenstein's (1958) critique of the picture theory of knowledge, and the pragmatists' emphasis on experience and the constructed nature of knowledge (Bernstein, 1983; Dewey, 1938; James, 1996/1909; Rorty, 1979, 1989) to Habermas's (1974) critical theory of communication and Derrida's (1981) critique of logocentrism, to mention only a few of the best known philosophical sources of criticism. The point that has been repeatedly made by these philosophical approaches is that scientific rationality, by exalting the scholastic attitude (i.e., knowledge generation through detachment from practice), disconnects knowledge from its social context and reduces human existence into cognitive knowing.

In particular, there are three problems with scientific rationality: (1) it underestimates the meaningful totality into which practitioners are immersed, (2) it ignores the situational uniqueness that is characteristic of the tasks practitioners do, and (3) it abstracts away from time as experienced by practitioners. By doing so theories developed within the framework of scientific rationality fail to do justice to the logic underlying practice. Below we explain why.

First, practitioners' accounts reveal, and ethnographic studies of organizational life confirm, that practitioners are immersed in organizational practices in a *holistic* manner (Harper, 1987; Orr, 1996; Weeks, 2004). As several practice-based studies have shown (e.g., Engeström, Miettinen, & Punamäki, 1999; Gherardi, 2006; Jarzabkowski, 2005, 2008; Lave & Wenger, 1991; Nicolini et al., 2003), the circumstances surrounding practitioners constitute a meaningful, unfolding totality, not a set of abstract, contingently linked variables (Weick, 2003: 467). To be involved in a practice is to be immersed in a context, in which things, people, actions, and options already matter in specific ways.

For example, Orr (1996) vividly showed that photocopier service technicians are simultaneously concerned with a number of issues that matter to them: fixing the broken photocopier at hand, handling the customer in a satisfactory manner, maintaining their reputation in the community of technicians, projecting a good image of the company to the customer, and sharing their experiences with colleagues. We can also obtain a sense of the meaningful totality of managing from Mintzberg's (2009: 245–248) account of the life of the head nurse of the Jewish General Hospital of Montreal. Managerial life for the head nurse is far from handling contingently linked variables; she is part of the flow of life in the hospital (Mintzberg, 2009: 246), immersed in a meaningful nexus of activities that deeply matter to her. In short, when investigating an organizational practice, a researcher does not explore stand-alone entities but, rather, meaningful relational totalities—namely, interrelated humans and objects that show up in terms of familiar practices for dealing with them (Spinosa, Flores, & Dreyfus, 1997: 17–18).

Second, another problem arising from focusing on how the abstract features of ahistorical discrete entities are contingently linked in aggregates (typically in cross-sectional samples since, according to scientific rationality, it is at that level that valid explanations may be derived; see Starbuck, 2006) is that such a focus is juxtaposed with the irreducibly *situational nature* of reality practitioners experience. As Starbuck remarked, in aggregating, "researchers construct homogeneity in heterogeneous phenomena" (2006: 143). By doing so they inevitably simplify the phenomena at hand (Weick, 2007), thus generating proposi-

tional statements, which, even if true at the aggregate level, as seen from a manager's situated action perspective, appear to be simplistic. Take, for example, the well-established proposition that "participation in the implementation of new ideas makes the ideas more acceptable" (Starbuck, 2006: 128). Even if valid in the aggregate, it is not necessarily valid for *my* organization, in this particular context at this particular point in time (see Buchanan, 1999).

Third, by conceptualizing practice as an atemporal space, scientific rationality abstracts away from the *temporal flow* of practice, such as the practical necessities, uncertainties, and urgencies in which practitioners are typically entangled, as is evident in Orr's (1996), Buchanan's (1999), and Mintzberg's (2009) accounts. The flow of practice, such as its tempo, "and above all its directionality, [which] is constitutive of its meaning" (Bourdieu, 1990: 81), disappears. Playing a game, chairing a meeting, teaching a class, and nursing a patient all involve, to varying degrees, anticipation, uncertainty, and urgency (Nicolini, 2009a: 123). Yet this sense of temporal flow—time as experienced by practitioners—is excluded from formal social scientific accounts (Bourdieu, 1990: 82; Zaheer, Albert, & Zaheer, 1999).

The exclusion of experienced time is clearly seen in the propositional statements included in contingency models of explanation, so popular in management research. As Bateson remarked, "The *if . . . then* of causality contains time, but the *if . . . then* of logic is timeless" (1979: 63). The causality that concerns practitioners—what to do, in this particular situation, to achieve the results they wish—is not included in the propositional statements offered by contingency models. Buchanan's (1999) change manager, who must handle an awkward colleague, Weick's (2001) Mann Gulch smoke jumpers, who confront a huge fire mistaken initially for an ordinary one, and Badaracco's (2002) loan officer, who must make up her mind as to how to proceed with a serious accounting irregularity she has discovered, are all faced with issues of timing and tempo, about which they get very little help from timeless propositional statements of the type, "The chance of success improves when intervention and participation are used to install a decision and declines when edicts and persuasion are applied, no matter what decision

context or situation is being confronted" (Nutt, 2001: 46). Practitioners, partly because of the asymmetrical time of action (i.e., the future always involves some degree of open-endedness), and partly because of the infinite contextual richness calling for judgments (Taylor, 1993b: 54–56), always face some degree of suspense and uncertainty as to how to go on (Shotter, 1996); hence, the timing of action becomes important (as evident in Orr's, Buchanan's, and Badaracco's accounts). Suspense and uncertainty, however, are typically absent in the contingency models of explanation, still dominating theory development in the leading journals of the field.

In conclusion, when adopting the framework of scientific rationality, researchers withdraw from practice, becoming spectators of practice (Bourdieu, 1998: 133). Insofar as this is the case, scientific rationality leads researchers to impose a representational logic on practice that conceals the logic underlying practice: the meaningful relational totality in which practitioners are involved is neglected in favor of focusing on discrete entities with pregiven properties, the situational nature of the dilemmas practitioners face is underestimated in preference of generic propositional statements, and time as experienced by practitioners is excluded from contingency models.

THE FRAMEWORK OF PRACTICAL RATIONALITY

Although several philosophers and social theorists have critiqued the framework of scientific rationality (Bourdieu, 1977, 1990; Dunne, 1993; Flyvbjerg, 2001; Giddens, 1979; Schatzki, 2002; Shotter, 1993), the philosopher who, perhaps more than any other, has sought to overcome its assumption that the epistemological subject-object relation constitutes the most basic form of knowing has been Martin Heidegger (see Dreyfus, 1995, and Guignon, 1983). His existential ontology provides valuable resources for developing practical rationality as an alternative framework for scientific rationality.

In this section we describe the key features of Heidegger's existential ontology and outline the framework of practical rationality. We first describe the Heideggerian notion of being-in-the-world—that is, our inevitable "entwinement" (Sandberg & Dall'Alba, 2009: 1351) with the world

as revealing the logic of practice. We then discuss different modes of engagement with the world. We focus specifically on how "temporary breakdowns" in our engagement with the world illuminate the logic underlying organizational practice.

Entwinement As the Logic of Practice

In his analysis of the ontological structure of human existence, Heidegger showed that the epistemological subject-object relation is not our most basic way of relating to the world but, rather, is derived from a more fundamental way of existence—that of being-in-the-world (Heidegger, 1996/1927: 49–58). Contrary to the ontology underlying scientific rationality, which assumes disconnection—namely, that we, as sentient beings, are initially separated from the world to which we subsequently become contingently connected—the notion of being-in-the-world stipulates that our most basic form of being is *entwinement*: we are never separated but always already entwined with others and things in specific sociomaterial practice worlds (hereafter "sociomaterial practices"), such as teaching, nursing, managing, and so on (Dreyfus, 1995; Orlikowski, in press; Sandberg & Dall'Alba, 2009; Schatzki, 2005; Taylor, 1993a).

Taking entwinement as the primary mode of existence means that for something to be, it needs to show up *as* something—namely, as part of a meaningful relational totality with other beings. For example, a hammer used by Willie, who is an independent Saab repairer in northern New York (Harper, 1987: 31–73), exists as a hammer—as a tool with which to bend metal—by virtue of being part of the sociomaterial practice of repairing Saab cars, which consists of several other tools and activities, such as doing bodywork (straightening bent metal on cars), forging metal, tempering metal (adjusting its hardness with heat and cold), welding, fitting repaired parts into the car, dealing with customers, and so forth. As Bartky remarked, "All these things form a structure both of being and of meaning and apart from such a structure a thing can neither be nor be understood" (1979: 213). What applies to a hammer also applies to the hand tools used by flute makers (Cook & Yanow, 1996: 441), the BlackBerrys used by investment and senior support staff at a private equity firm (Orlikowski, 2007: 1441), and the PowerPoint

used by a lecturer (Gabriel, 2008): they receive their meaning as specific tools from their entwinement in flute manufacturing, investment banking, and teaching as specific sociomaterial practices.

In other words, being entwined with the world makes it possible for something to be at all, to be intelligible as something (Dreyfus, 2003: 2), and, insofar as this is the case, entwinement constitutes the logic of practice. Consider teaching, for example (Schatzki, 2005: 472). As a particular sociomaterial practice, teaching forms a relational totality of significance, consisting of (1) a particular teleological structure, which orients its practitioners toward attaining certain ends (Schatzki, 2005: 471) and stipulating possible ways to practice teaching; (2) certain already-defined distinctions about what matters in teaching, which provide its practitioners with a particular orientation and identity (i.e., what is worthy and what is trivial, what is proper behavior and what is not, how and when certain tools are to be used; Nicolini, 2009a: 126; Orlikowski, 2002: 257–258; Polt 1999: 46; Taylor, 1985a: 71, 1985b: 23); (3) specific "standards of excellence" (MacIntyre, 1985: 187), which furnish its practitioners with certain concerns and points of reference (Schatzki, 2005: 472); (4) particular activities, such as lecturing, interacting with students, and mentoring (Schatzki, 2005: 468); and (5) the use of certain tools, such as textbooks, whiteboards, and PowerPoint, which are defined by their utility in specific activities and in reference to other tools (Orlikowski, 2007; Orlikowski & Scott, 2008). Tools and activities are sensible—that is to say, practically intelligible—by virtue of the teleological structure of the practice (Schatzki, 2000: 33).

To be more specific, taking entwinement as the logic of practice highlights that the identity of a particular sociomaterial practice is *noncontingent* in the sense that it incorporates distinctions that provide its practitioners with a certain orientation, without which the particular practice would not be what it is (Taylor, 1985a: 23, 1985b: 36). Saying that practitioners are noncontingently related to their practices does not tell us anything about how they are related; existential noncontingency does not preclude historical contingency—far from it. For example, there are many ways in which the sociomaterial practice of teaching may exist across time and space (hence, historical contingency), but, at the same

time, teachers are, at any point in time, necessarily (i.e., noncontingently) oriented toward some identity that defines their practices (cf. Smith, 1997: 40). The ends to be achieved, the standards of excellence, and the distinctions constituting a sociomaterial practice, of course, change over time. But for change to be intelligible, these defining features of a practice must be accorded ontological priority—they are a point of reference, albeit a contestable one, to guide behavior (Dreyfus, 1995: 161; MacIntyre, 1985: 190).

The entwinement logic of practice also brings to the fore the necessarily *embodied* nature of practice. Membership in a sociomaterial practice is embodied in the sense that the person who enacts a practice (e.g., teaching, managing, nursing, etc.) at the same time embodies it (Merleau-Ponty (1962/1945: 82). For example, as Harper (1987: 31) made clear, being a member of a particular sociomaterial practice, Willie (the car repairer) develops a deep understanding of materials, tools, and techniques that becomes incorporated in his body as a specific car repair know-how. And as Bourdieu remarked, the embodiment of practice "tends to guarantee the 'correctness' of practices and their constancy over time, more reliably than all formal rules and explicit norms" (1990: 54).

Moreover, the notion of entwinement makes us sensitive to the *temporality* of practice (Shotter, 2006: 591). The relational totality of sociomaterial practice is irreducibly temporal, not only in the sense of taking place in time but, more crucially, as immediate anticipations in the actual carrying out of action. For example, the nurse that does telemonitoring typically anticipates whether a call is routine or a possible emergency (Nicolini, 2009a: 123), and the hospital resident typically anticipates the supervising physician's reaction to her voicing her concern about a medical mishap (Blatt, Christianson, Sutcliffe, & Rosenthal, 2006: 910). In other words, to practice is to anticipate (Bourdieu, 1990: 81; Shotter, 2006: 591). We are always ahead of ourselves in the sense of our immediate anticipation of how our specific practice unfolds in time, be it teaching, repairing cars, treating a patient, or managing, because we bodily incorporate specific ways of being involved in the respective sociomaterial practice.

Revealing the Logic of Practice Through Temporary Breakdowns

For Heidegger, there are several modes of engagement with the world, ranging from immersion to detachment. Revealing the entwinement logic of practice requires something in between: a state of "involved thematic deliberation"—namely, a mode of engagement that involves both immersion in practice and deliberation on how it is carried out. Here we explore how the mode of involved thematic deliberation comes about and how it enables us to illuminate central aspects of the logic of practice.

The entwinement logic of practice stipulates that "absorbed coping" (Dreyfus, 1995: 69) is our primary mode of engagement with the world. Absorbed coping is a mode of engagement whereby actors are immersed in practice without being aware of their involvement in it: they spontaneously respond to the developing situation at hand. Absorbed coping is primary in the sense that practice forms a familiar relational whole that people are absorbed in and, at the same time, embody. As Heidegger showed, it is only when we encounter some form of significant breakdown (interruption, disturbance) in our absorbed coping that we start to focus on—thematize—the sociomaterial practice (i.e., ourselves, others, and tools) as something separate and discrete, singling people and tools out from their relational whole, and, thus, "change over" to the epistemological subject-object relation (Heidegger, 1996/1927: §74; Dreyfus, 1995: 60–89).

According to Heidegger (1996/1927: §74), two major forms of breakdown can occur in our absorbed coping: *temporary breakdowns* and *complete breakdowns*. When we are faced with a temporary breakdown, we shift from absorbed coping to the mode of involved thematic deliberation (Dreyfus, 1995: 72–73): although we are still involved in a practical activity, we have now started paying deliberate attention to what we do in order to continue. It is primarily through temporary breakdowns that the relational whole of sociomaterial practice is momentarily brought into view. This is because our deliberate attention to what has become unavailable remains dependent on the practical activity in which the temporary breakdown has occurred.

When the breakdown is so significant that our absorbed coping is completely interrupted (com-

plete breakdown), we become disconnected from our absorbed coping and move from involved thematic deliberation to "theoretical detachment" (Dreyfus, 1995: 79–81). We bracket our immediate practical concerns, either being too paralyzed to act (e.g., panicking) or aiming to find out the abstract properties of the situation at hand.

> Once our work is permanently interrupted, we can either stare helplessly at the remaining objects or take a new detached theoretical stance toward things and try to explain their underlying causal properties. Only when absorbed, ongoing activity is interrupted is there room for such theoretical reflections (Dreyfus, 1995: 79).

When we become detached from our practical activity at hand, the relational whole in which we are involved withdraws and becomes inaccessible. Instead, what remains and becomes present in our theoretical detachment is our particular activity as an array of discrete entities.

Let us illustrate the above concepts with the activity of lecturing. When a teacher is immersed in lecturing a class of students, his or her engagement with the world is that of absorbed coping—the teacher responds spontaneously to the solicitations of the task at hand, without paying explicit attention to what he or she is doing (Yanow & Tsoukas, 2009: 1355–1356). The PowerPoint slides, the whiteboard, the layout of the room, and the behavior of the class are all transparent and nonthematized. It is only when something goes wrong—when, for example, the PowerPoint temporarily breaks down—that the teacher needs to shift from absorbed coping into a mode of involved thematic deliberation as to what is problematic with the PowerPoint and how to fix it. In that instance the teacher's PowerPoint presentation is singled out and thematized, and its apparent utility in lecturing becomes momentarily manifest—that is, its specific features, such as the particular diagrams, cartoons, and photographs included in it, the projector, and the laptop connection with the projector come to the fore. The specific relational whole (the entwinement of people and objects) involved in lecturing comes into view. Note, however, that although the faulty PowerPoint presentation forces the lecturer to pay deliberate attention to it momentarily, he or she is still involved in teaching—the teacher is in the mode of involved thematic deliberation.

However, if the PowerPoint breakdown persists—namely, if the teacher is faced with a complete breakdown while lecturing—he or she will become disconnected from his or her absorbed coping. Such a complete breakdown pushes the lecturer into theoretical detachment. The teacher now starts forming hypotheses about the likely causes of the PowerPoint complete breakdown and how they may be dealt with. When entering the mode of theoretical detachment, lecturing turns into an array of discrete entities (e.g., the laptop, the projector, their connection, the switches, the content of the presentation, etc.), with specific abstract properties. In other words, when the teacher becomes theoretically detached from his or her lecturing, the relational whole of lecturing as absorbed coping withdraws.

Notice that in both instances of breakdown (temporary and complete), the thematization and singling out of the PowerPoint presentation presupposes lecturing as an activity situated within the sociomaterial practice of teaching (Schatzki, 2005: 474), because it is this context that makes the epistemological subject-object separation possible in the first instance. In other words, this changeover in our modes of engagement—from absorbed coping to involved thematic deliberation and then to theoretical detachment—demonstrates how the epistemological subject-object relation is a derivative mode of being-in-the-world. We are first absorbed in practice before we start reflecting on it. (Dreyfus, 1995: 120).

To sum up, in Heidegger's existential ontology, being-in-the-world comes before the subject-object separation. Or, to put it differently, the subject-object relation becomes possible only insofar as we acknowledge the ontological priority of being-in-the-world. This is because it is our engagement in—entwinement with—particular sociomaterial practices that enables us to understand ourselves as particular subjects and objects as particular things in the first place. Therefore, what constitutes the logic of practice is not the epistemological subject-object relation but the entwinement of ourselves, others, and things in a relational whole, in the sense that we are always already engaged in specific sociomaterial practices.

Practitioners' primary mode of engagement in a sociomaterial practice is absorbed coping—dealing with the world nondeliberately. When

their absorbed coping is significantly disrupted, practitioners shift to one of two modes, both of which are characterized, in varying degrees, by the subject-object relation. When the disturbance is a temporary breakdown, practitioners shift to the involved thematic deliberation mode: their relational whole comes into view and they pay deliberate attention to what they do, while still remaining practically involved in the task at hand. In other words, it is in the mode of involved thematic deliberation where the logic of practice momentarily becomes manifest and illuminated. When the disturbance is more serious and takes the form of a complete breakdown, practitioners become disengaged from the sociomaterial practice and switch to theoretical detachment. Through such change in the mode of engagement, the entwined logic of practice becomes concealed and, instead, practice presents itself as an array of discrete entities with specific abstract properties.

In the section below, following the framework of practical rationality and its Heideggerian existential ontology, we explore how theory development in organization and management science may take place.

STRATEGIES FOR THEORIZING THROUGH PRACTICAL RATIONALITY

How can we grasp the logic of practice, thematize it without distancing ourselves from it, and so avoid turning it into a set of discrete entities? The framework of practical rationality developed above suggests two interrelated major breaks with scientific rationality: (1) a shift from entities as the point of departure to entwinement (namely, focusing on investigating the relational whole of specific sociomaterial practices) and (2) a shift from the scholastic attitude of theoretical detachment to involved thematic deliberation (namely, focusing our research attention on temporary breakdowns). Each one of these shifts represents a distinct strategy for accessing the logic of practice and is examined below separately.

Searching for Entwinement

This strategy implies that researchers focus on how practitioners are ordinarily involved in the *relational whole* within which they carry out their tasks. The entwinement strategy consists of the following five components. First is taking sociomaterial practice as the point of departure—that is, focusing on the entwinement of practitioners and tools in sociomaterial practices. Second, as a result, the focus is not on people alone but on what people actually do—that is to say, the activities they are involved in—to achieve particular purposes. Focusing on activities reveals patterns of sociality, tool use, and empowerment (Nicolini, 2009a: 125). Third, zooming in on how the activity is accomplished through the body and the use of various tools reveals the sense in which the practice is enacted. Fourth, through exploring the standards of excellence that underlie a practice by focusing on what is regarded as success and failure, normatively binding or not, one can come close to understanding what matters to those involved in a practice and, therefore, what is the distinctive way for the practice to be that provides it with its identity. And fifth, zooming out on the relationships between various practices shows what makes a practice under study possible. Exploring the resources required for a practice to be what it is and how those resources are acquired from other practices enables one to understand connections and possibilities (Nicolini, 2009a).

What does the strategy of searching for entwinement look like? Illuminating examples are provided by Orlikowski (2002), Suchman (2007), Nicolini (2009a), and Sandberg and Pinnington (2009), to mention a few. It should be stressed, however, that it is not so common to see all the preceding five components in a single study, since pragmatic constraints come into effect. For example, the more a researcher zooms in on how a practice is accomplished, the more difficult it will be to zoom out to explore connections between practices (Nicolini, 2009b: 134). Below we discuss the study of professional competence by Sandberg and Pinnington (2009) to illustrate several of the above points.

Sandberg and Pinnington (2009) proposed and examined the utility of an existential ontological framework in the context of corporate law, within a large international law firm. As they point out, traditional theories of competence, such as the prevalent KSA (knowledge, skills, attitudes) theories, informed by scientific rationality, are entity based in that they conceptualize professional competence as consisting of two independent entities: a set of specific attri-

butes possessed, such as KSAs, and a separate set of work activities to be accomplished. Taking an entity-based view in studying management competence means that researchers try to identify what attributes (knowledge, skills, etc.) are central in management. The identified attributes are then organized into predefined categories such as KSAs (Boyatzis, 1982; Le Deist & Winterton, 2005; Mulder, Weigel, & Collins, 2007; Rothwell & Lindholm, 1999; Sandberg, 2000). The attributes are thereafter often "rated to allow quantitative measurement of the correlation between success in accomplishing the work and possession of the designated attributes" (Sandberg, 2000: 10).

A particular problem arising from entity-based approaches is that while they identify necessary prerequisites (list of attributes) for carrying out a job, such a list of attributes does not "demonstrate whether the workers use the prerequisite attributes, or in what way they use them in accomplishing their work" (Sandberg & Targama, 2007: 57). In other words, researchers following entity-based approaches are unable to describe what constitutes competence *in* work performance (where Gherardi calls competence "practical accomplishment" [2006: 20]).

In contrast to prevalent theories, Sandberg and Pinnington's study, explicitly informed by an existential ontological framework, takes the entwinement of aspects of corporate law sociomaterial practice (i.e., people, tools, activities), rather than entities, as the point of departure. Their in-depth interviews, supplemented by situated observations of the corporate lawyers in various contexts, generated important verbal and nonverbal data on what constitutes competence in corporate law practice, such as the entwinement of specific tools (like clothing, mobile phones, legal resources, and the prestigious office building) in distinctive *ways* of practicing corporate law.

In their analysis the authors' focus was not on tools themselves but on their entwinement—namely, on their uses in particular activities in the context of distinctive ways of practicing corporate law. Their findings suggest that the proposed existential ontological perspective enables closer descriptions of what constitutes competence in work performance, and they show that professional competence is not primarily defined by scientific or tacit knowledge, or by other attributes such as skills and atti-

tudes in themselves. Instead, competence is constituted by specific ways of being in the world—in this case, of four different ways of practicing corporate law, each one forming a distinct competence in corporate law.

In particular, Sandberg and Pinnington's findings show how the existential meaning of each specific way of practicing law distinguishes and integrates central aspects of corporate law practice into distinct forms of professional competence in work performance. For example, the existential meaning of "minimizing legal risks" as way of practicing corporate law

> distinguishes and integrates a specific *self-understanding* (legal service provider), a specific *understanding of work* (applying legal rigor, forming a team of lawyers, informing the client of legal issues), particular *people* (clients, colleagues, support staff) and specific *tools* (legal knowledge, precedents, communication skill, clothes, and buildings) into a distinct competence in corporate law (Sandberg & Pinnington, 2009: 1157).

Furthermore, their findings also show how aspects of practice, such as knowledge, are defined not by some objective properties but by their entwinement in particular ways of practicing corporate law. So, for example, in minimizing legal risks as a way of practicing corporate law, knowledge about the Corporation Acts is not defined by the specific laws within the Acts but by its usefulness or availability for minimizing legal risks. In other words, for something such as "knowledge about . . . " to be, it needs to show up as something—namely, as part of a meaningful totality with other beings: in this case, a distinctive way of practicing corporate law.

Searching for Temporary Breakdowns

This strategy aims at exploring the temporary breakdowns that may be found or created in a sociomaterial practice, which are treated as openings for accessing the *significance* of the internal workings of a practice. The purpose is to let the practice reveal itself through the moments it temporarily breaks down—namely, the moments when things do not work as anticipated. We identify two kinds of temporary breakdowns: first-order breakdowns and second-order breakdowns. The former emerge in organizational practices them-

selves, whereas the latter are created by the researcher after entering a practice. Each one is discussed below.

First-order temporary breakdowns. When temporary breakdowns occur, absorbed coping is interrupted and practitioners enter into the involved thematic deliberation mode of engaging with the world, through which they pay deliberate attention to their practice while at the same time still being involved in it. Such breakdowns are called "first order" insofar as they naturally occur in the organizational practices under study. The strategy of searching for first-order temporary breakdowns consists of exploring practitioners' responses to (1) thwarted expectations, (2) the emergence of deviations and boundary crossings, and (3) awareness of differences. Such explorations contribute to grasping the significance of the way a sociomaterial practice is accomplished in the mode of absorbed coping.

Thwarted expectations. Expectations are thwarted when a practice is disrupted because unintended consequences emerge, new realizations come about, or standards of excellence are not met. This is nicely illustrated in Feldman's (2000) study of organizational routines in the student housing department of a large U.S. state university. In that study Feldman sought to capture the internal dynamic of routines by following practitioners closely and scrutinizing their actions, the outcomes they yielded, and the responses to those outcomes. Such an approach enabled Feldman to note temporary breakdowns in the enactment of routines and how those breakdowns made manifest central aspects of the logic underlying the sociomaterial practice in question.

For example, in carrying out the "damage assessment routine," building directors would go through room inventories, after students had gone, to assess any damages and then would send the bill to those responsible. In the course of time, however, the building directors became increasingly unhappy with this routine since, in their experience, it worked in a way that fell short of the standards of excellence of their practice—namely, that they were not mere administrators but educators too. What had happened was that the hitherto application of the routine let students "get off easy" since, typically, their parents (or even their parents' secretaries) would pay for any

damages incurred, without the students' being confronted with the damages they had done to their rooms.

Seen as part of a sociomaterial practice, the damage assessment routine was teleologically structured—it was set up to attain a certain end (i.e., assess damages to student rooms), against which the actions of its practitioners made sense. Initially, the routine had a mere "operations management" identity: its distinctions principally revolved around the logistics of damage assessment and bill paying. Experience from enacting the routine, however, showed building directors that the way they had applied those distinctions fell short of the standards of excellence they found they held: the building directors realized that they did not want to be mere managers but educators too; students should be held responsible for their damages as part of their broader education experience at the university. Considering themselves as educators was a way to be in their sociomaterial practice.

Having the experience they did made the building directors wonder about their role and how best to enact it; there was a temporary breakdown in their practice. The breakdown revealed (to them and to the researcher) what truly mattered to them—namely, the significance of some of the distinctions they had been enacting in their work. The source of the breakdown was the tension generated between the particular outcomes of the hitherto application of the routine and the particular standards of excellence held. That tension made practitioners step back from their practice—from the absorbed coping mode of engagement—and reflect on its now temporarily manifested entwined components, particularly the entwinement of the room inventory list, the time and mode of its use, and the standards of excellence they should pursue. Notice that the logic of practice here is revealed, and further theorized (Feldman, 2000: 620–626), through the researcher's focus on the temporary breakdown. The latter created an opening that enabled Feldman to look into the internal working of the routine—the way it was initially designed and used, the experiences its application generated, and the significance of those experiences for the practitioners involved. Feldman shows what matters to practitioners, what they care about, and

how they deal with the experiences the enactment of the routine generates.

Deviations and boundary crossings. Deviations emerge when new discourse items are introduced or new actions appear. Exploring how practitioners respond to deviations enables researchers to see what is significant to practitioners (what matters to them) and, therefore, comes close to grasping the logic underpinning their sociomaterial practice. For example, Katz and Shotter (1996) discuss a medical interview of a female patient from Haiti, in the context of a routine medical examination at the primary care clinic of a large, urban U.S. hospital. As the authors note, in medical interviews the medical voice is typically dominant, centering on symptoms mentioned by the patient, prompted by the physician. In the process of this diagnostic interview, however, the patient uttered, on two occasions, "It's not like it is back home" (1996: 921–22). Katz and Shotter (1996: 922) note that the patient's utterance constituted a "break" with—a temporary breakdown in—the medical discourse that was hitherto driving the conversation; the patient was pointing to her broader personal world, implicitly inviting the physician to relate her medical problems to it. Which is what the physician perceptively did, by following up on questions having to do with the patient's cultural background (Katz & Shotter, 1996: 923).

In this instance the physician crossed the boundaries of the strictly medical discourse to engage with the patient as a person. Such boundary crossing, in response to a deviation from "the official or routine regime of significance" (Katz & Shotter, 1996: 930), if registered by researchers through appropriate research designs (here by zooming into the relevant conversations and writing in a first person narrative), enables researchers to "articulate the practice from within the practice itself" (Shotter & Katz, 1996: 213).

Awareness of differences. Absorbed coping may be temporarily disrupted when practitioners become aware of different practices (or the possibility of different practices). The latter may be practices from the history (or from different parts) of the organization itself, practices present in other organizations, or new practices introduced in change projects. Thus, exploring how practitioners respond to awareness of different practices (e.g., the resistance, ambivalence, or acceptance different practices may evoke) reveals what is significant in their own particular practice (Stensaker & Falkneberg, 2007). As Dunbar and Starbuck (2006: 173) note, some of the adaptive and reactive capabilities of organizations are revealed when researchers focus on efforts to displace organizations from equilibrium.

For example, in her research on a privatized British utility undergoing strategic change, Balogun (2006) explored middle managers' different reactions to the restructuring of the old group into three new divisions (core, engineering, and services). Being aware of the new, now perceived as elevated, status of the core division, engineering division middle managers resented what they saw as having been deprived of "ownership" of the assets of the company. Focusing on how different groups of middle managers coped with the perceived differences between the new schemata (centered on the values of customer focus and a flexible culture) and the old schemata (associated with the values of a traditional, provider-driven bureaucracy) enabled Balogun to show what mattered to the members of the different divisions (see also Balogun & Johnson, 2004).

Second-order temporary breakdowns. Another possible strategy for enabling the logic of practice to reveal itself is for researchers to actively *create* a temporary breakdown in the practice they investigate. There are already various techniques available that may be utilized for creating temporary breakdowns, such as Garfinkel's (1963) breaching taken-for-granted ways of doing things, scenario planning (van der Heijden, Bradfield, Burt, Cairns, & Wright, 2002), counterfactual thinking (Sayer, 2000), instructive language ("think of . . . ," "imagine . . . ," "suppose . . . ," etc.; see Shotter & Katz, 1996: 231), and thought experiments (Folger & Turillo, 1999), all of which prompt people to reflect on possibilities and potentialities (see Weick, 2003, for further examples). Below we illustrate second-order breakdowns by revisiting Argyris's well-known technique for action research.

By his own admission (Argyris, 2003, 2004), Argyris is a cognitivist who, most likely, would not have much time for the existential ontology we have outlined here. Yet his research on how managers tend to reason and how they might reason more productively can be recast in some of the terms of an existential ontology insofar as,

through the temporary breakdowns he creates in the organization at hand, he gets to reveal, to some extent, the logic of practice. We explain how this is done below.

In his sessions with managers, Argyris typically invites them to describe an organizational problem as they see it, describe the strategy they would follow if they had the chance to talk to someone about how to resolve the problem, and write down on the right-hand side of a page what they would say to that person and, on the left-hand side, what thoughts or feelings they would not communicate to their imaginary interlocutor (Argyris, 1993, 2003, 2004). In this way the researcher is no mere observer of other people's activities but a temporary participant in them, causing his subjects to think about themselves and their practices. The researcher deliberately interrupts the flow of managerial practice—creating a temporary breakdown—in order to get practitioners to step back from what they routinely do for the sake of improving the way they reason and communicate with others and, thus, solving problems more effectively. When managers have had the chance, as a result of the temporary breakdown caused by the researcher, to see *how* they actually think and communicate, their logic of practice will be revealed to them and to the researcher. The latter can then further theorize that particular logic, and this is what Argyris has done in his influential work.

A similar type of research has been adopted by those postmodern scholars who, through high-involvement research designs, seek to help practitioners unearth their unquestioned assumptions and reflect on them critically (Cunliffe, 2002, 2003; Shotter & Katz, 1996). Practice then becomes reflexive insofar as practitioners obtain a clearer view of their actions and, looking back at them, can see aspects they could not see before.

What is important to note is that through certain types of action research or high-involvement research, practitioners are made to step back from their absorbed coping mode. The temporary breakdowns are not located in the flow of the organizational practice itself but are deliberately created by the researcher. Merely asking detailed and concrete questions about what practitioners do and how they accomplish their work temporarily disrupts practitioners' absorbed coping and throws them into a mode of

deliberation. Practitioners enter into involved thematic deliberation, insofar as the researcher prompts them to reflect on their sociomaterial practice, and they temporarily step back from their practice to reflect on how they practice. In those moments the logic of practice comes to the fore in that the relational whole into which they are absorbed and its significance become momentarily manifest.

DISCUSSION

In this article we have addressed the following question: How can organizational and management theories be developed so they better reflect the way actors enact their practice and, thus, are more relevant to practice? In answering this question we have made two contributions.

First, we have shown why the framework of scientific rationality underlying mainstream organizational and management theories fails to grasp the logic of practice and, thus, is unable to generate theories relevant to practice. Our reevaluation of the onto-epistemological assumptions underlying scientific rationality showed that the latter, by foregrounding the subject-object relation, invites researchers to look at organizations as collections of discrete entities whose patterns of contingently linked abstract properties are to be identified and represented in a theory. However, by doing so, how the relational whole of the organizational practice is made available to involved practitioners is concealed, thus making researchers unable to grasp the logic of practice (Dreyfus, 1995: 120). In other words, in following scientific rationality, the enactment of organizational practice is obscured and the logic of practice is closed off.

Second, and most important, as an alternative to scientific rationality, we have proposed and outlined practical rationality as a coherent onto-epistemological framework and demonstrated how it enables management researchers to both stay close to the logic of practice and generate practical rationality theories—theories that capture essential aspects of the logic of practice. To be more specific, drawing on Heidegger's existential ontology, we showed that our entwinement with the world is ontologically prior to the epistemological relation between a subject and an object. Things do not appear to researchers

as they are in themselves. Instead, their appearance is dependent on the mode in which researchers engage with them. Intelligibility is not a property of things but is relative to their ways of being-in-the-world (Dreyfus, 1995: 31; Winograd & Flores, 1987: 33). Absorbed coping is the mode of being practically involved in a sociomaterial practice—namely, in a relational whole in which human beings and tools are entwined. Hence, if management researchers are interested in grasping the logic of practice, they need to get a handle on how a sociomaterial practice shows up to practitioners absorbed in it. This is what the framework of practical rationality and the related strategies we have suggested here—searching for entwinement and searching for temporary breakdowns— enable researchers to do.

Below we discuss the main implications for theorizing through the framework of practical rationality. In particular, we address issues related to process (i.e., how we may go about developing practical rationality theories) and content (i.e., what practical rationality theories look like). Moreover, we outline the benefits practical rationality yields to management researchers and practitioners.

Implications for Theory Development

Developing theory through the strategy of entwinement implies doing the following: (1) taking sociomaterial practice as the point of departure—what practitioners routinely do, with others and tools, for what purposes; (2) looking for how practitioners competently perform doings and sayings, with what results; (3) searching for the distinct ways in which performances are enacted; and (4) exploring what matters to practitioners by searching for how actions are recognizable and reportable to others and, thus, how accountability is accomplished. Thus, theoretical accounts that seek to grasp the logic of practice through the entwinement strategy focus on relational totalities and performances or, more precisely, on how relational totalities are accomplished: the discursive and material resources practitioners routinely draw on (i.e., practically employ in the mode of absorbed coping), in distinct ways, for certain purposes, and in the context of particular activities, in realizing certain identities.

To that end, research methods such as the phenomenological "life-world interview" (i.e., seeking to capture interviewees' meaning structure of lived experience; Kvale, 1996: 5; Sandberg, 2000: 12, 2005: 54–56), "shadowing" (Czarniawska, 2008; McDonald, 2005), "qualitative research diaries" (Symon, 2004), and "instructions to the double" (i.e., asking an interviewee to imagine giving work-related instructions to a double who will replace him/her in that job the following day; Nicolini, 2009a: 126, 2009b) aim at grasping the logic of practice—namely, capturing the distinct and unreflexive ways (i.e., in the absorbed coping mode) in which people routinely act while entwined with others and tools.

Developing theory through the strategy of temporary breakdowns entails doing the following: (1) taking instances in which expectations are thwarted, boundaries are crossed, and/or differences in awareness are noticed as the point of departure; (2) situating the temporary breakdowns under study within the broader sociomaterial practice in which they occur; and (3) identifying the significance of the way in which practitioners are absorbed in their practical activities. It should be noted that, as Winograd and Flores remark, "a breakdown is not a negative situation to be avoided, but a situation of non-obviousness" (1987: 165)—the recognition that something is missing or is not quite right, with the result that some aspects of the relational whole come to the fore. Suitable research methods for the breakdown strategy include those mentioned earlier, as well as "critical incident analysis." The latter, when employed from a phenomenological perspective (Chell, 2004), attempts to "capture the thought processes, the frame of reference and the feelings about an incident or set of incidents, which have meaning for the respondent" (Chell, 2004: 47).

Taken together, the strategy of searching for temporary breakdowns reveals something that the strategy of searching for entwinement does not: the *significance* of the taken-for-granted distinctions practitioners cannot articulate while absorbed in practice (e.g., assumptions about role structure effectiveness, such as in the case of the Mann Gulch fire [Weick, 2001]); assumptions about rocket reliability, such as in the case of NASA's launch of the Challenger [Starbuck & Milliken, 1988; Vaughan, 1996]). Searching for entwinement reveals something that searching for temporary breakdowns does

not: the *scope* of the sociomaterial whole that shapes human action, which practitioners are unaware of while immersed in action (e.g., Orlikowski's [2007] investment managers who embedded their BlackBerrys in their work and personal lives and how this changed work and communication practices). Both the scope of the sociomaterial whole and the significance of how its sociomaterial components interact are important. Ideally, therefore, the strategies of entwinement and temporary breakdowns should both constitute the foci of research that aims to theorize the logic of practice, although pragmatic constraints often make it difficult to incorporate both.

A second major implication for theory development concerns the outcome—namely, what practical rationality theories are like and, consequently, how they differ from scientific rationality theories. Admittedly, theorizing, in all its forms, necessarily involves abstraction. Theories consist of statements of relations among concepts aiming to make sense of a generic phenomenon (e.g., professional competence in corporate law practice), the empirical manifestations of which vary across time and space (Bacharach, 1989: 496, 498; Stinchcombe, 1968: 15; Weick, 1989: 517). However, since practical rationality theories aim to provide an account of organizational practice as enacted—that is, as an unfolding relational whole—they deviate significantly from scientific rationality theories, which aim to provide a detached account of organizational practice as a set of discrete entities that become contingently related to each other.

The main divergence is that concepts play a significantly different role in the two types of theories. Scientific rationality theories assume that (1) concepts fully capture a priori what is really going on in the world (cf. Chia & Holt, 2008: 474); (2) concepts and their relationships in theoretical statements enable practitioners to "win the privilege of totalization" (Bourdieu, 1977: 106), thus offering them a synoptic view of the phenomenon at hand; and (3) concepts provide practitioners with "manipulable variables" (Hrebiniak & Joyce, 2001: 612) to enable intentional action.

In contrast, within practical rationality theories, concepts are seen as partly emergent creations (rather than as fixed representations of a pregiven world), which help us orient ourselves in the world. To put it differently, concepts are

not fully defined a priori, nor are they connected to the empirical world in a definite manner (Weick, 1989: 519); rather, concepts are seen as open ended—that is, partly determined through the particular practices in which they are enacted. Practice has an irreducible epistemic value, insofar as it gives concepts their particular shape, drawn from local contexts. The open-ended and context-specific character of practical rationality theories is diagrammatically manifested through bidirectional arrows (see Orlikowski, 2000: 410), recursive patterns (see Jarzabkowski, 2008: 624; Orlikowski, 2000: 410; Sandberg & Pinnington, 2009: 1162), circular interactions (see Feldman, 2000: 623, 625, and Whittington, 2006: 621), or narrative means that preserve the complexity of human interaction (see Weick, 1995, and Orr, 1996) by incorporating human purposes and motives, contextual richness, multiple temporalities, and connections among events across time (cf. Tsoukas & Hatch, 2001). Practical rationality theories provide the conceptual means to capture the recursive patterns of interactions across practices, while at the same time remaining open to further conceptual specification through exploration of particular practices.

For example, in the work of Feldman and her coauthors, routines are not viewed as entities (i.e., "programs," "habits," or "genes"; see Feldman & Pentland, 2003: 97) but as "emergent accomplishments" (Feldman, 2000: 613). Routines are not completely defined a priori as having certain inherent characteristics (such as stability and repetitiveness), manifested any time routines are applied, but as having an irreducible performative component, situationally defined, which invests routines with flexibility and change. Thus, what a routine *is* is not fully defined a priori but partly emerges from the way a routine is enacted within a particular sociomaterial practice (Feldman & Orlikowski, in press). Hence, Feldman (2000) uses the term *routines-in-action*. Similarly, for Orlikowski (2000), technology does not have, nor can it be developed to have, certain inherent features that determine how it will be used or appropriated in organizations. Technology, rather, constitutes, along with human agency, a "technology structure" that emerges from the repeated, recursive, and situated interaction between people and particular technologies. Hence, Orlikowski (2000) uses the term *technology-in-practice* (similarly, see

Jarzabkowski et al.'s [2007]] concept of *strategy-as-practice*).

Theories about routines-in-action, technology-in-practice, and strategy-as-practice orient us to grasp the general pattern through which respective phenomena are enacted *and* to look for the situational specificity through which processes of enactment take place in particular contexts, thus potentially refining our theories. Combining a general template with situational specificity is what enables Orlikowski (2000) to explore the enactment of technology-in-practice in different firms ranging from consulting to software, Weick (2001) to investigate sensemaking in contexts as diverse as the Mann Gulch fire and the Polish Workers' Defense Committee, and Christianson, Farkas, Sutcliffe, and Weick (2009) to explore a rare event, such as the collapse of the Baltimore & Ohio Railroad Museum, as a significant interruption calling for sensemaking, leading them to further elaborate on the latter by connecting features of sensemaking to organizing routines.

The epistemic open-endedness of concepts in practical rationality theories makes those concepts empirically underdetermined and leads to an alternative view of generalization. In contrast to scientific rationality theories, which are mostly aiming for statistical generalizations, practical rationality theories offer what Tsoukas calls "heuristic generalizations." (2009: 295). The latter are generalizations insofar as they are built with concepts abstracted from concrete data. However, they are heuristic generalizations in the sense that they are open to further specification in particular cases; the latter offer opportunities for further refining concepts and making fresh distinctions.

While in scientific rationality theories concepts are taken to fully reflect the features of a pregiven world, in practical rationality theories concepts are seen as *indicators* that guide the search for better understanding, encouraging researchers to look for family resemblances—namely, for the similarities and differences among the empirical phenomena indicated by a concept (such as, for example, routine-in-action, strategy-as-practice, sensemaking). Thus, researchers are invited to think analogically and see the extent to which current conceptual formulations help them understand a particular case at hand. Insofar as all analogies are inexact to some extent, researchers are impelled to

reformulate, in various degrees, the currently available conceptualizations and, thus, potentially make new conceptual distinctions. From such a perspective, the question "To what extent does this hold in other cases?" (a statistical question) does not arise, since particular cases share family resemblances with one another (Tsoukas, 2009: 286–287). The question, rather, is "How far can you go with these concepts at hand?" thus offering researchers the opportunity to refine their analytical understanding of certain phenomena.

That practical rationality theories are able to "merely" indicate the logic of practice does not mean they are less precise than scientific rationality theories that more "fully" explicate organizational practice as specific entities' properties and their patterns of relationships. Rather, the reverse is true. As we have shown, any attempt to spell out something in a definite and context-free way requires such a significant break with organizational practice that the actual logic of practice withdraws. What is left to spell out is practice as a set of discrete entities with abstract properties, but not the entwinement logic of practice. Practical rationality theoretical accounts qua indicators, on the other hand, bring us closer to the logic of practice insofar as they let practice manifest itself through the moments it temporarily breaks down or through outlining the relational whole in which practice is routinely taking place, which practitioners are normally unaware of. Paradoxically, attempts to spell out explicitly the logic of practice fail since they turn it into a set of discrete entities, whereas attempts to indirectly access the logic of practice succeed since they approach practice in ways that allow its logic to manifest itself.

The Benefits Practical Rationality Offers to Organizational Practice and Theory

A central benefit deriving from the proposed framework of practical rationality is that it offers a way of significantly bridging the theory-practice gap in organization and management by making possible the development of practical rationality theories. Such theories enable both researchers and practitioners to obtain a clearer view of what is involved in the enactment of a sociomaterial practice. This is a view of theory-as-elucidation. Practical rationality

theory helps practitioners to better articulate and make manifest what was previously opaque in their routine practices and, thus, obtain insights into their practice. In particular, by illuminating the logic of practice, practical rationality theories enable practitioners to better understand, engage, and, above all, improve their own practice. In other words, practical rationality theories connect to practice because they elucidate and bring us closer to the logic of practice as experienced by practitioners, rather than the logic of the researcher, which is typically reflected in scientific rationality theories.

The framework of practical rationality helps researchers generate theories that both grasp important aspects of the logic of practice and articulate what is going on in the organizations under study more clearly than the absorbed coping of the actors involved would allow for (Taylor, 1985b: 27, 111). Greater clarity is possible since sociomaterial practices are always already constituted by distinctions that provide an identity to those practices. But the question inevitably arises as to whether such distinctions are adequate, complete, and useful—hence the need for more refined distinctions. As Taylor (1985a: 64) commented, once this question is opened, it cannot be closed; the process of theory development as the search for greater elucidation is bound to go on and on (Taylor, 1985a: 63–75).

Seen in that light, theorizing through practical rationality generates knowledge that is on the same continuum as the knowledge practitioners employ when they are engaged in involved thematic deliberation about their practices. This is shown in Snook's (2000) theorizing of the friendly fire incident that occurred, in 1994, in the U.S. forces in the no-fly zone in Iraq. Snook's (2000: 225) concept of "practical drift" (i.e., the gradual uncoupling between formal procedures and local practices) captured what had been going on but had not been paid attention to. A temporary breakdown, such as the incident of friendly fire, provided both practitioners and researchers the opportunity to see the significance of some ongoing features of a routine air defense activity (Weick, 2003: 472).

Another important benefit that practical rationality offers is a coherent onto-epistemological framework, along with systematic ways of theory development, to ground the emerging practice-based approaches in organization studies and the associated efforts to generate "performative" theories (Czarniawska, 2008: 7–8; Law & Urry, 2004: 395; Orlikowski, in press). As several scholars have noted (Chia & Holt, 2006; Chia & MacKay, 2007: 218–219; Gherardi, 2006; Jarzabkowski, 2005; Reckwitz, 2002; Sandberg & Dall'Alba, 2009; Whittington, 2006), practice-based approaches lack a coherent and consistent metatheoretical basis, which obstructs further theoretical advancement. By emphasizing the entwined character of practice, the framework of practical rationality corrects this weakness.

Concluding Remarks

In this article we have shown that theories developed through the framework of scientific rationality are not relevant to practice because they fail to capture its logic. As an alternative, we proposed and elaborated the framework of practical rationality and showed how it enables researchers to develop practical rationality theories that grasp important aspects of the logic underlying practice.

Having argued for the virtues of practical rationality and the associated practical rationality theories, is there still scope for scientific rationality theories of the kind we are so much used to in organization and management science? There is indeed. We have *not* argued here that scientific rationality theories, grounded in the epistemological subject-object separation, are wrong. Rather, we have argued that it is wrong to identify all theorizing with that generated by the framework of scientific rationality. Scientific rationality theories are *one* possible type of theory, and the subject-object separation is *one* possible mode of human engagement with the world. The advantage of practical rationality is that it is spacious enough to allow for both: that being-in-the-world is the primordial mode of human engagement with a sociomaterial practice—hence the concern with how the latter shows up to beings who are absorbed in it—*and* that human beings can engage with a sociomaterial practice in a theoretically detached way, through which its components appear as discrete entities to them.

There is, thus, room for developing scientific rationality theories by treating the world of organizational and management practice in a

theoretically detached way. When such a mode of engagement is adopted, the world of practice shows up to researchers as a collection of discrete entities, whose constitution and patterns of associations they can systematically investigate. Notice that such investigations constitute a particular type of practice (an academic practice, institutionally separate from the organizational practices under study) in which researchers have techniques for focusing on aspects of organizational practice, "de-worlding" them (Dreyfus, 2000: 317), turning them into discrete entities, and inserting them, in the form of abstract properties and their relationships, into their theories (Latour, 1988; Pickering, 1995).

But scientific rationality theories come at a cost: because they include abstractions created through researchers' theoretically detached manner of relating to the world of practice, they tend to reflect the logic of the researcher rather than the logic of practice (Bourdieu, 1998: 127–140; Weick, 1999: 136, 140). However, although scientific rationality theories do not capture the logic of practice, they can still be useful to organizational practice insofar as they highlight some of the forces that shape practice. For example, scientific rationality theories can be useful for identifying patterns in aggregate phenomena (McKelvey & Aldrich, 1983; Starbuck, 2006); for investigating "ideal types" and "idealized models" (McKelvey, 1997: 364)—that is to say, theoretically capturing important aspects of a phenomenon through the "analytical accentuation of certain elements of reality" (McKelvey, 1997: 364; see also Gane, 2009; Swedberg, 2005: 119–121; Weber, 1949: 90) and the avoidance of "the complexities of idiosyncratic microstate phenomena" (McKelvey, 1997: 364); for theorizing "generative mechanisms" that give rise to contingently experienced phenomena (Pentland, 1999; Tsang & Kwan, 1999; Tsoukas, 1989); and for investigating propositional "design rules" (Romme & Endenburg, 2006: 288) for shaping organizational settings (Bruosoni & Prencipe, 2006).

Hence, scientific rationality theories such as the above have the potential to provide organizational practitioners with resources to look at their organizational practices in a different light and, based on that, to be able to create new ways of performing and enacting their practice.

Weber perhaps best captured what scientific rationality theories can offer by referring to ideal types as serving "as a harbor until one has learned to navigate safely in the vast sea of empirical facts" (1949: 104). Notice that in this formulation ideal types (and scientific rationality theories more generally) are seen as helping sensitize practitioners to important features of their practice, without, however, pretending that they have articulated its logic ("the vast sea of empirical facts"). Such theories do not deal with how the world shows up to actors embedded in relational wholes and situated in unique circumstances but, rather, with how the world appears to observers looking for patterns across different contexts and the underlying forces that shape them.

However, insofar as practice retains "a certain plasticity stemming from the fuzziness, irregularity, and even incoherencies of its dispositional principles" (Polkinghorne, 2004: 63), a style of theorizing different from that provided by scientific rationality is required for grasping its logic and, thus, for bridging the management theory-practice gap. Practical rationality and the associated strategies of theory development suggested here provide the appropriate resources for such theorizing.

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Jörgen Sandberg (j.sandberg@business.uq.edu.au) is a reader in management in the School of Business at the University of Queensland, Australia, and leads its research program, Knowledge in Organizations. He received his Ph.D. from the University of Gothenburg. His research interests include competence and learning in organizations, leadership, practice-based theories, qualitative research methods, and the philosophical underpinnings of organizational research.

Haridimos Tsoukas (htsoukas@ucy.ac.cy) holds the Columbia Ship Management Chair in Strategic Management at the Department of Public and Business Administration, University of Cyprus, and is professor at the Warwick Business School, University of Warwick. He received his Ph.D. from the Manchester Business School. His research interests include knowledge-based perspectives on organizations, organizational becoming, practical reason in management, and epistemological issues in organizational research.