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Towards a theory of leadership practice: a distributed perspective

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School-level conditions and school leadership, in particular, are key issues in efforts to change instruction. While new organizational structures and new leadership roles matter to instructional innovation, what seems most critical is how leadership practice is undertaken. Yet, the practice of school leadership has received limited attention in the research literature. Building on activity theory and theories of distributed cognition, this paper develops a distributed perspective on school leadership as a frame for studying leadership practice, arguing that leadership practice is constituted in the interaction of school leaders, followers, and the situation.

Leadership is thought critical to innovation in schools. We know that schools matter when it comes to improving student learning and we know a considerable amount about the organizational structures, leadership roles, and conditions of schools that contribute to innovation (Newman and Wehlage 1995, Hallinger and Heck 1996). We know, for example, that schools with shared visions and norms around instruction, norms of collaboration, and a sense of collective responsibility for students' academic success create incentives and opportunities for teachers to improve their practice (Bryk and Driscoll 1985, Newman and Wehlage 1995). We know that principals' leadership is important in promoting these conditions

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(Rosenholtz 1989). Furthermore, there is considerable evidence to suggest that principals' leadership, as mediated through the development of these school-level conditions and processes, has an effect on student learning (Hallinger and Heck 1996).

However, while it is generally acknowledged that where there are good schools there are good leaders, it has been notoriously difficult to construct an account of school leadership, grounded in everyday practice, that goes beyond some generic heuristics for suggested practices. We know relatively little about the *how* of school leadership, that is knowledge of the ways in which school leaders develop and sustain those conditions and processes believed necessary for innovation. While there is an expansive literature about *what* school structures, programmes, roles, and processes are necessary for instructional change, we know less about *how* these changes are undertaken or enacted by school leaders. A recent review of the North American literature by Hallinger and Heck (1996; 1998; see also Bossert *et al.* 1982) identified many 'blank spots', i.e. shortcomings of the research, and 'blind spots', i.e. areas that have been overlooked because of theoretical and epistemological biases, in the understanding of leadership. These authors argue that an important *blank spot* centres on in-depth description of how school leaders sustain those in-school conditions that foster successful schooling. Sustained, narrowly-focused inquiry is necessary to fill this blank spot in the knowledge-base (Heck and Hallinger 1999). With respect to *blind spots*, they note that the focus on 'documenting if principals make a difference reinforced the assumption that school leadership is synonymous with the principal', resulting in researchers for the most part ignoring other sources of leadership in schools.

We agree, and consider an account of the *how* of leadership, grounded in the day-to-day practice of school leaders, as essential to understanding leadership in schools.[1] However, to study leadership activity, it is insufficient to generate thick descriptions based on observations of what school leaders do. *We need to observe from within a conceptual framework if we are to understand the internal dynamics of leadership practice.* However, because of the inattention to leadership practice, frameworks for studying leadership activity are scarce, and those that exist tend to focus chiefly on either individual agency or the role of macro-structure in shaping what leaders do. (Indeed, investigations of work practices in general require the development of new conceptual frameworks, 'frameworks built out of concepts that speak directly to practice' (Pickering 1992: 7).) Hence, our goal in this paper is to develop a conceptual framework—a *distributed* perspective on leadership—for investigating leadership practice.

The distributed leadership perspective developed here is designed to frame a programme of research that will analyse leadership activity and generate evocative cases for practitioners to interpret and think about as part of their on-going leadership practice. By identifying dimensions of leadership practice and articulating the relations among these dimensions, we hope that the distributed leadership framework can enable leaders to reflect on and analyse their practice. A consideration of leadership practice, thus, offers a potentially powerful explanatory framework, providing insights into how school leaders act.

Consider, by way of example, monitoring instruction, which the research informs us is important for the successful enactment of instructional innovation (Firestone 1989). However, although this research documents the importance of 'monitoring' behaviours for successful innovation, it tells us relatively little about the *how* of monitoring. Without a rich understanding of *how* leaders monitor, it is difficult to develop a perspective on the leadership practice of monitoring that can provide helpful information for school leaders in their practice. By framing an analysis of leadership practice—and developing rich case studies of that practice—the distributed leadership perspective is a tool that can enable change in leadership activity. A conceptual framework for leadership practice is likely to yield more insight into the relations between leadership and innovation in schools than theories that focus exclusively on organizational structures and leadership roles, because leadership practice is a more proximate cause of that innovation.

We begin with a brief retrospective on research on school leadership, paying particular attention to some recent North American work that has attempted to document and describe leadership practice, that is work that begins to address Heck and Hallinger's (1999) blank spot. Next, we outline the theoretical underpinnings for our distributed leadership framework. Specifically, we use distributed cognition and activity theory, perspectives that have proven especially generative in understanding human action, as the theoretical foundations for framing a distributed conception of leadership practice. We use these literatures to re-approach the subject of school leadership and to re-interpret the relevant literatures. We then develop our distributed leadership perspective around four central ideas— *leadership tasks and functions, task-enactment, social distribution of task-enactment*, and *situational distribution of task-enactment*.

In summary, we argue that investigating leadership practice is essential to understanding leadership in organizations. However, such investigations have to be undertaken within a conceptual frame and we develop a distributed framework for such work. In developing a distributed perspective on leadership, we move beyond acknowledging leadership practice as an organizational property in order to investigate how leadership might be conceptualized as a distributed practice, *stretched over*[2] the social and situational contexts of the school. Leadership is not simply a function of what a school principal, or indeed any other individual or group of leaders, knows and does. Rather, it is the activities engaged in by leaders, in interaction with others in particular contexts around specific tasks. We conclude by considering what our distributed leadership perspective might entail for research on school leadership and innovation.

School leadership: a retrospective

Our intent here is not to undertake a comprehensive review of scholarship on leadership, but rather to briefly overview some major lines of work relevant to school-leadership practice. While acknowledging the contribution of different lines of research to our understanding of leadership, we

identify several challenges that must be addressed in order to develop a conceptual framework for investigating school-leadership *practice*.

The literature on leadership, regardless of tradition, has focused mostly on those in formal leadership positions, chiefly on the chief executive officer or in the case of schools, the school principal. For example, the '*leaders' traits*' approach defines leadership chiefly as a function of individual personality, ability, traits, and style—and the focus on the venerable 'great man' theories of leadership continues unabated (Burns 1978). This approach has a long history and marked influence on leadership research, focusing on the identification of leaders' personality traits, and in some cases relating these traits to leaders' effectiveness (Stogdill 1948, 1950, Yukl 1981). Traits such as self-confidence, sociability, adaptability, and co-operativeness, among others, are thought to enable leaders to inspire others, and thus get others to follow; and empirical work suggests that such leader traits do indeed increase the likelihood of a leaders' effectiveness (Yukl 1981).

Responding in part to criticisms levelled at the leaders'-traits tradition for its silence about what leaders do, other researchers began to investigate leadership as a set of *behaviours* (Hemphill and Coons 1950, Kunz and Hoy 1976, Mouton and Blake 1984). Such research, which documented the behaviours of 'successful' leaders, has generated taxonomies of behaviours, including 'monitoring', 'consulting', and 'delegating' (Hemphill and Coons 1950, Hallinger and Hausman 1993). Other work in this tradition has identified broad styles of behaviour, including autocratic, democratic, and laissez-faire (Lewin *et al.* 1939, White and Lippitt 1960), employee-oriented and directive (Mouton and Blake 1984), and task-oriented and relationship-oriented (Likert 1967), at times showing a relationship between these behaviours and effectiveness.

While providing valuable insight, the focus in these traditions on positional leaders is problematic because other research underscores the need to move beyond those at the top of organizations in order to understand leadership (Barnard 1938, Katz and Kahn 1966, Heenan and Bennis 1999). Thus, critics of the solo decision-maker model have argued for giving attention to the shifting coalitions of decision-makers in organizations in which preferences and coalition membership is neither stable nor unified (Cyert and March 1963, March and Olsen 1984). Research on schools has suggested that leadership is not the sole purview of the school principal; teacher-leaders and other professionals also play important roles in leading instructional innovation (Smylie and Denny 1990, Heller and Firestone 1995).

In other words, if leadership is an *organizational quality* (Pitner 1988, Ogawa and Bossert 1995), then investigations of leadership practice that focus exclusively on the work of individual positional leaders are unlikely to generate comprehensive understandings of the practice of school leadership. Indeed, in schools, teacher-leaders often assume leadership roles from a perspective that is distinct from that of positional leaders, and the character and structure of these interactions are vital to understanding leadership practice (Leithwood *et al.* 1997, Urbanski and Nickolaou 1997).

Seeking to address the inattention to context or situation, another line of research on leadership, *contingency theory*, has focused on the relations

between the situation of leaders' work and their actions, goals, and behaviours (Fiedler 1973). Contingency theory assumes that there is no one best approach to organizing, that organizational structure matters when it comes to organizational performance, and that the most effective method of organizing depends on the organization's environment (Galbraith 1973, Lawrence and Lorch 1986). While some researchers have concentrated on such situational aspects as relations between leaders and followers and the extent to which the leadership task is structured (Fielder 1970), others have focused chiefly on followers' readiness to achieve the leader's goal (Hersey and Blanchard 1977). Effective leaders draw on a repertoire of styles, and the effectiveness of particular styles is dependent on both the leadership task and the context (Stogdill 1974). For example, a task-oriented style is more effective when followers have limited experience and competence (i.e. 'immature' followers); a blend of task- and relationship-oriented styles works best with more mature groups; and a delegating-style of leadership appears most effective when working with very mature groups (Hersey and Blanchard 1977).

Leaders' thinking about their work is largely ignored in behavioural studies of leadership, with the research focusing attention on documenting macro- or micro-leadership behaviours or styles. The *cognitive tradition* of research on decision-making in organizations has focused on leaders' and followers' thinking about their situation and work, and the relations between these cognitive processes and their behaviour (Simon 1976, Pfeffer 1977, Weick 1979, 1995). Recent work in this tradition investigates how school leaders use mental representations to understand and order their repertoire of responses to experience (Bolman and Deal 1991, Gardner 1995). Comparing the problem-solving strategies of 'expert' and 'typical' principals (as identified by school boards, administrators, and interviews with subjects), researchers have shown that 'experts', when compared to 'typical' principals, are better able to identify the problem situation and to detect features of the problem that are similar to past problems (Leithwood and Steinbach 1990, 1995). However, with its focus on the thinking of individual leaders, this work continues the tradition of seeing leadership chiefly as a function of individual personality, ability, cognition, and style. If school leadership involves a range of administrators and teachers in a given school, this focus has limitations. Another caution to be levelled at the cognitive research on leadership is that by concentrating on administrators' intentions, values, and beliefs, cognitive approaches run the risk of ignoring organizational, cultural, and political factors that also influence what school leaders do (Cuban 1993).

In contrast to the traditional cognitive perspective, *institutional theory* attempts to situate individual sense-making in institutional sectors, challenging 'models of social and organizational action in which relatively autonomous actors are seen as operating with unbounded rationality' (Rowan and Miskel 1999: 359). From an institutional perspective, the thinking and action of social actors is situated in institutional sectors that provide norms, rules, and definitions of the environment, both constraining and enabling action (DiMaggio and Powell 1991). These tacit schemata

define appropriate structures and give meaning and order to action in institutional sectors (Scott 1995). In this scheme, leadership is about preserving institutional legitimacy in order to maintain public support for the institution.

From this perspective, leadership, and leaders' cognition cannot be understood apart from the contexts in which they are embedded. This perspective provides insight into the implications of structure for leaders' cognition and action, suggesting that cognition itself can be constrained by institutional context. However, although not inherent in the approach, institutional theorists have tended to overplay aggregation and determinism (DiMaggio 1988), curtailing the frame's usefulness for investigating leadership practice. Focusing on populations of organizations—institutional sectors—institutional theory has stressed the emergence of dominant organizational forms rather than the leadership practices or activities that may be particular to individual organizations (Whittington 1992). Further, the over-emphasis on the role of institutional schemata tends to smother human agency. As a result, institutional theory runs the risk of being overly deterministic by not attending to how social actors make sense of, and shape, their environments (Giddens 1984, Weick 1995). To enhance its relevance to scholarship in educational leadership, institutional theory needs to more closely address issues of school learning, educational practice, and institutional change (Rowan and Miskel 1999).

Drawing on this previous research, we contend that, in order to understand leadership practice, leaders' thinking and behaviour and their situation need to be considered *together*, in an integrated framework. We argue that understanding the *what* of leadership is essential; but that without a rich understanding of *how* leaders go about their work, and *why* leaders do and think what they do, it is difficult to help school leaders think about and revise their practice. Further, from a research perspective, we contend that attention to *how* leadership practice is undertaken by multiple leaders in diverse contexts will establish a cogent framework for a more careful consideration of the *why* of school leadership. Building on recent work in distributed and situated cognition and activity theory, we argue that leaders' practice (both as thinking and activity) is distributed across the *situation of leadership*, that is, it emerges through interaction with other people and the environment. Hence, to frame a study of leadership practice, we propose an integrative conceptual model that explores the interaction of leaders' thinking, behaviour, and their situation.

Conceptual underpinnings

Distributed cognition and activity theory, the conceptual foundations for our distributed leadership perspective, have proven especially fruitful in understanding human activity in complex, emergent, and discretionary environments. This emergent perspective within psychology is recognizing how social context is an integral component of, not just backdrop or container for, intelligent activity. We appropriate several concepts from this work.

The study of human cognition has undergone something of a revolution in the past few decades, as scholars have focused on understanding the thinking process *in situ* rather than *in vacuo* (Rommetveit 1980). Recent investigations of human intelligence and cognition, rooted in Heidegger's (1962) emphasis on the 'in-the-worldness' of human experience, aim to situate thinking in the context in which it occurs (Lave and Wenger 1991). In this context, it does not seem satisfying or relevant to talk about thinking as a '*g*-factor', independent of the context or action in which it is exercised, because intelligence is not encountered apart from the occasions in which it is displayed. In this view, investigating purposeful activity in its 'natural habitat' is essential for the study of human cognition (Leont'ev 1981, Hutchins 1995b). Cognition cannot be understood merely as a function of mental capacity because sense-making is enabled (and constrained) by the situation in which it takes place (Resnick 1991).

Thus, because of the mutuality of the individual and the environment, human activity is *distributed* in the interactive web of actors and artifacts, and *situation* is the appropriate unit of analysis for studying practice. Because cognition is distributed situationally in the physical environment, that is through the material and cultural artifacts in an environment, it is also distributed *socially*, through other people in collaborative efforts to complete complex tasks (Latour 1987, Pea 1993).

Recent investigations in distributed cognition have focused on ways in which cognition is distributed across or 'stretched over' material and cultural artifacts (Rogoff 1990). Artifacts include language, notational systems, tools of various sorts, and buildings (Gagliardi 1990). For example, Hutchins (1995a) documents how the task of landing a plane can be best understood within a framework that includes the manufactured tools and social context of the cockpit which situate a pilot's activity. These features of the environment are not, argues Hutchins, merely 'aids' to the pilot's cognition, rather they are best understood as essential features of a composite which has the cockpit as the basic unit of analysis. Similarly, tools such as calculators enable students to complete computational tasks in ways that are difficult without tools (Pea 1993); in these cases, cognitive activity is also 'stretched over' actors and artifacts (Lave 1991). Thus, the unit of analysis for examining cognition in practice is actors in situations working with artifacts, rather than actors abstracted from situations or artifacts.

The technological or material aspects of the situation are not the only relevant means of distribution. Language, number systems, theories of action, and interpretive schema provide also 'mediational means' that enable and transform intelligent social activity (Vygotsky 1978, Leont'ev 1981, Brown and Duguid 1991, Wertsch 1991). Such material and cultural artifacts, seen as products of particular social and cultural situations, form identifiable aspects of the 'sociocultural' context. Actors have or develop common understandings, and draw on cultural, social, and historical norms in order to think and act. Thus, even when a particular cognitive task is undertaken by an individual, apparently *in solo*, the individual relies on a variety of sociocultural artifacts, such as computational methods and language, that are social in origin (Vygotsky 1978, Wertsch 1991).

While much of the work in distributed cognition and activity theory emphasizes how context enables action, we recognize that it can also constrain it. Thus, our conceptual frame must address the relations between structure and human agency. 'Structure' refers to the various elements which individuals must contend with when forming action, from the tangible to the intangible, from things like classroom lay-outs to world-views and cultural dispositions. 'Human agency' refers to the actions of individuals *within* the context of (and, in fact, through) structure.

There are different perspectives on the relations between agency and structure—from objective structural determinism where all 'agency' is ultimately predicted by the structure in which it is embedded (Althusser 1971), to phenomenology which emphasizes the agentive, subjective, social construction of reality by agents (Berger and Luckmann 1966). While these approaches view structure and agency as a dualism, we conceptualize structure as a duality. Following Giddens (1979, 1984), we view structure as both the medium and the outcome of action, i.e. agency. Structure constitutes agency, providing the rules and resources upon which it is based; however, structure is also created, reproduced, and potentially transformed by the actions of human agents. The structural properties that enable human activity exist only as they are 'instantiated in activity' or remembered as rules of conduct or 'rights to resources' (Whittington 1992: 696).

In other words, a distributed perspective on human activity presses us to move beyond individual activity to consider how the material, cultural, and social situation enables, informs, and constrains human activity. *In this view, activity is a product of what the actor knows, believes, and does in and through particular social, cultural, and material contexts.* Taking a distributed and situated perspective does not mean that the individual is somehow irrelevant in an investigation of human cognition and activity. What the individual thinks and knows is still relevant (Salomon 1993). In adopting a 'person-plus' perspective on human activity, we acknowledge that individual cognition is distributed in the material and social situation, but also that some intelligent activity may be distributed more than others (Perkins 1993).

Leadership: a distributed perspective

In keeping with the theoretical underpinnings for this work, our perspective on school-leadership practice focuses on leaders' thinking and action *in situ*. For us, the appropriate unit of analysis is not leaders or what they do, but leadership *activity*. We argue that leadership activity is constituted—defined or constructed—in the interaction of leaders, followers, and their situation in the execution of particular leadership tasks. As illustrated in figure 1, in this view leadership activity involves three essential constituting elements—leaders, followers, and situation. It does not reside in any one of these elements, and each is a pre-requisite for leadership activity. Our perspective shifts the unit of analysis from the individual actor or group of actors to the web of leaders, followers, and situation that give activity its form. We explore each of these elements separately below; however, it should understand that we view leadership practice as constituted in the interaction of all three.
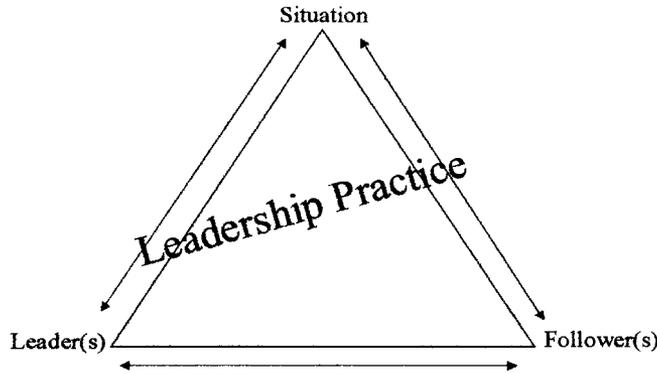
Figure 1. Constituting elements of leadership practice.

In other words, rather than seeing leadership practice as solely a function of an individual's ability, skill, charisma, and/or cognition, we argue that it is best understood as a practice distributed over leaders, followers, and their situation. Attending to situation as something more than a backdrop or container for leaders' practices, we consider sociocultural context as a constitutive element of leadership practice, an integral defining element of that activity.

Leadership in schools

Although the distributed perspective we develop here is applicable to leadership in general, we use examples of leadership practice around instructional innovation to illuminate our argument. Our perspective is premised on two assumptions:

- School leadership is best understood through considering leadership tasks; and
- Leadership practice is distributed over leaders, followers, and the school's situation or context.

We begin our discussion with a consideration of the tasks around which school leaders organize their practice. We consider the macro-functions as well as the micro-tasks that are essential for the successful execution of these macro-functions. We next consider the social and situational distribution of leadership practice around task-enactment in order to expand the cognitive accounts of leadership by emphasizing how the social and situational context enables and constrains leaders' practice.

We define school leadership as the identification, acquisition, allocation, co-ordination, and use of the social, material, and cultural resources necessary to establish the conditions for the possibility of teaching and learning. Leadership involves mobilizing school personnel and clients to notice, face, and take on the tasks of changing instruction as well as

harnessing and mobilizing the resources needed to support the transformation of teaching and learning.

An issue here concerns the relationship between leadership and management. While 'the essence of organizational leadership [is] the influential increment over and above mechanical compliance with routine directions of the organization' (Katz and Kahn 1966, cited in Bass 1990: 14), management involves 'maintaining efficiently and effectively current organizational arrangements' (Burns 1978, Cuban 1988). Many have noted how the 'managerial imperative' often dominates the work of school leaders, while instructional activities receive limited attention (Peterson 1977). We believe that a focus on generalized 'leadership' runs the risk of overlooking how much of every leaders' work involves managing the status quo. Managerial tasks, which are designed to produce stability, may differ substantially from 'leadership' tasks designed to promote change (Firestone 1996). However, what leaders do in the managerial and political realms, though often not directly and explicitly connected to changing some aspect of school life, may be an essential component of leadership in general, and leadership for instruction in particular (Lee 1987, Leithwood 1994). Indeed, efforts to change and efforts to preserve are often blended in the practice of leaders as tasks serving multiple agendas and functions. For example, maintaining scheduling arrangements for teachers that create opportunities for them to meet can enable instructional innovation. Leaders who neglect managerial concerns, such as respecting the constraints on the daily schedule resulting from, e.g. collective-bargaining arrangements (*de facto* limitations on what can be asked of teachers), may have difficulties executing leadership tasks.

Without attention to stability and the maintenance of organizational structures and routines, it can be very difficult to understand the significance of particular leadership tasks. Thus, efforts to transform teaching and learning that are guided by a *technical logic* are likely to depend in some measure on preserving the legitimacy of the institution by maintaining the confidence of external constituents, efforts which are informed by an *institutional logic* (Meyer and Rowan 1978). Seen in this light, much of the work of school principals is directed outwards, towards external constituents, in an effort to protect the legitimacy of the organization. In other words, tasks designed to promote change may depend, in substantial measure, on the successful execution of tasks designed to preserve the status quo.

Leadership tasks and functions

Breaking leadership practice into component tasks is an elusive activity because, as Mintzberg (1973: 31) puts it, the work of administrators is characterized by 'brevity, variety, and fragmentation' (see also Leithwood and Steinbach 1995). The disjointed, discretionary, and emergent work of school leaders, their 'fire-fighting' (Weick 1996), results in a decision-press which can lead to a focus on short-term resolutions of problems rather than long-term planning (Peterson 1977). However, because school leaders do

not work solely in reaction to their environment, our analysis of their practice is tied to an understanding of the task-structures that, over time, inform and guide their work.[3] Pursuing a task-centred approach, grounded in the functions of leadership within the school, offers a means of accessing leadership practice. While others focus on the 'networks of roles' that exist between multiple actors and make up organizational leadership (Ogawa and Bossert 1995), our perspective centres on the inter-dependencies between leadership activities or practices rather than focusing chiefly on social interaction among individuals. Hence, the distributed frame allows us to examine how social interaction *and* situation simultaneously constitute leadership practice.

What constitutes a leadership task? Constructing a school vision, holding a disciplinary hearing regarding misbehaviour, conducting a meeting to persuade parents of the merits of a new discipline code, or monitoring the instruction in a 2nd-grade reading classroom are all leadership tasks. Yet, there is tremendous variation in the grain-size of these tasks. A leadership function like 'constructing a school vision' consists of numerous tasks, e.g. writing a draft vision, facilitating a staff meeting to discuss the draft, and revising the drafts, spread out over months, or even years. In contrast, facilitating a disciplinary hearing is a micro-task that is perhaps connected with the macro-function of establishing a safe school climate. The literature documents a variety of macro-school-level functions that characterize successful, well-run schools. For example, Purkey and Smith (1983) note that school-site management, planned curriculum co-ordination and organization, linking staff development to the expressed concerns of the staff, and a strong sense of order and discipline are some key characteristics of effective school communities.

An extensive literature identifies and describes the macro-school-level functions that are thought essential for instructional innovation (Leithwood and Montgomery 1982, Firestone and Corbett 1988, Blasé and Kirby 1993, Louis and Kruse 1995, Sheppard 1996, Blasé and Blasé 1999). Synthesizing this literature, we can identify several functions that are important for instructional leadership:

- constructing and selling an instructional vision;
- developing and managing a school culture conducive to conversations about the core technology of instruction by building norms of trust, collaboration, and academic press among staff;
- procuring and distributing resources, including materials, time, support, and compensation;
- supporting teacher growth and development, both individually and collectively;
- providing both summative and formative monitoring of instruction and innovation; and
- establishing a school climate in which disciplinary issues do not dominate instructional issues.

These leadership functions provide a framework for analysing leadership tasks and exploring their relation to instructional innovation. Focusing on

macro-functions alone, however, will not enable us to understand leadership *practice*—where we must also identify and analyse the micro-tasks that contribute to the execution of macro-functions. However, due to the fragmentary nature of leadership practice in schools, micro-tasks often appear to have little connection either with one another or with the school's instructional goals (Lee 1987). Thus, the research challenge in understanding leadership practice is to reconstruct, through observation and interview, whatever links exist between the macro-functions and the micro-tasks of school leadership. For example, creating opportunities in the school day for teachers to work together, e.g. shared planning times, helps school leaders build norms of collaboration within the school (Goldring and Rallis 1993). Similarly, the execution of such micro-tasks as frequent classroom observations, distinguishing summative and formative evaluation, and establishing professional relations between the observer and the observed help realize the macro-functions of both supporting teacher growth and monitoring instruction (Little and Bird 1987). Our earlier discussion suggests that tasks can also be sorted into instructional, managerial, and political categories, although these categorizations are not mutually exclusive (Cuban 1993).

We contend that research on the analysis of leadership tasks should be extended to focus on dimensions that include task-complexity, task-ambiguity, and the knowledge-entailments of a task. For example, the cognitive skills of framing and resolving non-routine tasks, as distinct from routine tasks, differentiate expert from novice principals (Leithwood and Steinbach 1995). We also know from research in organizations in general and schools in particular that the clarity and complexity of the core technology (in the case of schools, instruction) influence the behaviour of managers (Thompson 1967). For example, greater clarity, i.e. specificity, with respect to instructional practices, enables closer supervision of teaching by school leaders. Furthermore, in-depth analyses of leadership tasks are important: tasks that appear similar can turn out, on careful scrutiny, to be very different. For example, the particulars of a task such as facilitating a teacher workshop on mathematics instruction depends, among other things, on the knowledge of the teachers one works with and the particular skills one wants teachers to develop.

Enacting leadership tasks

However, to develop a framework for analysing leadership practice, it is necessary to move beyond the identification and analysis of tasks to explore their *enactment*. Indeed, the ways in which leadership tasks are enacted may be most important when it comes to influencing what teachers do (Blasé and Kirby 1993, Lambert *et al.* 1995, Elmore *et al.* 1996, Smylie and Hart 1999).

There is often a difference between what people do and what they say about what they do, a distinction that can be maintained without duplicitous intent. Organizational policies can reflect ideal or desired tasks rather than what people actually do (Orr 1996), and personal accounts of action often reflect *post facto* sense-making efforts that refine the complexities of the

experience (Weick 1996). Thus, the 'espoused theories' of practice (Argyris and Schön 1974) or the 'canonical practice' (Brown and Duguid 1991) found in formal accounts, official policies, and job-descriptions are often abstracted from day-to-day practice to provide over-rationalized portrayals of an ideal practice in which the challenges and uncertainties of unfolding action are smoothed-over in the telling (Weick 1979, Brown and Duguid 1991). Research suggests substantial differences between the espoused theories and the 'theories-in-use' that guide day-to-day practice (Argyris and Schön 1974). For example, Orr (1996) shows how the espoused theories (i.e. the training manuals, trouble-shooting guides, and decision-trees) of a copy-machine repair organization tell a fundamentally different, more rationally-ordered story of work than the emergent, discretionary work of the repair technicians. He found that repair workers supplement espoused practices with a rich, shared cultural library of case-stories used to diagnose and resolve problems. Thus, espoused practices, while often readily accessible, serve as insufficient road maps to practice. To gain insight on practice, we need to understand a task *as it unfolds* from the perspective and through the 'theories-in-use' of the practitioner.

Analysing leadership practice involves understanding how school leaders define, present, and carry out their tasks. 'Expert' principals are better able to regulate their own problem-solving processes and are more sensitive to the task demands and the social contexts within which tasks are to be solved (Leithwood and Steinbach 1995). We suspect, however, that a greater range of processes influences how school leaders enact their tasks.

Recently, some scholars have worked to understand task-enactment through documenting the day-to-day practices of school leaders, exploring their relationship to the macro school functions considered essential for innovation (Goldring and Rallis 1993) and their effects on teachers' work (Blasé and Blasé 1999). For example, strategies such as frequent classroom observing and distinguishing summative and formative evaluation help realize the macro-function of supporting teacher growth (Little and Bird 1987). Blasé and Blasé's (1999) study of teachers' perspectives on principals' day-to-day leadership behaviour identified two major themes— talking with teachers to promote reflection and promoting professional growth—that made up some 11 strategies that effective principals, as identified by teachers, use to promote instructional change. They defined six strategies that principals use to promote teacher reflection, including making suggestions, giving feedback, modelling, using inquiry, soliciting advice and opinions, and giving praise (Blasé and Blasé 1999: 359).

While such work has contributed in significant ways to our understanding of everyday task-enactment by principals, it has shed limited light on the beliefs and experience that leaders bring to their work and, in some cases, the influence of context on leaders' practices. For example, when it comes to enacting tasks considered essential for instructional innovation, school leaders' subject-matter and pedagogical knowledge, coupled with their beliefs about teacher learning and change, may influence how they present and carry out these tasks. Nelson (1999), for example, has suggested that administrators' assumptions about teaching and mathematics instruction influence what they notice and how they evaluate mathematics lessons.

Task-enactment becomes more complicated if one assumes a distributed perspective, that is if one assumes that human activity is not simply a function of individual skill and knowledge but is spread across people and situations.

The social distribution of task enactment

A distributed perspective presses us to identify and explore the enactment of leadership tasks, as these tasks are performed by multiple formal and informal leaders. Consistent with the research which suggests that school leadership reaches beyond those in formal leadership positions (Heller and Firestone 1995, Ogawa and Bossert 1995), a distributed view of leadership incorporates the activities of the multiple individuals in a school who work at mobilizing and guiding a school's staff. Thus, our distributed perspective focuses on how leadership practice is distributed among positional and informal leaders as well as their followers. Understanding how leaders in a school work together, as well as separately, to execute leadership functions and tasks is an important aspect of the social distribution of leadership practice.

We argue that the social distribution of leadership means more than acknowledging the division or duplication of labour—although that is an important aspect—in the enactment of leadership functions and tasks (Heller and Firestone 1995). A distributed perspective presses us to consider the enactment of leadership tasks as potentially *stretched over* the practice of two or more leaders and followers. Hence, the social distribution of leadership practice involves more than developing additive models that capture the 'amount' of leadership or that are inclusive of the work of all leaders in a school (Pounder *et al.* 1995). It also involves understanding how leadership practice is stretched over the work of various school leaders and exploring the practice generated in the interactions among these individuals.[4] In this view, leadership practice might be 'in-between' (Salomon and Perkins 1998) the practice of two or more leaders. From a distributed perspective, a multiplicative rather than additive model is most appropriate because the interactions among two or more leaders in carrying out a particular task may amount to more than the sum of those leaders' practice.

In other words, we argue that leadership activity is constituted in the interaction of multiple leaders (and followers) using particular tools and artifacts around particular leadership tasks. In this scheme, what is critical are the *interdependencies* among the constituting elements—leaders, followers, and situation—of leadership activity.

One way of understanding interdependencies in leaders' practices would centre on the ways in which two or more leaders jointly enact school leadership practice. For example, in one of our schools, Carson,[5] standardized test scores and a breakdowns of student performance in particular skill areas are used to focus instructional improvement efforts on specific student learning needs. This strategy involves a number of inter-dependent steps and actors, each building on resources produced through the completion of prior steps. First, the tests must be administered to students, requiring scheduling

and co-ordination. Secondly, the test results must be received, analysed, and interpreted by school personnel. Thirdly, based on this analysis, instructional priorities must be identified and disseminated, and their implementation monitored throughout the school. And, finally, classroom teachers must participate in professional development and implement the instructional changes in classrooms.

This example illuminates how leadership activity is distributed across people while adding a temporal dimension to jointly-enacted leadership. Taking into account the multiple activities involved in Carson's efforts to use student test scores to lead instructional improvement, we observe an inter-dependency among various activities. In this case, one leadership activity—*determining instructional priorities*—depends upon the completion of another activity—*interpreting student results*. The vignette illuminates how the enactment of certain leadership tasks depends upon resources generated from prior tasks.

A second sort of distribution across leaders occurs when activities performed separately produce a common resource. At Ellis school, the principal and assistant principal work separately but inter-dependently on the task of evaluating instruction. The assistant principal, who maintains a friendly and supportive relationship with teachers, visits classrooms frequently and engages in formative evaluation by providing regular feedback to teachers on instructional issues. The principal on the other hand functions more as an authority figure and engages in summative evaluation. She visits the classrooms one-to-two times per year and makes final determinations on the quality of teachers' instructional practices. The assistant principal shares his learning with the principal, and the two use their collective observations to develop an understanding of teachers' instructional practices. In other words, the activity of evaluating instruction is engaged in by two actors who work separately; however, their work is inter-dependent because it produces a common teacher evaluation practice. Moreover, their work is co-ordinated because they share a common goal of improved instruction, seek to reach it through a common approach, and communicate with each other about their work. While some observers might see the practice of these two leaders as independent, one can only understand evaluation practice at this school by factoring in both practices. The assistant principal's practice only makes sense when considered in relation to the principal's practice. And, while some might view this practice as a division of labour, we argue that these leaders are not engaged in discrete tasks but that leadership activity, the practice of evaluating instruction in this case, is stretched over their work.

Finally, interdependency emerges when the enactment of a leadership task depends on the inter-play between two or more actors (and, as discussed below, two or more aspects of the situation). Consider the following example. At monthly planning meetings, the mathematics co-ordinator, 4th-grade lead-teacher, and the assistant principal were working together to co-ordinate the work of a curriculum committee made up of the teachers from each grade level who were redesigning the elementary school mathematics curriculum for the following academic year. The mathematics co-ordinator, with a master's degree in mathematics, was recognized by her colleagues for her

knowledge of mathematics. The assistant principal had a keen understanding of state and district curriculum standards and accountability measures, especially the learning priorities established by the mandated state and local district standardized tests. The 4th-grade lead-teacher, who recently completed a master's degree in curriculum and instruction, had a keen interest in and knowledge of mathematics pedagogy.

The practice of facilitating the curriculum committee was constituted in the interaction of these three leaders, the teachers, and the material artifacts they used. For example, at one meeting, the assistant principal argued that 4th-grade teachers should teach multiplication of fractions in the fall semester, so that the students could have a mastery of that skill for the standardized test given in February. The mathematics co-ordinator noted that this would only work if the children had already mastered multiplication facts and multiplication situations (word-problems) and developed a working understanding of fractions. She pointed out that these are pre-requisites for understanding multiplication of fractions and gave the group a few examples to indicate why these topics are important. At this point, the 4th-grade lead-teacher interjected, arguing that all of these topics cannot be covered prior to winter break. Hence, it would not be possible to cover multiplication of fractions by February. Most of the teachers agreed, and marshalled considerable evidence to support the lead-teacher.

Initially, the assistant principal insisted that multiplication of fractions must be covered. She suggested that either the bare essentials could at least be covered in all four pre-requisite areas or, alternatively, perhaps they could skim over the pre-requisite concepts. The mathematics co-ordinator reminded her that some of the questions in the 'new' format for the mandated tests require students to explain their answers, and that this would be difficult for students if they did not have a firm grasp of the key mathematical principles involved in these topics. Memorizing procedural knowledge alone would not serve. As the conversation proceeded, the group decided to teach the meaning of fractions and multiplication facts in the spring semester of the 3rd grade, so that students would be better prepared when they reach 4th grade to take up multiplication of fractions.

In this example, leadership practice was constituted in the interaction among these three leaders, the teachers, and the material artifacts. There was also a reciprocal relationship between the practice of these leaders. Each required input from the others to facilitate the activity. In such *reciprocal interdependencies*, individuals play off one another, with the practice of person A enabling the practice of person B, and vice versa. Hence, what A does can only be fully understood by taking into account what B does, and vice versa. Such collective leading depends on multiple leaders working together, each bringing somewhat different resources—skills, knowledge, perspectives—to bear.

In the scenario described above, the group (or the group of individuals) performing the task had cognitive properties that exceeded those of any one member—'the cognitive properties of groups are produced by an inter-action between structures internal to individuals and structures external to individuals' (Hutchins 1990: 306). We contend, in other words, that the *collective* cognitive properties of a group of leaders working together to enact

a particular task leads to the evolution of a leadership practice that is potentially more than the sum of each individual's practice. Consequently, to understand the knowledge needed for leadership practice in such situations, one has to move beyond an analysis of individual knowledge and consider what these leaders know and do *together*. Depending on the particular leadership task, the knowledge and expertise of school leaders may be best explored at the group or collective level rather than at the individual leader level.

A final aspect of the social distribution of leadership practice concerns the ways in which a leader's practice is distributed among leaders and followers. Previous work underscores the relational nature of leadership, suggesting that leaders not only influence followers, but are also influenced by them (Dahl 1961, Hollander 1978, Cuban 1988). As Barnard (1938: 163) put it, 'Whether an order has authority or not lies with the persons to whom it is addressed'. The emphasis here is on the development of a *negotiated order* between leaders and followers: leaders are dependent on the followers they lead (Smylie and Hart 1999). Research in micro-politics suggests that, while leaders can often draw on their positional authority to support the beliefs and actions they advocate, followers can influence leaders by drawing on personal characteristics, access to information, or special knowledge or expertise (Bacharach and Lawler 1980). Finally, followers may influence leadership strategies by finding subtle ways to resist administrative controls through 'creative insubordination' (Crowson and Morris 1985, Blasé and Anderson 1995).

A socially distributed perspective on leadership practice extends these arguments by suggesting that the role of followers in leadership practice involves more than influencing the actions taken by formal leaders or the effects of formal leadership. *From a distributed perspective, followers are an essential constituting element of leadership activity.* Rather than a variable outside of leadership activity that influences what leaders do or mediates the impact of what they do, followers are best understood as a composing element of leadership activity.

Consider an example. An assistant principal and lead reading teacher were working to foster reflective dialogue among the 5th-grade teachers in their school using 'Writer's Workshop', which the 5th-grade teachers had been using for a semester. To facilitate the dialogue that they sought, the teachers' accounts of their enactment of the Writer's Workshop, as well as some of the stories 5th-graders composed in the programme, became the focal points of bi-weekly meetings convened by the assistant principal and lead-teacher to promote the teachers' reflection about reading instruction. The followers in this situation—the teachers—in interaction with the two leaders and a variety of artifacts defined the leadership practice through the accounts of practice they shared and their discussion of these accounts.

The situational distribution of leadership practice

In our view, leadership practice is *situated*. Acknowledging the mutuality of the individual and the environment, the distributed view underscores that

activity is distributed in the interactive web of actors, artifacts, and situation.

Prior research has established the importance of situation to leadership arrangements in organizations. Contingency theorists argue that the most effective or appropriate organizational structure depends on the nature of the work, i.e. the technology, being undertaken by the organization and the environmental demands the organization has to negotiate (Fiedler 1973, Lawrence and Lorch 1986). Aspects of the situation, including the complexity and uncertainty of the work performed by the organization, its size, and the complexity of its environment, influence an organization's structural arrangements and performance (Scott 1995).

Work on schools illuminates how the circumstances of leadership influence what leaders do as well as the effects of what they do on followers (Bossert *et al.* 1982, Murphy 1991). For example, the clarity and complexity of the instructional technology influences the extent to which school administrators co-ordinate and control the work of teachers (Cohen and Miller 1980). Other situational variables, including district-office support, e.g. provision of resources and technical assistance and priorities, staff composition e.g. age, educational level, stability, and the school's social or community context, e.g. SES of parents have also be examined (Dwyer *et al.* 1983). Such work finds, for example, that, in order to lead effectively, leaders must adapt their behaviours to the characteristics of their staff. Schools with more mature and stable staffs are likely to have principals with more indirect leadership styles compared with schools with younger and less stable staffs (Dwyer *et al.* 1983). However, while we agree that such aspects of the situation are important in studies of school leadership and its effects, our treatment of situation differs in a number of respects.

Thus, our approach to situation differs from contingency theorists in at least four ways—the positioning of situation vis-à-vis leadership activity, the relations between situation and leadership, the aspects of the situation that are critical, and the aspects of leadership that merit attention. To begin with, in contingency theory situation or context is treated chiefly as something that is outside and working independently or interdependently to influence leadership activity. Aspects of the situation are treated as independent or interdependent variables that shape leadership behaviour and/or mediate the effects of leadership on teachers or other organizational members. For example, Hallinger and Murphy (1987: 182) talk about situation (no doubt reflecting the state of the literature) as creating 'a context within which principals act' and 'its influence on the actions of school leaders'. In other words, situation, as manifested in organizational size and staff characteristics among other factors, is treated as something impacting leadership practice from *outside* the practice. However, in keeping with activity theory and distributed cognition, our distributed perspective argues that situation is not external to leadership activity, but is one of its core constituting elements (see figure 1).

As indicated above, studies within activity theory and situated cognition contend that situational elements are constitutive of human practice, and thus highlight how difficult it is to separate the capacity for action from the context of action (Pea 1993). Situation or context does not simply 'affect'

what school leaders do as some sort of independent or inter-dependent variable(s); it is *constitutive* of leadership practice. Because situations offer particulars e.g. tools of various kinds, organizational structures, language that are part and parcel of leadership practice, as these particulars vary, so too will the *how* of leadership practice. In other words, we mean by 'situated' that leadership activity is, to varying degrees, distributed or stretched over various facets of the situation, including tools, language, and organizational structure. Situation is part of practice and works to influence leadership activity from within the activity.

A second distinction concerns the somewhat deterministic treatment of social structure in contingency theory. Contingency theorists tend to view structure as a determining rather than constraining, or indeed enabling, human activity (Child 1972, Pfeffer 1981). Our distributed perspective, as we will elaborate below, suggests that aspects of the situation enable *or* constrain leadership activity, while that activity can also transform aspects of the situation over time. As argued earlier, situation is both constitutive *of* and constituted *in* leadership activity.

A third distinction we draw concerns the aspects of the situation that are important in investigating leadership activity. While we agree with contingency theorists that aspects of the situation, such as staff-size and stability, environmental complexity, and task-complexity and task-certainty, are important, other aspects of the situation are also especially critical in studying leadership practice. Specifically, in our framework the symbols, tools, and other designed artifacts that are part and parcel of day-to-day leadership practice, and mostly taken-for-granted, are integral to investigations of leadership activity. Further, by 'structure' we mean not only organizational structures (Ranson *et al.* 1980) but also broader societal structures, including race, class, and gender (Abolafia and Kilduff 1988, Filby and Willmott 1988), and the manner in which these manifest themselves in interactions among leaders and followers in the execution of leadership tasks.

Finally, while contingency theory tends to focus chiefly on the effects of situation on broad leadership styles and organizational forms, we are concerned with day-to-day leadership activity, not just broad styles of leadership or organizational structures and roles.

Thus, by *situation* we mean the sociocultural context (including artifacts) that can embody the stable practices—the 'crystallized operations' (Leont'ev 1981) or the 'reifications of practices' (Wenger 1998)—in work such as leadership. It is important to keep in mind that these stable practices are inventions, and frequently they wear out, and are re-designed or re-invented over time. As integral constituting elements of human activity, artifacts of various sorts are not just sources of ideas and guidance for action but vehicles of thought (Perkins 1993). Hence, the introduction of new tools or artifacts does not merely make the work of leaders more efficient, but can transform the nature of the leadership activity.

The challenge for a distributed leadership framework is to identify those aspects of the situation that are critical in constituting leadership practice. We have already brought to the fore the *tasks* of leadership as the thread that winds through leadership practice. Here, we turn to some of the significant

aspects of the sociocultural context that are constitutive of that practice. To develop this point, we consider some aspects of the situation, emphasizing the structural context of leadership as mediational means (Wertsch 1991) that serve both as the medium and outcome of human action (Giddens 1979). To illuminate these ideas, we then consider how leadership practice might be spread out across three dimensions of the situation: designed artifacts, language, and organizational structure.

Our conception of situation draws heavily on the work of Giddens (1979, 1984), Wertsch (1991), and Swidler (1986). We argue that leadership practice cannot be extracted from its socio-cultural context—that it is situated in cultural, historical, and institutional settings (Wertsch 1991).

Drawing from Giddens (1979: 66), we distinguish between *structure*, the rules and resources that provide the medium and outcome of social action, and *system*, the 'reproduced relations between social actors or collectives organized as regular social practices'. 'System' refers to the social institutions, like work, family, school, or other constellations that we recognize as having some level of stability and regularized patterns of social interaction. 'Structure', on the other hand, represents the properties of social systems that enable and constrain social action. So, for example, within a school (i.e. social system) the organization of grade levels (i.e. structure) shapes social interaction, while language provides a medium of action in this social system as a structural property constitutive of human action in schools. Our use of structure as the medium of human interaction in social systems is similar to Wertsch's (1991) conception of the 'mediational means' which he argues enable and shape human action in important ways. To understand human activity, we must investigate individuals 'acting in conjunction with mediational means' (Wertsch 1991: 33). In other words, our framework includes *structure*, or the rules and resources that are the medium and outcome of social relations within social systems, and *system*, which refers to reproduced relations between social actors.

We have argued above that *human agency* is embedded in the situation. We need, therefore, to illuminate how we see structure, and agency interacting in the construction of leadership practice. While we assign a central role to structure, we are *not* advancing a structural-determinist argument where all 'agency' is ultimately predicted by the structure in which it is embedded (Althusser 1971). *Structure is both constitutive and constituted*: the structural properties of social systems can be conceptualized as a 'tool-kit' of rules and resources that may facilitate action. Here, we borrow from Swidler (1986), who argues that culture provides a tool-kit through which social actors deploy strategies of action. These strategies are informed by the repertoires of skills and resources to which people have access. *We argue that structures, as mediational means, provide a basis for action from which people pick and choose in an effort to accomplish desired ends.* Thus, we avoid structural determinism while recognizing how structure is constitutive of human action.

It is also important to note that we recognize the unequal distribution of resources and the differential implications of rules for different social actors. For example, organizational arrangements that inhibit communication

among teachers might constrain leadership practice for instructional innovation. Likewise, adversarial relationships between home and school might work against home-school collaboration and undermine instructional innovation.

Having considered the conceptual issues with respect to relations between situation and leadership activity, we now explore how leadership practice might be stretched over its situation or context from a micro-perspective. Specifically, we want to illuminate the ways in which the situation might be constitutive of day-to-day leadership practice. We consider how leadership practice might be distributed across the dimensions of the situation, including designed artifacts and organizational arrangements. While other dimensions of the situation may also be important, a consideration of these two will enable us to articulate in more specific ways what we mean when we argue that the situation of leadership practice is constitutive of that practice.

Designed artifacts

Designed artifacts are constitutive of leadership practice. Leadership practice is situated in an environment composed of artifacts that represent, in reified forms, the achievements and problem-solving initiatives of previous human action. We use the term 'artifacts' here to refer to externalized representations of ideas and intentions that are constitutive of leadership practice. A leader's thinking and practice is mediated by these artifacts: they serve as constituting components of leadership practice, not simply as devices or means that allow individuals to do what they want to do. However, while artifacts form tangible features of the school environment, the ways in which they are utilized also depend upon the agency of social actors and the situation in which they are introduced. In other words, artifacts are constitutive of and constituted in human activity.

Leaders do not work directly on the world; their actions in and on the world are mediated by a continuum of artifacts (Wertsch 1991). At one end of the continuum are *tools*, ranging from material artifacts such as memos, meeting agendas, computer programs for analysing test data, and district policies (e.g. teacher evaluation protocols) to such more abstract artifacts as the temporal arrangements of the workday. These artifacts represent identifiable created or emergent entities or routines that both define and are re-defined by leadership practice. At the other end are *symbols*, that is language-based systems, rhetorical strategies, and vocabularies, that constitute artifacts that are difficult to pin down in both their origins and specific effects but are pervasive in their cumulative defining of practice.

Both tools and symbols are kinds of artifacts, that is, created entities either designed by individuals or gradually defined by multiple audiences in order to enable particular practices. A distributed perspective on leadership seeks to both articulate the range of these artifacts as they constitute leadership practice and to characterize the ways in which such artifacts define and are defined by leadership activity.

On one end of the continuum, designed material artifacts such as forms, memos, and agendas constitute the material context in which schoolwork is done:

Forms, as designed artifacts, serve as mediational means for leadership activity. Investigating leadership practice involves understanding leaders' practice as both enabled and constrained by forms of various sorts. Consider, for example, the practice of teacher evaluation. Many school systems in the US mandate that school leaders use particular forms when undertaking summative evaluations of teaching practice. Understanding the practice of teacher evaluation involves exploring the mediational properties of these evaluation protocols, that is how these forms are constitutive of leadership activity.

If we consider two very different evaluation protocols, the importance of the tool in understanding leadership practice will be further illuminated. Imagine *protocol A*, consisting of a checklist of generic teaching processes, including items such as wait-time and teachers' use of praise, of the sort identified by the process-product research tradition. In contrast, *protocol B* is subject-matter specific, including, for example, such items for mathematics teaching as 'how the classroom task represented "doing mathematics"', and 'how students were required to justify their mathematical ideas'. These different forms draw the observers' attention toward different aspects of the teaching situation, thereby resulting in potentially different kinds of observation practice. Leaders may negotiate with forms in order to identify the aspects of practice they see fit to note, but the point still remains that the forms act as a defining element of the observation practice. The form or protocol is not simply an accessory or aid that the leader uses to execute the evaluation task in an *a priori* manner. Further, because evaluation tools *represent* teaching and what it means to be competent in teaching in different ways (as our two hypothetical examples illuminate), changing the protocol may contribute to changes in the practice of evaluating teaching.

Memos represent artifacts designed to address particular issues of communication in schools. The subjects of memos can range from information dissemination to individualized messages regarding specific events in the school. For example, some leaders use informal, hand-written memos to congratulate faculty members on work well-done, to offer reminders about following through on responsibilities, or to check in on relationships. Others use memos in lieu of faculty gatherings to make sure that the school community is up-to-date on current events. Such memos can convey a message of encouragement, interest, or surveillance, and are often regarded by both parties as a non-threatening means of communication. However, when problems about instruction, compliance, or conduct escalate, more formal memos serve notice that binding communication procedures have been initiated. These formal memos can establish conditions of firing or instances of discrimination, and are often written with an eye toward the legal weight that they may have to shoulder. However, especially in the latter case, the form of the formal memo is an intrinsic property of the disciplinary activity. The memo of reprimand, for example, replaces an often difficult face-to-face conversation between a leader and a

teacher or staff member, serving as an extension of the leader's authority as well as a statement of administrative intent. These memos also serve as legal artifacts with the potential to represent the communication between the parties in the event of a claim by either party. Memos, then, are artifacts that not only convey messages within the school, but their form represents a crucial *tool* that contributes to defining leadership practice. The practice of leadership in these situations is best understood by viewing the memo as a constitutive element.

Finally, *meeting agendas* provide a good example to illustrate how material artifacts are constitutive of leadership activity, especially when it comes to determining the legitimate issues of discussion (and contention) in the school. Thus, one important constituting element of leadership practice is the meeting agenda, and because of its power for shaping meeting conversation agenda-setting is an influential tool available to leaders.

Thus, the use of agendas varies both within and across leadership activity. In some activities, agendas become powerful formal artifacts to collaboratively shape the instructional agenda of the school, while in other activities the agenda emerges with the issues currently faced by the school community. For example, consider the differences in agenda-setting by the same leadership team for different occasions. At a preliminary planning-session meeting, the leadership team purposely constructs and distributes an under-specified agenda in the interest of communicating to participants that their contributions will be an integral aspect of the meeting time. On the other hand, when calling a meeting to outline the results of its planning process, the agenda is presented as a highly structured artifact intended to inform the audience while inviting little comment. In both cases, the agenda is a constituting element of the leadership activity. Similarly, a request for an agenda on the part of faculty and staff-members could indicate a need to clarify why valuable time is being spent on faculty meeting issues. At Ellis school, the agenda for the professional develop-ment sessions held through the next school year are collaboratively developed among leaders and teachers every spring, and are firmly connected to the instructional agenda of the school improvement plan. Agenda-setting and agenda-distribution are, thus, seen as a key artifact through which leadership actions are distributed throughout a school community. Such practices, enabled by the agenda artifacts themselves, communicate a strong sense of instructional direction to the school community and beyond. Examining the use of meeting agenda, or planning agenda more broadly, provides an artifact through which the practice of leadership becomes clearer.

Designed artifacts, however, are not limited to tangible, at-hand material items. More abstract artifacts such as the schedule of the school day and yearly calendars establish the 'hidden rhythms' of school life (Zerubavel 1981). These artifacts collectively form representational schemata within which time-usage and action in the school are structured. Yearly school calendars and faculty schedules shape the space and temporal resources available to the costly and time-consuming process of changing teaching.

District and school policies, learning technologies, and the school plant itself also represent key artifacts that contribute to defining leadership

activity. Many of these artifacts are experienced as 'givens' by school leaders, as constraints that afford little opportunity for agency. And, in fact, designed artifacts, such as district policies, often do not bear the imprint of local actors and, while designed, are received in the context of schools as constraints on practice. However, the consideration of how leadership activity is constitutive of and constituted by artifacts can highlight the interactive nature of the use of designed artifacts in schools. For example, many school leaders in the US feel that their district's yearly schedule constrains the range and depth of professional development opportunities that can be offered to teachers. They feel that district-mandated hours and times for professional development limit the possibilities for creative leadership in the school. However, other leaders see these same constraints as opportunities for collaborative staff negotiations about how this time should be, or might better be, spent. Leaders who construct meaningful incentive systems to exploit the time set aside for district-mandated development can create, over time, a professional community of practice within the school.

These contrasting stories illustrate both how artifacts constitute leadership practice in schools and how they are constituted by that same practice when they are taken as an opportunity to work on building a professional community. Considering the artifacts apart from practice may allow us insight into the intentions of the artifact designers, but considering the artifacts as they enable and constrain leadership practice provides a lens into leadership as a distributed practice in schools.

Organizational structure

In a way that is similar to the use of designed artifacts, leadership practice is also stretched over organizational structures. A distributed perspective presses us to consider organizational structures as more than vessels for leadership activity, and more than accessories that leaders can use to execute a particular task using some pre-determined strategy or practice. For example, the prevailing 'egg-carton' organization of schools isolates teachers in their classrooms, providing them with few opportunities to discuss instructional issues with peers (Lortie 1975). Such individualized and privatized arrangements for teachers' work can inhibit the dissemination of ideas about professional practice among teachers in schools. However, these organizational arrangements are constitutive of leadership practice, *not* simply hurdles external to that practice that leaders must overcome in order to enact a particular task using some pre-determined practice. In other words, the 'egg-carton' school structure is an essential constraint in the composition of leadership practice, fundamentally shaping how school leaders enact their tasks. Likewise, research from the institutional perspective informs us that schools 'decouple' formal structure, e.g. administration and management, from core activities, e.g. teaching (Weick 1976). Minimizing inspection of the uncertain core activities of schooling enables schools to maintain the confidence of their external constituents (Meyer and Rowan 1978).

In proposing that organizational structures are constitutive of leadership practice we are not arguing that they *determine* that practice. School leaders are another constituting element. They notice, apprehend, and use organizational structures in a variety of ways. Thus, while organizational structures are constitutive the activity of school leaders, it is also the case that these structures are created and recreated by the actions of leaders and others who work in schools. For example, in one of the elementary schools in our pilot study, which had been characterized by limited dialogue among teachers and mostly privatized classroom practice, the principal established breakfast meetings in order to create a forum for teachers to exchange ideas about their instructional practices. According to the staff at this school, over time this opportunity for dialogue contributed to breaking down the school's 'egg-carton' structure, creating new structures that supported peer-communication and information-sharing, arrangements that in turn contributed to defining their leadership practice.

In other words, leadership practice is extended through organizational structures that enable the movement and generation of knowledge and incentives in the organization. In this case, the leader's practice both redefined and was defined by organizational structure. Research on schools as professional communities illuminates how alternative organizational arrangements can provide forums for teacher conversations and contribute to de-privatizing practice (Louis and Kruse 1995). From a distributed perspective, what is paramount is understanding the extent to which, and how, organizational arrangements are constitutive of leadership practice, not simply ancillary.

In summary, mediational means while shaping human action are also reshaped through human activity. A tool is, to some extent, a bundle of dispositions or potentials that shape leadership practice under certain circumstances, but that can also be reshaped by that practice.

Discussion and conclusion

We have developed a perspective on the *practice* of school leadership that centres on the *how* and *why* of leadership activity. We contend that, to understand leadership practice, it is essential to go beyond a consideration of the roles, strategies, and traits of the individuals who occupy formal leadership positions to investigate how the *practice* of leadership is stretched over leaders, followers, and the material and symbolic artifacts in the situation. The situation of leaders' practice—material artifacts, tools, language, etc.—is not simply an appendage but, rather, a defining element of that practice. Leadership practice (as both thinking and activity) emerges in the execution of leadership tasks in and through the interaction of leaders, followers, and situation.

The distributed leadership perspective has implications for research on school leadership and efforts to improve the practice of leadership. Thus, the framework provides some important leverage with respect to empirical research on leadership. First, it offers theoretical grounding for studying day-to-day leadership practice, enabling investigations of practice to go

beyond documenting lists of strategies that leaders use in their work. In other words, it frames inquiry into leadership activity in ways that move beyond leaders' and teachers' accounts to develop more integrative understandings of leadership as a practice. Secondly, it suggests that leadership activity at the level of the school, rather than at the level of an individual leader or small group of leaders, is the appropriate unit of analysis in studying leadership practice. *To study leadership practice, we need to study leaders in action*. Focusing either exclusively on one or more formal leaders, or on teacher-leaders, is unlikely to generate robust insights into school-level leadership practice.

Thirdly, our distributed frame also specifies an integrative model for thinking about the relations between the work of leaders and their social, material, and symbolic situation, one in which *situation* is a defining element in leadership practice. For example, one consequence of treating situation in this way is that the tools leaders use become central in the study of leadership practice. Forms, curricular documents, tools for representing test-score data, and other material artifacts have rarely received systematic and in-depth attention in studies of leadership. We contend that systematic attention to these artifacts is essential in studying leadership practice.

Fourthly, our distributed perspective suggests the need for more complex approaches to studying the expertise of leaders. From a distributed perspective, expertise is not simply a function of a leader's thinking and mental schemata. Viewing skill and expertise exclusively as a function of individual traits, styles, and schemata obscures how what leaders do is a function of their situation. A 'person-plus', as distinct from a 'person-solo' perspective (Perkins 1993), is necessary in order to understand leadership expertise as something extending beyond the mind of individual leaders. Studies of leadership expertise must investigate how, and the extent to which, the expertise essential for the execution of particular leadership tasks is stretched over different leaders as well as over the tools with which they work. In other words, investigating purposeful activity in its 'natural habitat' is central to understanding leadership expertise. We do not mean to suggest that the distributed perspective developed here offers the only fruitful frame for a study of leadership practice, though we are convinced it offers substantial theoretical leverage in studying leadership activity.

We believe that a distributed leadership perspective, and the knowledge generated from empirical studies within that framework, can give insights and leverage on the improvement of school leadership. It offers a new meta-lens for thinking about a familiar activity—leadership practice—by mobilizing a language and a set of analytical tools for reflecting on that activity. Understanding the distributed practice of school leadership will help to build legitimate stories of practice, grounded in the interaction of people and contexts in school environments—and that will be recognizable to practitioners as evocative sounding boards for their own work. By providing a frame that helps researchers build cases for practitioners to interpret and think about in their on-going leadership practice, the distributed perspective offers a tool to help researchers and practitioners to change that activity. For example, cases of how leadership is stretched over individuals in schools in a variety of ways that vary depending on the particular leadership tasks and

situations might help leaders to think about the enactment of leadership tasks in new ways. Similarly, thinking about material artifacts as critical elements of leadership practice might press school leaders to consider the tools they use, and how these tools both enable and constrain their practice.

The distributed perspective also suggests some ways of thinking about intervening to change school-leadership practice. Rather than proposing to develop, articulate, and disseminate a context-neutral, task-generic template outlining the moves that leaders should make, it argues for the development of rich theoretical knowledge based on studies of practice that are context-sensitive and task-specific. We believe that such knowledge can be useful in helping leaders reflect on their practice and conceptualize their work in realistically complex ways. By making the 'black box' of school-leadership practice more transparent through the generation of rich knowledge about how leaders think and act to change instruction, a distributed perspective can help leaders identify the dimensions of their practice, articulate the relations among these dimensions, and think about changing their practice. Further, the distributed perspective also suggests that intervening to improve school leadership by focusing exclusively or chiefly on building the knowledge of an individual formal leader in a school may not be the most optimal, or the most effective, use of resources. If expertise is distributed, then the school rather than the individual leader may be the most appropriate unit for thinking about the development of leadership expertise. In addition, reformers might also think about how the tools they design represent expertise for leadership, enabling or constraining leadership activity.

In *Sense-making in Organizations*, Weick (1995) claims that 'it takes a complex sensing-device to register and regulate a complex object'. We propose the distributed leadership framework as a sensing-device for registering the complex practice of school leadership. If theory is to be more influential in guiding leadership practice, it will need to provide a frame, informed by practice, that helps leaders interpret and reflect on their day-to-day practice. The distributed leadership perspective promises to establish a rich knowledge-base upon which we can build such a frame.

Acknowledgements

Notes

1. The lack of attention to work-practices on the part of scholars is not unique to education. Wellman (1995; cited in Suchman, 1995) sums the situation up aptly when he noted that

'how people work is one of the best-kept secrets in America'. Wellman goes on to argue that 'the way in which people work is not always apparent. Too often, assumptions are made as to how tasks are performed rather than unearthing the underlying work practices'. Some scholars of business management and organizations have also noted this inattention to the activity of leadership (Tucker 1981, Eccles *et al.* 1992, Heifetz 1994). Eccles *et al.* (1992: 13) argue that an 'action perspective sees the reality of management as a matter of actions and processes'. They encourage an approach to studying leadership that centres on action rather than exclusively on structures, states, and designs.

2. We view 'distributed' and 'stretched' as complementary terms. 'Stretched over' provides a more visual representation of what we mean by 'distributed'.

3. All names of schools and people used in this paper are pseudonyms.

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