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Framing the Problem of Reading Instruction: Using Frame Analysis to Uncover the Microprocesses of Policy Implementation

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Policy problems do not exist as social fact awaiting discovery. Rather, they are constructed as policymakers and constituents interpret a particular aspect of the social world as problematic. How a policy problem is framed is important because it assigns responsibility and creates rationales that authorize some policy solutions and not others. This article brings together sense-making theory and frame analysis to understand the dynamics of problem framing during policy implementation. Data were derived from a yearlong ethnographic study of one school's response to the California Reading Initiative. Results showed that the school's response depended on how school staff constructed their understanding of the relevant problem to be solved. The problem framing process was iterative and contested, shaped by authority relations and mediated by teachers' social networks. Ultimately, it proved important for motivating and coordinating action, reshaping authority relations, and influencing teachers' beliefs and practices.

KEYWORDS: authority relations, policy implementation, problem framing, reading instruction, sense-making

Researchers have long argued that policy problems do not exist as social fact awaiting discovery. Rather, these problems are socially constructed as policymakers and constituents identify and interpret some aspect of the social world as problematic (Dobbin, Sutton, Meyer, & Scott, 1993; Dowd & Dobbin, 1997; Kingdon, 1984; Moore, 1988; Smith, 1988; Stone, 1988; Weiss, 1989). Because the social world is complex and multidimensional, any representation of the cause of a problem inevitably highlights certain aspects of the situation

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while deemphasizing or ignoring others (Weiss, 1989). The way in which a particular policy problem is defined or *framed* is crucial because it assigns responsibility (Schneider & Ingram, 1993; Stone, 1988) and creates rationales that authorize some policy solutions and not others (Benford & Snow, 2000; Moore, 1988; Schneider & Ingram, 1993; Stone, 1988; Weiss, 1989). Thus, how individuals and groups frame the problem opens up and legitimizes certain avenues of action and closes off and delegitimizes others.

To date, research on problem framing has been largely focused at the level of *policy-making*, analyzing how policy entrepreneurs and policymakers define problems and embed them in public policy. Little if any attention has been paid to how local actors frame problems during *policy implementation*. Yet, research on policy implementation suggests that local actors are also policymakers (Cohen, 1990; Weatherley & Lipsky, 1977), in that their decisions and actions shape how policies play out in practice. Research drawing on sociological theories of sense-making provides evidence that local interpretation shapes the direction of policy implementation. It suggests that local actors in schools actively construct their understanding of policies by interpreting them through the lens of their preexisting beliefs and practices. How they construct such understandings shapes their decisions and actions as they enact policy in their schools and classrooms (Guthrie, 1990; Jennings, 1996; Spillane, 2000; Spillane & Jennings, 1997). But this line of work has not directly addressed questions of problem framing and, as such, has tended to ignore this crucial aspect of the policy implementation process. Furthermore, sense-making theorists have tended to emphasize shared understanding, paying little attention to issues of contestation and the dynamics by which differences in interpretation are negotiated. Finally, sense-making research has focused primarily on teachers; thus, we know little about cross-role interactions in sense-making.

In the study described here, I drew on social movement theorists' theoretical and empirical work on frame analysis to examine the social processes of problem framing that occurred as public schools grappled with new California reading policies. At the time of the study, California was in the midst of the California Reading Initiative, an ambitious policy initiative to improve early-grade reading instruction that involved new state standards, accountability systems, textbooks, extensive professional development, and new requirements for teacher preparation and licensure (California State Board of Education, 1999). For a year, I followed teachers and school leaders in one urban California elementary school as they discussed the changes brought about by the new policy initiative and set their agenda for school improvement. Threaded throughout these discussions were ongoing negotiations about the problems associated with reading instruction at the school, negotiations that ultimately shaped the course of implementation and subsequent interpretation of policies in consequential ways. By analyzing ongoing trajectories of problem framing, I show that the school's response to the new state reading policy depended, in part, on how teachers and principals constructed their understanding of the relevant problem to be solved. I further argue that this process is a con-

tested one wherein teachers and principals construct understandings of the problem in an interactive process shaped by relations of authority and mediated by teachers' formal and informal social networks. Finally, I argue that not only is the problem framing process crucial for motivating and coordinating action, it has the potential to reshape authority relations and influence teachers' sense-making and practices as well.

Literature Review

To understand the dynamics of problem framing during implementation, I bring together conceptual tools from two distinct yet complementary theoretical traditions: sense-making theory and frame analysis. Sense-making theorists suggest that action is based on how people notice or select information from the environment, make meaning of that information, and then act on these interpretations, developing culture, social structures, and routines over time (Porac, Thomas, & Baden-Fuller, 1989). In this view, the meaning of information or events is not given but is inherently problematic; individuals and groups must actively construct understandings. They construct these understandings by placing new information into cognitive frameworks, also called "worldviews" or "working knowledge" by some theorists (Kennedy, 1982; Porac et al., 1989; Vaughan, 1996; Weick, 1995).

Sense-making does not refer solely to individual processes; rather, it is social in two key respects. It is *collective* in that it is shaped by interaction, signaling, and negotiation (Coburn, 2001; Louis, Febey, & Schroeder, 2005; Porac et al., 1989; Trice & Beyer, 1993; Vaughan, 1996; Weick, 1995). However, it is also social in the sense that it is *situated* in sense-makers' embedded contexts. Individuals and groups draw on ideas or approaches available to them in their proximal communities as they make sense of their situation: larger systems of beliefs (Snow, Rochford, Worden, & Benford, 1986; Trice & Beyer, 1993; Weick, 1995), elements of occupational culture (Barley, 1986; Porac et al., 1989; Spillane, 1998; Vaughan, 1996), and organization- or workgroup-specific premises or traditions (Lin, 2000; Porac et al., 1989; Siskin, 1994; Vaughan, 1996; Yanow, 1996). In this respect, sense-making theorists recognize the ways in which existing social structures and cultures shape interpretation (Fiss & Hirsch, 2005). Existing cultural ideas and norms operate as "categories of structure, thought, and action" (Vaughan, 1996, p. 47) that individuals and groups draw upon as they construct understandings of the problem at hand and potential solutions.

There is a growing body of evidence that these sense-making processes play a central role in how people in schools implement instructional policies (see Spillane, Reiser, & Reimer, 2002, for a review). The ways in which teachers enact policies are shaped by what they understand the meanings and implications of these policies to be. Teachers construct this understanding by drawing on their preexisting beliefs and practices (Coburn, 2001; Guthrie, 1990; Jennings, 1996; Spillane & Jennings, 1997; Spillane, 1999) in a process that is shaped by patterns of interaction with their colleagues (Coburn, 2001; Spillane,

1999) and the social and structural conditions of their workplace (Coburn, 2001; Gallucci, 2003; Siskin, 1994; Spillane, 1998).

School leaders are sense-makers too (Anagnostopoulos & Rutledge, in press; Coburn, 2005; Spillane et al., 2002). How school leaders come to understand policy can influence teacher sense-making as school leaders focus teachers' attention on certain aspects of policy rather than others, define the range of appropriate responses, and provide interpretive frameworks that teachers adopt and use as they construct their understandings of the meanings and implications of policy (Coburn, 2005). School leaders' conceptions of policy are more or less influential depending on the degree to which they are able to skillfully marshal resources to support such conceptions (Anagnostopoulos & Rutledge, in press). Finally, there is evidence that it is very difficult to move forward if school leaders and teachers construct different or conflicting interpretations of the appropriate response to policy (Anagnostopoulos & Rutledge, in press; Spillane et al., 2002).

However, research on sense-making in policy implementation has thus far paid little attention to problem framing. Thus, we know little about how schools construct the frameworks within which sense-making unfolds. Furthermore, sense-making theory in general and the research on sense-making in schools in particular have tended to ignore the ways in which the process of meaning making about policy may be contested. Sense-making researchers have tended to emphasize shared meanings and collective understandings. As such, they have not provided an account of what happens when differences in interpretation arise among those who are interacting. This issue becomes increasingly important in investigations of the role of principals, in that teachers and school leaders come to the process with different roles and authority. Finally, although we know that sense-making takes place in social interactions, we know little about the *process* by which it occurs. Studies have tended to simply provide evidence that sense-making exists rather than investigating directly the process by which meaning emerges from social interactions.

To address these limitations, I turn to theoretical and empirical work on frame analysis. In the past 15 years, collective action researchers in sociology have drawn on the seminal work of Goffman (1974) to develop conceptual tools for investigating the ways in which ideas are produced and invoked to mobilize people to action. In this view, collective action frames are interpretive devices that condense complex social situations, making sense of the "raw data of experience" (Babb, 1996, p. 1034) in ways that motivate action (Babb, 1996; Snow et al., 1986). Frame analysis differs from sense-making in its specific focus on problem framing, a process that sense-making theory largely ignores. But it also differs analytically from sense-making in at least three key respects. First, while sense-making theorists focus on how people use pre-existing cognitive frameworks to make meaning of extracted cues, frame analysts look at the process by which these frameworks are created in social interactions. Second, frame analysts focus on the strategic aspects of this process often ignored by sense-making theorists: how people use these interpretive frames strategically to shape others' meaning-making processes in an effort

to mobilize them to take action (Fiss & Hirsch, 2005; Fligstein, 2001). Third, frame analysts have developed conceptual tools to study the interactive process of problem framing as it unfolds.

Collective action researchers have identified two kinds of problem frames that people invoke in their ongoing interactions: diagnostic and prognostic (Benford & Snow, 2000; Snow & Benford, 1992). Diagnostic framing involves defining problems and attributing blame. It is important because it focuses attention on some aspect of the problem and not others, identifies certain individuals or groups as responsible for the problem, and thus identifies those responsible for change (Cress & Snow, 2000; Stone, 1988). Prognostic framing involves articulating a proposed solution to the problem. In so doing, a prognostic frame puts forth particular goals and suggests tactics for achieving those goals (Benford & Snow, 2000; Cress & Snow, 2000; Snow & Benford, 1992). Diagnostic and prognostic framing are often closely intertwined, in that prognostic framing often rests implicitly on the problem definition and attribution that is part of diagnostic framing.

The act of framing is an interactive one constituted by two related processes: frame alignment and resonance. *Frame alignment* refers to the actions taken by those who produce and invoke frames in an attempt to connect these frames with the interests, values, and beliefs of those they seek to mobilize (Snow et al., 1986; Williams & Kubal, 1999). Individuals and groups attempt to construct ways of framing the problem that provide "conceptual hooks" (Zucker, 1991) allowing targets of mobilization to link the frame with other things they know, experience, or believe (Benford & Snow, 2000; Snow et al., 1986). However, frame alignment activities are always dependent on how individuals and groups respond, or what social movement theorists call *resonance* (Snow et al., 1986; Williams & Kubal, 1999). Resonance is the "mobilizing potency" of a particular frame, the degree to which a frame is able to create such a connection—a "deep responsive chord" (Binder, 2002, p. 220)—with individuals and motivate them to act.

Framing is often a contested process. Prognostic and diagnostic framing may be challenged as others offer counterframes that put forth alternative portrayals of the situation, often with contrasting implications for roles, responsibility, and resources (Benford & Snow, 2000; Fligstein, 2001; Stone, 1988). These frame disputes, as Benford and Snow (2000) labeled them, may stretch over time as frames are reconstituted and reframed in negotiation and interaction (Benford & Snow, 2000; Davies, 1999; Gamson, 1992). Furthermore, this negotiation among and between frames is likely to be shaped by structures of power and authority (Fligstein, 2001; Isabella, 1990).

In linking sense-making theory and frame analysis, I make three contributions to research on policy implementation. First, I illuminate the micro-processes of problem framing during implementation. Studies that employ sense-making theory provide evidence that sense-making exists and that it plays an important role in the directions of policy implementation. However, these studies have not investigated the process and mechanisms by which it unfolds. Second, I build on preliminary work exploring the role of the

principal in sense-making processes (Coburn, 2005; Burch & Spillane, 2003; Spillane et al., 2002), paying special attention to the role of authority in the interactive process of meaning making in schools. Finally, I broaden the field's understanding of the consequences of problem framing, providing evidence not only that framing activity shapes the direction of implementation but also that it has consequences for motivation and coordination of action, configurations of authority relations, and individual teachers' sense-making and practices.

Methodology

This study drew on data from a larger investigation of the relationship between changing ideas about reading instruction in the policy environment in California and teachers' classroom practices during the period 1983–1999. While the larger study involved both a historical and cross-sectional design, I drew primarily on cross-sectional data collected during the 1998–1999 school year in an attempt to understand the dynamics of problem framing at the school level. I relied primarily on sustained observation (Barley, 1990) and in-depth interviewing (Spradley, 1979). I focused on a single case, allowing for the depth of observation and analysis necessary to capture the subtle and iterative process by which teachers and principals socially constructed and reconstructed policy problems through social interactions. The in-depth investigation made possible by the single case provided the opportunity to generate new hypotheses or build theory about sets of relationships that would otherwise have remained invisible (Hartley, 1994).

The case study school was selected because it is an urban school involved in an ongoing effort to improve reading instruction in California. Stadele Elementary¹ is exceptionally racially diverse, and the vast majority of the students live in poverty or are English-language learners, or both.² During the year of the study, the school was in its second year of taking part in a regional reform effort that encouraged schools to engage in whole-school inquiry processes centered around a focused effort. The school faculty decided to use the process to move toward standards-based instruction, starting in reading instruction. As part of this effort, the school developed standards and grade-level indicators in reading instruction and classroom assessments to track student progress toward meeting the standards. This effort was led by a leadership team composed of classroom teachers, resource teachers, and the school principal. At the time of the study, the school principal had been at the school for 5 years, her first principalship. She had come to the job after working in the district's professional development office, where she had developed expertise in school climate and mathematics instruction.

Data collection activities centered on observations of informal and formal teacher meetings. Over the course of the 1998–1999 school year, I spent more than 130 hours observing formal meetings and professional development activities. I spent the majority of time observing grade-level meetings with the first- and second-grade groups (14.5 and 16 hours, respectively) and full

faculty meetings (43.5 hours). But I also observed in-school professional development activities, selected meetings of other grade-level groups, and required district professional development activities. In addition, I spent significant time with the leadership team, observing their meetings (13.5 hours) and attending external professional development activities with them (11.5 hours). In addition to formal meetings and professional development activities, I observed countless hours of informal conversations during lunch, before and after school, and in the hallways (see the Appendix for complete information on meeting observations). While data on most observations (both formal and informal) were typed up as field notes, on a few occasions I taped and transcribed key meetings that I was unable to attend.

I supplemented meeting observations with semistructured interviews conducted with classroom teachers, resource personnel, and the principal. In all, I conducted 57 interviews with 18 classroom and resource teachers, interviewing some teachers up to 12 times. I also interviewed the principal 3 times.³ Interviews ranged from 45 minutes to 3 hours in duration. Nearly all were audiotaped and transcribed.

Finally, I conducted 106 hours of classroom observations of eight teachers across the primary grades. Using information garnered from first-round interviews, I selected for observation teachers representing the full range of approaches to reading instruction present among the school's early-grade teachers. I structured observations to spend full days in a teacher's classroom for several consecutive days in the first half and then again in the second half of the year. Spending a full day, rather than simply observing the morning time period a teacher designated as "reading instruction," was important for two reasons. First, most teachers actually engaged in a range of reading-related activities throughout the day. Second, spending an entire day with a teacher rather than dropping in for a bounded time period proved important in observing teachers' ad hoc and informal conversations with their colleagues. Observing classrooms for several consecutive days provided a sense of the flow and continuity of instruction in the near term, and conducting observations at two different times of the year allowed for insight into changes occurring over time (for a more complete description of the analysis of classroom observations and findings from this part of the study, see Coburn, 2004).

I used NUDIST qualitative data analysis software to code observations and interviews. In an earlier analysis, I had coded all formal and informal meeting data using one set of codes that described the nature of teacher interactions and a second set of codes that described the content or topics of these interactions (see Coburn, 2001, for further details). For the analysis described here, I created longitudinal records of the topics of conversation. I then recoded these longitudinal records for evidence of diagnostic and prognostic framing. I identified six topics that were the source of ongoing framing (in other words, framing that involved more than a few interaction turns). These six frame trajectories, as I labeled them, are summarized in Table 1. I then identified the different frames and counterframes invoked in each trajectory, analyzing the degree of resonance of frames, charting key moves in the terms

Table 1
Description of Problem Trajectories

Problem Trajectory	Description
Assessment	School leaders raised questions about the ways in which teachers use assessment in their everyday practice, pushing for more ongoing assessment and encouraging teachers to begin to use assessment to inform their instruction; later, once teachers accepted this premise, the discussion shifted to problems with particular assessments and concern about the degree to which the data collected with these assessments were valid.
Decoding	Teachers raised questions about the way they and their colleagues teach decoding, offering multiple and varied diagnoses of the problems associated with instruction and instructional approaches that might remedy these problems.
Reading comprehension	The faculty tried to understand why test scores were so low in reading comprehension.
Reform initiative	Midway into the school year (the second year of the reform initiative), the faculty raised questions about the way the school was implementing the initiative.
Standardized testing	The faculty questioned how they should respond to pressure to increase test scores and the school leadership's increased reliance on test scores to justify and inform the direction of school reform; they debated the validity of test scores as a reflection of student learning and the appropriate response to the increased emphasis on standardized testing.
Students who do not meet the standards	As the school moved toward standards-based instruction, it began to grapple with what to do with students who failed to meet the standards.

of the debate over time, and assessing the degree to which these moves were related to shifts in beliefs and action. Finally, I coded interview and observational data for these key topics, mapping evidence onto the timeline of discussions in formal and informal meetings. I created data displays to confirm emerging patterns, always alert to disconfirming evidence (Miles & Huberman, 1994).

Framing the Problem of Reading Instruction

During the year of the study, California was in the midst of a major shift in reading policy. Starting in 1995, questions about what constituted "good" reading instruction exploded onto the public stage after the release of test scores placing California last in the country in reading, tied with Louisiana and Guam (Carlos & Kirst, 1997). In what was dubbed "the reading wars" by the popular press, controversy raged about the root causes of the low test scores. Some critics framed the problem as the failure of the approach to

reading comprehension championed by existing state policy: whole language. In particular, critics argued that the policy and instructional approaches had failed because of a lack of attention to phonics and other skills instruction (see, for example, Colvin, 1995; Honig, 1996). However, advocates of whole-language approaches countered that the problem resided not in the whole-language approach but in lack of teacher training and poor implementation of the policy statewide (see, for example, Routman, 1996).

In a very public debate involving researchers, professional organizations, policy entrepreneurs, and politicians that was broadcast widely by the media, critics began to call for the end of whole language and a return to "basic skills." In 1995, the state responded to the controversy by publishing a task force report calling for a "balanced approach" to reading instruction (California State Department of Education, 1996) and launching the California Reading Initiative, which would continue through the remainder of the decade. By the 1998–1999 school year, the state legislature had passed 12 bills allocating nearly half a billion dollars to reform efforts that promoted the approach through purchase of materials, professional development, and a new credentialing examination for teachers focused on reading instruction (California State Board of Education, 1999).

At the same time, California, like other states, was involved in a move toward standards-based instruction and high-stakes accountability. The state was an early leader in the movement toward systemic reform, adopting state frameworks starting in 1985 and aligning them with textbook adoption, professional development, and, until funding was cut, statewide assessment (Carlos & Kirst, 1997; Kirst & Mazzeo, 1996; Massel et al., 1994). In the late 1990s, California extended this approach by adopting state standards for the first time and taking small steps toward phasing in an accountability system with standards as an anchor. After several years without a statewide test, California adopted a new statewide assessment (the SAT9) in the 1997–1998 school year, the year before this study was conducted. Subsequently, in the face of criticisms that the standardized test was not linked with state standards, the state added several sections to the test ("augmentation sections") in the 1998–1999 school year.⁴ During the year of the study, the state was in the midst of unrolling plans to link school test scores to rewards and sanctions, but these measures would not come into play until future years.

The way in which teachers at Stadele Elementary responded to these policy changes depended on how they constructed their local and context-specific understanding of the problem of reading instruction in their school. But this task was not simple or straightforward. Rather, it was an incremental and recursive process in which teachers and school leaders framed and reframed problems in multiple public and private conversations that stretched throughout the year. In what follows, I begin by illustrating patterns of problem framing by analyzing two of the six frame trajectories: the problem of reading comprehension and the problem of standardized testing. I selected these two trajectories because they illustrate many of the patterns found across topics of problem framing in the school more broadly and because

they represent two central issues that teachers in elementary schools across the state were grappling with during that time period. I then situate these two trajectories within the broader sample, drawing conclusions from evidence across all six frame trajectories that unfolded in the school during the year of the study.

The Problem of Reading Comprehension

During the 1998–1999 school year, the faculty at Stadele Elementary was engaged in its second year of involvement in a whole-school inquiry project focused on improving reading comprehension. The principal and leadership team justified the focus on reading comprehension as a response to low and declining scores in reading on the state standardized test. The staff participated in professional development in standards-based instruction and reading comprehension strategies, began crafting school-level indicators for reading comprehension based on district standards, developed classroom assessments, and used these assessments to collect data on students' progress in meeting the standards. As teachers engaged in these activities, they were also involved in an ongoing process of framing and reframing the problem of reading comprehension in their school.

In the early part of the year, conversations in faculty meetings and professional development activities were characterized by what Snow and his colleagues have labeled *diagnostic* problem framing (Benford & Snow, 2000; Snow & Benford, 1992). That is, teachers offered multiple frames for understanding the nature and causes of the problem of low reading comprehension test scores. Many teachers framed the problem in terms of student or family deficits. For example, one teacher repeatedly linked poor reading comprehension to students' limited vocabulary, sometimes associating limited vocabulary with the fact that so many children in the school were second-language learners and sometimes with the nature of parents' interactions with their children. Other teachers framed the problem in organizational terms, that is, student grouping, placement, or class size issues.

Importantly, only a few teachers framed the problem in terms of limitations in teachers' instruction. Those who did tended to do so in private conversations focused not on their own grade level but on instructional approaches used in previous or subsequent grades. For example, when talking among themselves, one group of kindergarten and first-grade teachers frequently framed the problem of reading comprehension as related to instructional practices in the upper grades. For example, in a conversation with her colleagues about low test scores in the upper grades, one early-grade teacher argued that the problem was lack of reading groups in the upper grades: "[Upper-grade teachers] don't have reading groups. I don't care how old they are. And the gap gets wider at the upper grades. How can you give everyone the same reading work?" Several upper-grade teachers, in contrast, drew on the oft-repeated discussions in the media of the "reading wars" in California and suggested that comprehension problems in the upper grades were due to a lack of phonics instruction in the early grades. The principal and other members of the leader-

ship team also privately framed the problem largely as one involving instructional practices. For example, just before the start of the school year, the principal remarked in an interview: "Some classes didn't do well on standardized testing this year and it really made them think. I think that the problem is that most teachers are not really teaching reading comprehension. But I'm not sure that teachers see it that way."

Each of these ways of framing the problem—family background, organizational issues, lack of phonics in the early grades, and problems with instructional approaches in the upper grades—had quite different implications for the steps the school should take to address it. Absent some agreement on the nature of the problem, it was challenging for the school to take action. And, indeed, the school made limited progress in addressing issues of reading comprehension in any tangible way in the early part of the year, as it was difficult for them to agree on the steps they should take to move forward.

By January, the talk among members of the leadership team bubbled up into full faculty meetings, and the school leaders began to explicitly frame the problem of reading instruction as a problem of teachers' instruction. In so doing, they engaged in what Snow and his colleagues have called *frame transformation*, or redefining a situation or event such that it comes to be seen in a different way by others (Snow et al., 1986). Here they attempted to shift the way in which teachers conceived of the locus of responsibility for the problem. For example, during professional development on an approach to comprehension that emphasized explicit instruction in reading strategies, one leadership team member suggested that low standardized test scores in the upper grades were due to a lack of instruction in comprehension strategies:

Teacher 1: This approach [to reading comprehension strategies] really said a lot to me because when I work with children in Reading Recovery, I feel like I'm able to get them to first grade. And then, when I follow up on them later, I wonder what happened. Why are they in learning club [after-school tutoring for underachieving students]? Why are they scoring like that on the [standardized tests]? We need to be teaching them these strategies.

This framing, while diagnosing the problem as one of teachers' instruction, also contained elements of *prognostic* framing. That is, in arguing that "we need to be teaching them these strategies," this member of the leadership team articulated a proposed solution to the problem: incorporating new approaches to comprehension into classroom instruction.

The principal then elaborated this frame by linking the approach—reading comprehension strategies—to an instructional approach that teachers were already familiar and comfortable with: strategies for teaching mathematics problem solving that the school had engaged with in the past and many teachers used in their classroom. She explained:

[This approach to reading comprehension is] like problem solving in math. . . . In math, you teach strategies like guess and check. You are

teaching children to think, which is different from teaching the information on the page. . . . I've seen the teachers in primary have kids explain their thinking with math. They do it with their story problems. We need to do this in reading starting in pre-K.

This way of thinking about reading comprehension made sense to the principal because it connected with metacognitive approaches to instruction that she had promoted in her previous role as a mathematics professional developer. In making the connection for teachers, she used a technique that social movement theorists call *frame amplification*, or accenting and highlighting certain aspects of an issue or problem rather than others by linking the issue or problem to existing values, beliefs, narratives, or experiences (Benford & Snow, 2000; Snow et al., 1986). The principal emphasized aspects of the approach that were similar to what teachers were already doing in mathematics (having children justifying their thinking) while minimizing aspects of the approach that differed significantly with the modal teacher practice in the school (focus on explicit teaching of strategies to foster students' metacognitive thinking). This framing also blunted the force of shifting the responsibility for the problem to teachers by suggesting that the necessary change was not far from what they were already doing in their classrooms, albeit in another subject matter.

The principal's framing appeared to have some degree of resonance, or what Benford and Snow have referred to as "mobilizing potency" (2000, p. 619), with other members of the faculty. An indicator of this resonance is that when one teacher initially raised questions about the appropriateness of the instructional approach, it was other teachers—not the principal or other members of the leadership team—who countered the concerns and invoked the comprehension strategies frame in doing so.

Teacher 2: But this stuff doesn't relate to the [reading series]. You are adding another layer.

Teacher 3: In the fifth-grade reader, a lot of these strategies are included. . . . It's right on the side of the story in the teachers' guide.

Teacher 4: I think it's really interesting what [the principal] was saying about reading strategies and math problem solving because I've noticed that in math, it's hard to explain their thinking. The only ones who do it well are the ones who can do it in reading.

In another indicator of resonance, teachers began to adopt and invoke the principal's way of framing reading comprehension strategies as their own, calling for the need to teach students to justify or explain their thinking in reading, not only in public meetings where the principal was present but also in grade-level meetings when the principal was not. In five of the six grade-level groups, teachers brought up the reading strategies framing in grade-level meetings in the month after the training.

However, this way of framing the problem did not have resonance with all members of the teaching staff. In particular, there was a cadre of early-grade teachers who, in private conversations with each other, accepted the notion

that the problem of reading comprehension lay with teachers' practice but felt that this notion applied only to upper-grade teaching. For example, during lunch on the day of the professional development session in January, a group of early-grade teachers engaged in the following conversation.

Teacher 5: You should really know that the issues at this school start at the upper grades. We do a really good job getting them to start reading in kindergarten and first grade and then it falls apart in second grade. Those upper-grade teachers are the ones who need to be doing more of those reading strategies.

Teacher 6: I see it with the fourth-grade children I'm tutoring. Some of those children are ones I had and who then had [another teacher] and got a very good solid foundation. They were scoring in the 60th percentile at the end of first grade and now at the end of third grade they are really low.

This counterframing suggested that the discussion of reading comprehension strategies did not apply to kindergarten or first grade.

The comprehension strategies frame and the upper-grade frame continued to coexist among different segments of the faculty for nearly 2 months, as teachers repeatedly invoked the reading strategies frame in public meetings and early-grade teachers invoked the upper-grade frame among themselves in small-group meetings. However, in late February, an early-grade teacher invoked the upper-grade frame publicly at a meeting where teachers were looking at results from their interim assessments in reading comprehension, which showed a precipitous dip in student scores in the fourth and fifth grades: "The data shows that there's a really big drop [in reading scores] at the fourth- and fifth-grade level. We need to find out what we can do in the upper grades to keep that from happening." At this point, the principal stepped in and reframed the problem of reading comprehension in general and the dip in scores in particular *not* as a problem of the upper grades but as a problem for the whole school:

Staff here need to take ownership of every child. The test scores dropping at fourth and fifth grades isn't a reflection of fourth and fifth grades. Everything we do here from the first day a child gets here is reflected in those test scores. We have to change our mind-set about this.

While generating considerable resonance with the upper-grade teachers, who not only applauded but also took up and invoked this framing themselves in future meetings, this framing by the principal did little to mobilize early-grade teachers, who seemed to be relatively convinced that their approach to reading instruction was successful with children.

Two weeks later, several upper-grade teachers built on the principal's "whole-school responsibility" frame, reconstituting it to amplify issues associated with cross-grade alignment. Drawing on ideas put forth by representatives of a reform support organization that had recently spent time in the school, these teachers suggested that the problem with upper-grade reading

comprehension scores was that there was not a consistent approach to reading comprehension across grades and that teachers in different grade levels did not know what others in the school were doing. For example, one fourth-grade teacher argued that what they really needed was “to look at the gaps between upper and lower grades and move toward more consistency in the curriculum.” This frame shifted the emphasis away from a problem related to teachers’ instructional approaches at all grade levels, as implied in the principal’s “whole-school responsibility” framing, by suggesting that the problem was *between* grade levels. In this way, the frame implicated all teachers in the school (linking to the principal’s push for taking collective responsibility for test scores) but did not suggest that any individual teacher was deficient in her or his approach to comprehension instruction.

The “lack of cross-grade alignment” frame seemed to have broad resonance in the school. For example, in a small-group brainstorming activity meant to generate priorities for reform work the following year, the idea of cross-grade articulation came up over and over again as groups reported on their discussions.

- Teacher 7 (second-grade teacher):* Everybody [in my group] discussed how it would be valuable to have a big old rubric with skills, like “What are the things they need for reading comprehension [in a given grade]?” . . . “What do we expect of them?”
- Teacher 8 (fourth-grade teacher):* Our group also talked about developing a list of skills that we would like them to have—like a wish list at the beginning of the grade levels.
- Teacher 9 (fifth-grade teacher):* We came to the same agreement. We agreed that we needed to have strands of things that go through the whole school, that everyone agreed to be consistent on, but have it be loose enough to accommodate all teaching styles.

All told, some variation of the “cross-grade alignment” frame was invoked by 14 different teachers (nearly 50% of the teaching staff) across the next five meetings. Significantly, teachers who had once resisted the notion that they bore responsibility for the problem of reading comprehension, including many of those in the early grades, were among those to promote this problem definition in meetings. The framing appeared to have what frame analysts call experiential commensurability—or the degree to which a frame connects with an individual’s personal, everyday experience (Benford & Snow, 2000)—in that indeed most teachers had little idea what was going on in other grade levels. Ultimately, the principal adopted this frame as well and began calling for greater consistency in instructional approaches to reading comprehension across grades. She subsequently put resources behind this framing, organizing faculty meetings to allow for greater cross-grade-level conversations about effective instruction in reading comprehension across the grades.

This ongoing problem framing about reading comprehension had consequences at both the school and the individual teacher level. At the school level, initial framing activity by school leaders served to focus teachers' attention away from multiple potential external causes for poor reading comprehension scores toward the way in which they taught reading comprehension. This shared focus, in turn, enabled the school to begin to take action after several months of somewhat aimless and fragmented discussion about the nature of the problem. Framing activities later in the year that moved beyond a general definition of the problem as one of instruction to the more refined definition that it was a lack of cross-grade alignment shaped the reform agenda for the coming years. At the end of the year, the school engaged in a series of conversations to make plans for the next year. These discussions were focused overwhelmingly on ways to improve the alignment of instructional approaches across grade levels. Of 75 statements across three meetings made about possible solutions the school should pursue, 55 were related to the need for cross-grade alignment or particular approaches or strategies that could be pursued to create this alignment.

Ultimately, the faculty decided to select a single instructional approach to reading comprehension and have all teachers in all grade levels implement it as a way to develop cross-grade articulation and consistency in the school. Drawing on the principal's emphasis on improving students' comprehension by having them justify their answers, the faculty decided, by vote, to work with a professional development provider to help them develop this approach. Thus, framing activity earlier in the year served to mobilize teachers to work toward improving their instruction, generating the energy and coordination to move the work forward after languishing for some time. More specific conversations about the nature of the problem set the parameters for decision making, circumscribing the range of possible solutions considered and shaping the allocation of resources for a solution.

But there were also consequences of this framing trajectory at the teacher level. For instance, it appears that the principal's way of framing comprehension instruction by analogy to math problem solving influenced teachers' sense-making about the approach, providing them with an interpretive frame through which they could construct their understanding of the approach. As mentioned earlier, teachers in the school subsequently and repeatedly made the connection between comprehension strategies and problem-solving strategies in the discussions in their grade-level groups. For example, shortly after the meetings where the principal and others framed the approach in this way, teachers on the second-grade team talked about how reading comprehension strategies were really about having children explain their answers as they did in math problem solving. While jointly scoring student work on a performance task, the teachers had the following conversation.

- Teacher 7:* [referring to a student's answer identifying the problem in a story]
This one is good.
[discussion clarifying which paper they are looking at]
- Teacher 10:* [disagreeing] But a performance task needs to be more than a one-liner. We discussed this the other day [at the professional

development session]. [It] needs to talk about what did you learn and why?

Teacher 7: I agree, but not many [students] did that.

Teacher 11: We need to do more preteaching about how to include specific facts from the story to justify.

This framing also guided their classroom experimentation with the approach. In this case, the second-grade teachers turned to a protocol for questioning developed to get at students' thinking in mathematics problem solving that many teachers used in mathematics lessons and adapted it for use in their reading groups. Classroom observations documented a consistent increase in the degree to which the teachers asked children to justify their answers with evidence from the stories.

This grade level was not alone. Many teachers who began to experiment with the approach in their classroom (mainly teachers in Grade 2 and above) did so initially by drawing on structures of questioning from math problem-solving activities. And two thirds of teachers interviewed about reading comprehension at the end of the year described the approach in terms of the principal's framing. For example, one teacher talked about her recent efforts to promote reading comprehension in the following way: "I don't think we've done enough with the metacognitive stuff. I don't think we've done enough thinking about thinking. So I've been working with students to say why do you think the character behaved that way? How do you know? Really justifying their answer."

This is striking because professional development and written materials about the approach put forth a much more complex and multifaceted portrait of reading comprehension strategies. The principal's frame both greatly simplified the approach and focused attention on some aspects while ignoring others. Thus, the principal's way of framing reading comprehension strategies played a significant role in shaping how teachers came to understand the approach and narrowing and focusing implementation.

The Problem of Standardized Testing

While engaged in the work of improving reading comprehension, as just described, teachers at Stadele Elementary were also confronted by increased pressure to raise standardized test scores. As mentioned earlier, during the year of the study, the state introduced new sections to the standardized test meant to link it to the state standards and announced that high priority would be attached to school performance on the test the following year. In addition, school leadership began to bring the issue of standardized test scores front and center by justifying strategic decisions related to reform based on test scores. However, this justification rested on the notion that standardized tests were an accurate and appropriate measure of student achievement. As the year unfolded, some teachers began to question this assumption, creating controversy in the school community. Teachers and school leaders began to discuss and debate the appropriate way to respond to standardized test scores, and

the degree to which they were an adequate measure of the effectiveness of classroom instruction in what became a much more contested process than the problem framing associated with reading comprehension.

Some teachers, including several on the leadership team, increasingly began to challenge the value of standardized tests as an accurate measure of achievement. For example, in a meeting in December, the reform coordinator responded to a technical question about inquiry processes by stating: "The SAT9 is only one measure of that and it is debatable how valuable that score is. . . . We need to do other assessment that will really find out where the kids are at." Other teachers raised questions about the fairness of the test given that the school had a large percentage of students for whom English was a second language and state law required students to be tested in English. As collective action researchers have demonstrated, collective frames are able to motivate and coordinate action only to the degree that they have empirical credibility—the claims are believable—with the population one is attempting to motivate (Benford & Snow, 2000; Schneider & Ingram, 1993). That is, "empirical referents [in this case, standardized test scores] must lend themselves to being read as 'real' " (Benford & Snow, 2000, p. 620). At Stadele Elementary, empirical credibility for standardized tests appeared to be eroding.

Teachers began to respond to references to standardized test scores as a rationale for improving instruction with statements such as "We have bought into standardized testing way too much!" By the end of January, discussions of the problem of reading instruction at Stadele Elementary were temporarily unable to move forward until the problem of standardized tests—what they meant, how teachers should respond to them, and implications of test scores for teachers and their teaching—was addressed.

The principal responded to challenges to standardized tests by engaging in prognostic framing that aligned standardized test scores with issues of equal opportunity and access. Recall that prognostic framing involves putting forth a proposed solution to a problem, which is usually premised on an implicit problem definition. Here the principal argued that the faculty must pay attention to test scores to create equal opportunities for the poor and minority students they served:

To make change, we have to get focused on what is best for the students. . . . I am here because I believe I can make a difference in the lives of each of these kids. . . . But I realize that I may need to change the things I do and that's okay if I know that if I make a change it will make a difference. . . . We are judged by our test scores. That's how we judge. And we do okay because [our scores] are in the middle band in the district. But okay is not good enough if the kids are going to function in this world. We need to do better. . . . We need to look at the data and find what the answers are and then find out what can help us.

The "standardized tests as equal access" framing appeared to have resonance with some of the members of the faculty. When the issue came up again the

next day, several teachers adopted the frame as their own to argue with their colleagues about the importance of taking standardized testing seriously.

Teacher 12: I think we're focusing too much on test scores as a way to figure out how kids are doing.

Teacher 6: Everything in life is measured by the test. If we don't teach those kids to take the test, they won't get into college. That's the only way that the district is measuring achievement. We have to work on those scores and get them up.

But this framing did not go unchallenged. Other teachers offered counter-frames that drew on social justice themes to define standardized tests as inequitable and unjust. Some teachers challenged the assumption that the scores reflected the quality of their teaching. One teacher argued:

The school district and the public value that damn test. I've worked in some of those schools that have really high test scores and they're wrong. Those are not always the best places for kids to be. I've also worked at a school in the bottom of the list and it was a better place for kids. . . . Affluence buys test scores. If we are going to be about reform, then let's be about reform!

Others concurred, pointing to the injustice of administering the test in English to students who were English-language learners and arguing that standardized testing created an environment in schools that was unhealthy and unfair for children.

Momentum began to grow for this definition of the problem of standardized testing. Across the next three meetings, fewer and fewer teachers countered the "standardized tests as unjust" frame with the "equal access" frame. In fact, at least four teachers who had previously made arguments using the "equal access" frame began to voice support for the "standardized tests as unjust" frame. In a meeting in early April, as testing season drew near, nine different teachers invoked some variation of the "unjust" frame. As this framing gained momentum, teachers became increasingly resistant to the notion of using standardized tests as a measure of their teaching and became increasingly energized to organize some form of political protest against the test—a letter either to the district or to the media.

The principal responded to the "standardized tests as unjust" frame by introducing an alternative framing that linked standardized testing to the logic of standards-based reform. She argued:

The [new sections of the test] align with the standards. I've looked at the augmentation test and it's hard. Some of the kids can do it, but it's a matter of teachers looking at it and making the connections. If we've done the activities, then kids should be able to do okay. If we are teaching to the standards, if we are teaching what's working, students will do better on the test.

This framing appeared to invoke what social movement theorists call *frame bridging*, or linking two ideologically congruent but unconnected frames as a way to reach out to others (Benford & Snow, 2000; Snow et al., 1986). In this case, the principal bridged the logic of standardized testing with the logic of standards as a way to create legitimacy for standardized tests. During the year of the study, the broader logic of standards-based instruction was quite salient both in the reform environment and in the school. Teachers at Stadele were particularly inclined to accept this logic because they had participated in a considerable number of professional development opportunities on standards-based reform the year before and, for the most part, embraced the idea that it was the teacher's role to teach to the standards. Teachers responded to the "standards frame" by questioning its empirical validity: Is it really true that the test is aligned with the standards?

Several teachers and the principal set to work trying to evaluate the degree of alignment between the new test and the standards. The principal also had individual conversations with many teachers in which she talked individually about the issues involved and made a spirited argument in support of the standards frame. She described the conversations in the following way:

I had informal conversations to really push the agenda through . . . to really stress the importance of [the standardized test] because there's this whole thing that "we don't believe in standardized tests." Well, I can't let people off that easily. . . . Yes, the tests are biased. Yes, kids who take it are not on an equal playing field. Everything is biased. And so we've got to teach the kids how to play the game in mainstream society and give them the tools they need to win at that game. Yeah, it's biased. But if the kids are learning what they're supposed to be learning in the standards, they're going to figure out how to take those tests. I feel strongly about that.

A week later, the faculty reconvened to discuss next steps. As illustrated by the following extended excerpt, the determination that the augmentation test was indeed linked to the standards seemed to give strength to the principal's standards framing. In a conversation in which nearly all of the previous ways of framing the problem of standardized tests were invoked anew, multiple teachers took up the standards framing as their own and used it to promote the idea that it is the teachers' responsibility to teach to the standards, and in fact standardized tests are a legitimate measure of the degree to which they are doing that.

Teacher 13: The consensus was that we should write a letter to the testing office, but people raised questions because the SAT9 is geared to the standards and because we're supposed to be teaching to the standards, how is it going to look? It's going to look like we're not doing what we're supposed to be teaching. [standards frame]

Teacher 9: What standards are those?

Principal: I looked at the fifth-grade math standards and matched them and they matched pretty closely.

- Teacher 9:* But it doesn't match the [math textbook series]. [new problem: lack of alignment to text]
- Principal:* [The textbook] is one tool. It's not the standards. It's one way to get to the standards, but we're still required to be teaching to the standards. [Teacher 2], did it look like it met the standards? [standards frame]
- Teacher 2:* Yes, it did. I downloaded it and looked at the fifth-grade test. But what it doesn't do is it doesn't jibe with the curriculum and things that we have available that we have to teach. I feel like I don't have the means to teach to the state standards [lack of alignment of text frame]. I was talking to [a colleague in the union] and he said I should direct a letter to the person who wrote the January article in *Time* magazine about why standardized testing is hard on children. So I've been thinking that maybe I could write to that person and say that it's not right to give 7 or 8 hours of testing to 8-year-olds. [injustice to children frame]
- Teacher 14:* I disagree with teaching to the test.
- Teacher 13:* But I don't think that's teaching to the test. It's teaching to the standards. But if the test and the standards are correlated, it's not a problem. [standards frame]
- Teacher 9:* [getting angry] We spend a lot of money on those tests in this district and on test prep and there's not agreement among the teaching community that this is the way to teach kids.
- Teacher 6:* I don't like the test either, but standardized tests are a fact of life. Parents want kids to go to school and that's all based on test scores, so we need to teach these kids how to take tests. [equal access frame]
- Teacher 14:* I agree. I think we should focus on the standards so that we focus on those concepts. And then if we focus on the concepts, we don't have to worry about the tests. [standards frame]

As more and more teachers affirmed the standards frame, efforts to write a letter to protest standardized tests were diffused. When the school convened meetings at the end of the year to assess progress in reading comprehension and to make plans for the coming year, teachers and principals alike justified their choices of reform strategies by referring to standardized tests and their link to standards. The definition of standardized tests as inaccurate or unjust had been defused.

Framing standardized tests in terms of standards served to create temporary agreement at the school level, allowing the work to move forward. After spending large portions of faculty meetings for several weeks debating the problem of standardized testing and not discussing issues associated with reading comprehension or other aspects of the school's reform efforts, the faculty returned to the work on reading comprehension—work that rested on the assumption that there was a problem, as evidenced by test scores. While a minority of teachers continued to have grave problems with standardized tests as a measure of student learning, the issue did not reemerge during the remainder of the year, and indeed the school drew on standardized test scores to justify its decisions about contracting with a professional development provider for the following year.

Individual teachers responded to this framing activity in ways that depended on their prior beliefs about and conceptions of standardized testing. Those teachers who were supportive of standardized testing (a relatively small minority in the school) tended to reconstitute the way they talked about testing by adopting the standards frame. After one meeting at which the standards frame was invoked repeatedly, a teacher whose children consistently did very well on standardized tests took me aside and told me: "I've been saying this for years. We need to really focus much more closely on the standards if we want kids to do better on the test." Of the 18 teachers interviewed at the end of the year, 3 of the 4 strong supporters of standardized tests used the language of standards to justify the importance of these tests.

Many teachers who had less strongly held negative feelings about standardized tests also adopted this way of understanding the meanings and implications of standardized tests. For example, one teacher who refused to use worksheets in her classroom because she saw them as "test prep" responded as follows to a question in a May interview regarding what she thought about standardized testing: "It's hard to say. The one positive thing that I can say about it is that it makes sure that teachers are teaching what they need to teach. If I didn't teach to the standards, the kids would just flop." In addition to this teacher, nine others who started the year with somewhat negative views of standardized testing talked in these terms about their responsibility for test scores and their plans to increase test preparation or do a better job of integrating the standards into their teaching in the coming year. Thus, the development of the standards frame appeared to influence some of the teachers' personal understandings about testing.

However, for the teachers who felt that standardized testing violated their sense of justice and their views regarding the purpose of schooling, the standards frame had little impact on their deeply felt beliefs. Four of the teachers interviewed expressed this view. One teacher explained: "I'm just very anti-standardized test. I feel myself more and more disassociated from this whole [reform effort] thing and from standards." But while the framing and counterframing process did not influence these teachers' beliefs or practices related to standardized testing, it did serve to silence their protests in public meetings. As momentum gained around the idea that it was teachers' responsibility to teach to the standards, they stopped voicing these opinions in faculty meetings and no longer interrupted the ongoing work on reading comprehension with their concerns. The issue of standardized tests did not reemerge in public conversations for the remainder of the year.

Problem Framing and the Microprocesses of Implementation

As suggested by sense-making theorists, teachers and school leaders at Stadele Elementary School actively mediated pressures and policies in the reform environment. But how they mediated state policy on reading and accountability was shaped by how the school defined the relevant problem of reading instruction to be solved. The faculty at Stadele Elementary defined the

problem not as the need for increased phonics instruction, as was emphasized in state legislation and the policy environment, but rather as the need to have a more consistent and aligned approach to reading comprehension across grade levels. This, then, shaped their decision (made by a vote) to contract with a professional development provider to provide training on reading comprehension strategies and have all teachers commit to incorporating at least one key aspect of the approach in their classrooms.

At the same time, in a more contested process, the faculty drew on the logic of standards-based reform to define the problem of standardized tests as reflecting gaps in their instruction. This framing allowed the principal and others to continue to draw on test scores to justify strategic decisions related to reading instruction, and it constrained efforts to move forward with plans to protest standardized tests as an injustice to the children in the school. Thus, in the case of reading comprehension, the way in which the school framed the problem led to a major adaptation of reading policy on the part of the school. In the case of standardized tests, the principal was successful in framing the problem in a way that led to implementation congruent with the state's emerging accountability policy.

This suggests that as with policy formation, the way in which key players—in this case, teachers and principals—frame the problem plays an important role in how policy implementation unfolds. But what influences how participants frame the problem? In the sections that follow, I look across all six problem-framing trajectories to analyze the process by which problem framing occurred, paying particular attention to the microprocesses of problem framing, the role of authority in teacher-principal interactions, the roles of teachers' formal and informal professional communities, and the consequences of problem framing for action, authority relations, and teachers' sense-making and shifts in practice (for definitions of these problem trajectories, see Table 1).

Microprocess of Problem Framing

Rather than a single event involving a solitary decision maker (the school leader), the process of framing that shaped these definitions was a profoundly social one that involved interactions among and between multiple actors at the school. In this case, teachers and teacher leaders were active participants *with* the school principal in articulating problem definitions and engaging in counterframing. Framing activity was fundamentally interactive, in that frames were modified and reconstituted in the face of direct challenges from others or the failure of particular frames to motivate action.

At root, framing involved coordinating the diverse perspectives and preferences that existed in the school. Consequently, framing activities were most successful—that is, they were most able to generate resonance—when individuals were able to put forth a definition of the problem (or a solution that rested on an implicit definition) that others with diverse worldviews could find ways to connect with. Across the six problem trajectories, I identified

95 distinct diagnostic or prognostic frames that were invoked, often repeatedly, over the course of the year (see Table 2 for a distribution of frames across frame trajectories). The 51 frames that were successful in gaining resonance among *at least* a pocket of the faculty (e.g., within a grade level, the leadership team, or an informal teacher network) had one or more of the following three qualities.⁵ First, prognostic and diagnostic frames generated resonance to the degree that they tapped into individuals' preexisting worldviews and experiences. For example, in the case of the "reading strategies" frame, linking the new approach to reading comprehension to teachers' existing approach to mathematics problem solving not only seemed to help the teachers understand the approach in a different way but also linked reading comprehension strategies to an instructional approach that teachers were familiar with and supported.

Second, frames also generated resonance when they invoked values or ideas that were salient in the environment and had widespread acceptance in the school, as was the case when the principal invoked the logic of standards-based instruction in the service of justifying or promoting attention to standardized test scores. Similarly, frames invoking social justice—either directly or symbolically—were often successful in generating resonance with teachers at this school.

Finally, frames were successful to the degree that individuals perceived them to be consistent with or felt they accounted for available information or recent events. Just over one third of the frames that failed to gain resonance

Table 2
**Number of Frames Achieving Various Degrees of Resonance
In Each Problem Trajectory**

Trajectory	Lacked Resonance	Achieved Resonance in Segment of the School	Achieved Resonance Across Multiple Segments of the School	Unable to Determine Resonance
Problem of assessment	5	5	7	0
Problem of decoding	3	5	0	2
Problem of reading comprehension	13	16	5	8
Problem of the reform initiative	4	4	2	1
Problem of standardized testing	4	4	3	0
Problem of students not meeting the standards	4	0	0	0
Total	33	34	17	11

(12 of 33) were rejected because teachers did not perceive them to be consistent with available evidence. Here, evidence took a broad range of forms. Frames failed to gain resonance when teachers were able to provide examples of specific students whose experiences appeared to contradict the claim. They also failed to gain resonance when they appeared to teachers to be inconsistent with test scores and other kinds of performance data. For example, the early-grade teachers rejected the "whole-school responsibility" frame—the idea that the entire school is responsible for third- and fifth-grade test scores—because they believed that it conflicted with performance data showing that students achieved at respectable levels in the early grades. Frames also had to be congruent with other kinds of evidence. For example, efforts to protest standardized tests were countered when the principal and others provided evidence that the standards were, in fact, aligned with the new sections of the standardized test.

Problem framing often took place in interaction with events that unfolded and new information that became available. Individuals reconstituted their frames to incorporate or accommodate new test results or new information from the district or a reform support organization. In this way, problem framing was an interactive and at times recursive process through which shared definitions of the problem were developed and shifted incrementally over time in dialogue with available information and in social interactions and negotiations among multiple actors.

Role of the Principal: Authority and the Social Construction of Problems

But while problem framing involved interactions and negotiations among multiple actors in the school, these interactions were shaped by relations of authority. In particular, the school leader had more influence in problem framing, but that influence was always contingent upon her ability to construct frames that generated resonance among a sufficient number of teachers.

Diagnostic and prognostic framing by the principal often carried more weight in the problem-framing process than frames put forth by others at the school. Across all six trajectories, problem frames were much more likely to achieve some degree of resonance if they were explicitly supported by the principal than if the principal countered them or remained silent. Fifty percent of the frames that the principal supported achieved resonance across multiple sectors of the school, 45% achieved resonance in a pocket of the school, and only 5% failed to achieve resonance at all. In contrast, of those frames that the principal explicitly spoke against, 20% achieved resonance across multiple sectors of the school, 10% achieved resonance in a pocket of the school, and 60% failed to achieve resonance.

Additional evidence for the influential nature of principal framing is that the two frame trajectories with little participation by the principal—the problem of decoding and the problem of children who do not meet the standard—petered out entirely. In the case of the problem of children not meeting the standards, several teachers repeatedly brought up the issue in full faculty

meetings. Yet, each time, the principal remained silent as teachers discussed it back and forth among themselves. As can be seen in Table 2, framing activity generated little momentum, and teachers were not able to move the conversation forward or motivate the school to act on the issue. Similarly, the problem of decoding—in which teachers discussed why students were having difficulty decoding texts—came up multiple times across the year. Each time it was raised, either the principal was not present when the discussions took place at grade-level meetings or she was present and remained silent. While there were five frames in the decoding trajectory that generated resonance within small segments of the school, teachers were not able to generate resonance with others outside their immediate areas. Calls for change languished, and little changed during the course of the year.

The principal appeared to be influential in the dynamics of problem framing in part because of her positional authority and in part because she was quite skilled at problem framing. Positional authority—or power that is “coded into [the] structural design” (McAdam & Scott, 2005, p. 10) of organizations and legitimized by shared norms that authorize particular roles and uses of power (Dornbusch & Scott, 1975; Gerth & Mills, 1946)—accorded the principal with resources for problem framing that others in the school did not have. Among other things, it enabled the principal to shape the framing process by setting agendas for meetings that focused attention on some issues and not others. For example, decoding was not a high priority for the principal, and she never made it the focus of full faculty meetings or activities for grade-level groups. Thus, framing activity related to decoding emerged only in private conversations or around the edges of full faculty discussions. The issue never had the platform to engage the full faculty in conversation in ways that might have led to more sustained attention and the potential to generate greater resonance. In contrast, as mentioned earlier, when the cross-grade alignment frame emerged, the principal scheduled meetings at which teachers met in cross-grade level groups, serving to further generate support for the idea.

The principal also influenced framing by asking teachers who had legitimacy with their peers to facilitate sections of the meetings, thereby fostering teacher-to-teacher framing on key issues. Finally, the principal had the access and authority to have one-on-one conversations with teachers about various issues. She employed this approach most often in the trajectory related to standardized testing, using these conversations to persuade teachers of the link between the tests and the standards.

Beyond positional authority, however, the principal appeared to be influential because she was skilled at framing. Problem framing is always dependent upon the degree to which a frame creates resonance with others. Certainly, on more than one occasion, the principal framed problems in ways that failed to gain resonance, or these frames were effectively countered by alternative frames offered by other members of the leadership team or vocal teachers. In one example, the principal's “equal access” framing of standardized tests initially seemed successful in mobilizing equity-minded teachers toward

working in a directed way to raise standardized test scores. But this framing was derailed when a teacher tapped and redirected the social justice sentiment pool by reframing standardized tests as bad for kids. However, in this and other instances, the principal had the flexibility to reconstitute frames in response to counterframes and the emergence of new information or a new event. She did so by drawing on the scripts that were available in the proximal environment to articulate frames that diverse actors could connect to their beliefs, values, and ways of thinking.

Ultimately, the principal was most influential in shaping the definition of the problem when she was able to articulate or adopt ways of framing problems that were subsequently taken up and championed by teachers. In these cases, the principal was able to orchestrate what Fligstein (2001) referred to as an "aggregation process" (p. 114) by which momentum for a particular frame is generated as diverse actors appropriate it as their own, creating energy for the frame by invoking it in new and different circumstances. For example, in the problem of standardized tests, significant momentum was generated for the principal's standards frame only when teachers began to adopt and invoke it in their own conversations with their colleagues, working to influence their colleagues to see the problem in similar ways. There were similar patterns of aggregation in three other problem trajectories: reading comprehension, assessment, and the problem of the reform initiative. It was only when this aggregation process began to occur around a particular frame that resonance spread beyond individual segments to reach multiple segments of the school. And it was only by encouraging this aggregation process that the principal was able to mobilize diverse actors to work in a more coordinated manner toward a common reform agenda.

Mediating Role of Teacher Professional Communities

Because resonance and the broader aggregation process ultimately depended on teachers taking up and championing frames as their own, teachers' proximal professional communities—grade-level groups and informal networks—often played an important role as a site of mobilization and a place of dissent and counterframing. At times, teachers used their proximal communities as a place to mobilize dissent for framing activities at the school level. For example, in the case of the problem of reading comprehension, the early-grade teachers did not publicly voice their concerns with the "reading strategies frame" to the whole group. Rather, they talked to one another over lunch, assuring each other that because the problem of reading comprehension was really at the upper grades, the reading strategies put forth in the professional development session did not apply to them. These conversations shaped the inclination of this group of teachers to actively participate in the professional development session and limited the degree to which they experimented with the new approach in their classroom.

But teachers' professional communities also served as important sites for further mobilization of frames that had been initiated in the large group. For

example, throughout the year, there was an extended trajectory related to the problem of assessment. The school principal and members of the leadership team were early advocates of ongoing assessment. However, many teachers argued that using assessment in this manner involved burdensome paperwork, did not elicit valid data, and did not tell them anything they did not already know about student learning. At different points in the trajectory, four of the six grade-level groups essentially replayed the arguments that took place in the full group. For example, in one grade-level meeting, after two teachers had echoed complaints about the paperwork and limited utility of assessments, a third teacher framed ongoing assessment as an equity issue, claiming that such assessment was most effective in helping underperforming students. This framing seemed targeted to the particular concerns of a teacher who actively resisted ongoing assessment but who also held strong values around issues of equity and placed particular emphasis on reaching underperforming children. Framing ongoing assessment in this manner proved quite effective, as the teacher eventually conceded that perhaps ongoing assessment could be useful, at least for underperforming children, and began to do the grade-level assessments with her children.

When teachers invoked and championed frames from the large group in their proximal networks, they did so in ways that were much more specific, individual, and contextual. That is, teacher-to-teacher framing in proximal communities appeared to be cued to colleagues' particular concerns as well as issues related to specific grade levels and students. Thus, teachers were often able to create rhetorical bridges that helped their close colleagues connect particular frames with their own beliefs and experiences, thus facilitating resonance.

Perhaps because framing could be more targeted and personal in teachers' proximal communities, framing activities in these settings were important to the aggregation process. Across the six frame trajectories, teacher-to-teacher framing in proximal communities played a role in generating resonance in 10 of the 17 frames that achieved resonance across multiple segments at the school. In so doing, conversations in teachers' proximal communities played an important role in mediating framing activities at the school level.

Consequences of Problem Framing

This study provides further evidence that the way a problem is defined is important because it points toward and legitimizes certain responses and not others, thus shaping the direction of future action. Framing activity shaped how implementation unfolded by opening up some doors for action while simultaneously closing off others, setting parameters within which decision making unfolded, and shaping the allocation of resources such as time and discretionary dollars. Thus, defining the problem of reading comprehension in terms of teachers' instructional practice resulted in a decline in momentum toward solutions involving parents and the community. Similarly, defining the problem as a lack of cross-grade articulation shaped allocation of resources.

The school subsequently decided to allocate time and resources for cross-grade meetings to further support efforts to align instructional practice and decided to use resources to contract with a professional development provider to support this approach. Defining the problem of standardized tests as one of teachers' instruction closed off efforts to engage in political protests against the test. And defining the problem of assessment as a lack of valid assessment instruments paved the way for the school to drop assessments it had spent a year developing itself (and that showed that children were achieving at low levels in reading comprehension) and adopt externally developed assessments for the coming year.

But this study also highlights three additional outcomes of the problem framing process rarely discussed in the literature. First, problem framing not only shaped the direction of proposed solutions, it played an important role in enabling and coordinating action toward these ends. In the absence of a clear and shared understanding of the problem, it was very difficult for the school to move forward. In such situations, conversation was fragmented and repetitive, with multiple definitions of the problem raised, countered, and raised again. Teachers and school leaders alike were unable to frame the problem in ways that were compelling to others or generated resonance with a sufficient core of their colleagues. Action was ad hoc and fragmented, and it unfolded in different ways in different parts of the school.

This pattern was present in the two frame trajectories in which framing activities failed to construct a definition of the problem that was shared by a critical mass of teachers and school leaders. As mentioned earlier, in the absence of the ability to gain resonance for any of the problem frames, conversations about the problem of students not meeting the standards fizzled out, and no action was taken on this issue. Similarly, in the problem of decoding, while some teachers engaged in individual efforts to improve decoding instruction, many others did not, and approaches to decoding remained highly variable across the school.

Interestingly, this pattern of ad hoc and fragmented action was also present at the beginning of the year with the problem of reading comprehension. In this case, very little work was done in the school on reading comprehension during the fall of the study year, even though it was the focus of the school's reform work. Instead, there were disconnected discussions and individual efforts among classroom teachers to improve their instruction. Not until the ongoing framing activity began to generate some agreement among teachers and school leaders were they able to coordinate their efforts. It was only then that momentum began to build and the school was able to move forward in a coordinated manner with its reform efforts.

Second, framing activity influenced authority relations. Earlier, I argued that the dynamics of framing and counterframing were shaped by relations of authority. It appears that frame disputes are also occasions where these relations are renegotiated and reshaped as well. As has been well documented in past research, widespread norms of teacher autonomy typically grant teachers some degree of authority over their classroom practice (Goodlad, 1984;

Little, 1990; Lortie, 1975). In framing problems and promoting solutions that implicated classroom practice, the principal challenged these norms in three problem trajectories. In the problem of reading comprehension, the principal attempted first to frame the problem as one of teachers' instruction (as opposed to children or their families). She then further framed the problem in ways that suggested particular programmatic responses. Similarly, in the problem of standardized tests, the principal framed the problem and promoted solutions that placed responsibility for student achievement squarely on teachers' instruction. And in the problem of assessment, the principal framed the issue of achievement in terms of a lack of ongoing assessment to inform instruction. She then promoted school-wide use of multiple measures, including several specific assessments. In each of these trajectories, the framing and counterframing that resulted can be seen as occasions where the teachers and school leaders "broker[ed] the boundaries" (Malen, 1994, p. 154) of their authority over classroom instruction. With the success of the principal's frames, this negotiation reshaped these norms in small ways, granting the principal greater authority to influence teachers to use specific instructional approaches in their classrooms.

However, there was at least one trajectory during the year of the study in which patterns of authority were altered in ways that granted teachers greater authority in school-wide decision making. During a trajectory in which the teachers and school leader discussed problems that arose with the reform effort itself, the teachers were successful in framing the problem as a lack of teacher voice in decision making. In seeking to remedy this problem so defined, the school leadership shifted the decision-making structure for governance of the reform such that more decisions were made by the faculty as a whole rather than the appointed leadership team. It also allowed greater choice in how teachers used meeting time funded by the reform, which served to push away from the whole-school focus of the reform toward greater autonomy at the grade level. Thus, across these frame trajectories, framing activities resulted in a renegotiation of authority in tangible ways.

Finally, framing activities appear to have influenced individual teachers' sense-making, which in turn shaped how they approached and experimented with new classroom practices. Framing activities in public meetings provided interpretive frameworks that some individual teachers adopted to make sense of new ideas, events, or approaches. The clearest example of this occurred in the problem with reading comprehension. As discussed earlier, individual teachers drew on the principal's analogy between math problem solving and reading comprehension strategies to make sense of the implications of the approach for their classrooms. These teachers drew on this frame when they talked together about the approach with one another, and it guided their experimentation in their classrooms. As discussed earlier, the frame also appears to have shaped the way teachers thought about the problem of reading comprehension, in that two thirds of the teachers, in individual interviews, invoked aspects of and language from the "reading strategies as mathematics problem solving" frame as they discussed their

approach to reading comprehension and efforts to improve instruction in their classrooms. There was a similar pattern in the problem of the reform initiative. When asked an open-ended question at the end of the year about their reflections on the reform initiative, more than 80% of the teachers interviewed mentioned that the reform suffered from a lack of teacher voice, reflecting the shared definition of the problem that had been negotiated across the year.

It is important to note, however, that even though shared conceptions of the problem generated via framing activity appeared to influence the nature and direction of teachers' sense-making, this did not mean that teachers used interpretive frames to make sense of new events, information, or instructional approaches in the same way. For example, during framing activity related to assessment, teachers grappled with the notion that the problem was a lack of ongoing assessment used to inform instruction. The leadership team argued that the solution to the problem was a structured and analytic approach to assessment that represented a substantial departure from the existing assessment practices of many teachers in the school. A substantial number of teachers at the school adopted the prognostic frame that they needed to engage in ongoing assessment as their own. More than 80% of the teachers interviewed at the end of the year expounded on the importance of ongoing assessment. There was also an increase in the number of teachers who began to actually use assessment in their classrooms in an ongoing manner. In the early grades alone, those consistently using assessment increased from 3 of 18 at the beginning of the year to 15 of 18 at the end of the year.⁶ This is striking in a school that had little in the way of ongoing assessment at the beginning of the year and had a faculty that raised significant questions about the added value of using assessment early in the process.

However, teachers who came to the debate with different understandings of the nature of assessment ended up using assessment to inform instruction in quite different ways. Thus, those teachers who came to the approach seeing assessment largely as a way to obtain summative information began to use assessment more frequently but did not tend to use it in a formative manner to inform their instruction. In contrast, other teachers who valued the formative purposes of assessment—even if they did not consistently use assessment in this manner—gradually incorporated ongoing assessment into their classroom, renegotiating the purposes and role of assessment in their broader program as they began to use it to guide their instructional decision making.

All of this suggests that there is something of a reciprocal relationship between individual worldviews and the social process of problem framing. Problem framing depends on and results from the negotiation between interpretations brought to the table by individual members with differing beliefs and values. But at the same time, these negotiated understandings of the problem, once arrived upon, create frameworks within which teachers construct new understandings that at times shape their worldviews and guide their experimentation with new instructional practices.

Conclusions

While there is a long history of scholarly interest in the phenomenon of problem framing at the level of policy-making, little, if any, attention has been paid to the role such processes might play during policy implementation. This study provides evidence that problem framing plays a crucial role in policy implementation. How the school ultimately framed the problem of reading instruction not only shaped the future direction of reform implementation, it provided a mechanism to forge jointly held interpretive frames that motivated and coordinated both collective and individual action. But this study goes further, elaborating the social process by which problem framing and sense-making unfold. Most research on problem framing in public policy focuses solely on the consequences of problem framing. While this is no doubt important, it provides little insight into how and why problems are framed in particular ways. Here I suggest that problem frames emerge through an interactive process by which individual frames are invoked, countered, and reframed until this negotiation results in a way of framing the problem that allows individuals with diverse worldviews and interests to connect with it.

In investigating the dynamics of problem framing, this study makes at least three key contributions to our understanding of the microprocesses of policy implementation. First, by bringing together frame analysis and sense-making theory, this account introduces the role of authority into our understanding of the social process of sense-making during policy implementation. While a subset of the sense-making literature has highlighted the role of social interaction in meaning making about policy (Coburn, 2001; Hill, 2001; Spillane, 1999), this work has not, to date, investigated what happens when there are differences of interpretation or when sense-making takes place among individuals with different roles and positions of authority. Here I have provided evidence that all voices are not equal in the social negotiation of meaning. Rather, the way in which individuals jointly construct their understandings of policy is shaped by and in turn shapes authority relations. School leaders with greater authority—albeit contingent authority—and greater access to resources have more influence in efforts to define problems in a particular manner. These problem frames, in turn, create powerful frameworks within which teachers and others make sense of new policy initiatives and practices.

At the same time, this study enriches frame analysis by illustrating how framing processes play out in formal organizational structures. Collective action researchers who have developed the technique of frame analysis have typically explored the role and significance of framing activities in the context of social movements that principally reside outside of formal organizational structures (Binder, 2002; McAdam & Scott, 2005). By investigating how framing processes unfold in the context of public schools, I have uncovered evidence that formal and informal organizational structures matter for both the process and outcomes of framing. As just highlighted, frames put forth by those with greater authority tend to be privileged in the social negotiation of meaning,

although formal authority in particular does not guarantee that school leaders' problem framing will be successful in motivating action.

But I also have provided evidence that the social organization of the workplace, in particular the configuration of subunits and teachers' informal social networks, shapes how problem framing unfolds. These formal and informal organizational structures influenced teachers' patterns of interaction, structuring who teachers interacted with in what settings. This, in turn, shaped the course of the frame trajectories, as conversations in these settings provided fodder for and mediated framing activities at the school level. At this school, individual teachers often mobilized their colleagues in the context of grade-level meetings or informal social networks, framing problems in ways specifically targeted to grade-level concerns and their colleagues' individual beliefs and preferences. The fact that there were individual teachers championing particular frames distributed in multiple grade-level groups and informal networks perhaps helps explain why so many of the frame trajectories during the study year resulted in the sort of aggregation process that appears necessary to generate momentum for a particular problem definition.

The present research also contributes to studies on school leadership by highlighting the importance of skillful framing as a key element of reform leadership. The ability to negotiate shared understandings of problems and potential avenues for solutions appears to be crucial in mobilizing groups of diverse individuals to action. Yet, this capacity is rarely discussed in the literature on school leadership (Anagnostopoulos & Rutledge, in press, is an exception). Skillful framing may be particularly important for school leaders given the long-standing norms of autonomy for teachers in U.S. public schools. As Dornbusch and Scott (1975) reminded us, if the exercise of authority is to be effective, it must be legitimized by social norms and endorsed by those who are subject to it. The presence of strong norms of teacher autonomy may mitigate against direct exercises of control over instruction by principals. And, indeed, there is evidence that directives by school leaders in the absence of skillful framing may result in limited or superficial compliance or outright resistance from teachers (Anagnostopoulos & Rutledge, in press; Hallett, 2006). In this study, the principal engaged in framing activities not to *compel* teachers to make changes in their practice (orchestrating what Binder, 2002, called a political shift) but, rather, to *persuade* teachers to make changes in their practice because they believed it was the right thing to do (orchestrating what Binder called an ideological shift). Thus, framing was a deeply political act, functioning as a mechanism to generate cooperation in an organizational structure that rendered the principal especially dependent upon such cooperation from teachers to bring about instructional change.

Finally, this study provides insight into the social organization of motivation. For the past two decades, scholars of policy implementation have argued that the degree to which policy is implemented is related to the "skill and will" of frontline implementers (Berman & McLaughlin, 1978; McLaughlin, 1987; Miles & Louis, 1990; Odden, 1991). By invoking "will," these researchers have pointed to the key role motivation plays in how teachers respond to changes

in instructional policies. Yet, most of this work views motivation in highly individualized terms. This study provides evidence that individual motivation can be socially organized. That is, skillful framing may be an important mechanism for generating individual motivation and channeling it in a particular direction. By creating frames that allow individuals to connect their own worldviews, values, and practices with a collective way of understanding the problem, framing activities serve to link individuals to group goals, organizing individual experience and mobilizing it toward collective action. In the absence of clear and shared understandings of problems, collective and coordinated action is elusive. All of this suggests that problem framing activities are crucial, yet often unseen and unacknowledged, aspects of the microprocesses of policy implementation.

APPENDIX

Distribution of Meeting Observations

Activity	Hours of Observation
1st-grade meetings	14.5
2nd-grade meetings	16
Other grade-level meetings	13.5
Full faculty meetings	43.5
Leadership team meetings	13.5
In-school professional development	15
District professional development	3
External professional development with leadership team	11.5
Total	130.5
Informal meetings	Ongoing

Notes

This article is part of a line of work that uses the tools of organizational sociology, especially institutional theory and sense-making theory, to study the relationship between instructional policy and teachers' classroom practice in urban schools. The goal is to understand the ways in which schools are connected to their broader social and cultural environments and how these connections shape the efforts of teachers and school leaders to make instructional changes. The work is intended to illuminate the challenges teachers face and uncover windows of opportunity for change.

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¹Stadele Elementary is a pseudonym.

²At the time of the study, the student body at Stadele Elementary School was very diverse: 43% of the students were Asian (the majority Chinese), 28% were Latino, 13% were African American, 12% were Filipino, and 3% were White. Sixty-seven percent of all students qualified for free or reduced-price lunches, and 48% were classified as English-language learners. The teaching faculty was also racially diverse. Of 33 classroom teachers, 48% were White, 33% were Asian (Chinese and Filipino), 12% were African American, and 6% were Latino. All 5 resource teachers were White, and the principal was Asian American.

³The reason for the disparity in the number of interviews with teachers versus the principal is that the larger study involved both a historical and a cross-sectional design in an effort to understand the relationship between changes in the policy environment and teachers' classroom practice. The additional interviews with teachers were largely devoted to developing oral histories of their classroom practice.

⁴The SAT9 and the augmentation test have since been replaced by the California Standards Test.

⁵Indicators of resonance included overt agreement with a frame (either in a meeting or in subsequent interviews), others taking up and invoking the frame as their own, and instances in which subsequent comments invoked the frame as an implicit premise. Resonance in a segment of the school was defined as resonance confined to a single grade level, committee (such as the leadership team), or informal teacher network. Resonance across multiple segments of the school was defined as resonance reaching across multiple grade levels, committees (such as the leadership team), or informal teacher networks. It is important to note that resonance across multiple segments does not imply that a given frame resonated with all or even most of the teachers in the school. And, in fact, several frames that gained significant momentum in the school still had pockets of teachers who did not connect with them.

⁶Data for this claim come from observations in 8 of the 15 classrooms, supplemented by observations of grade-level meetings attended by all 15 teachers in which teachers brought copies of their assessments. Because of the structure of the meetings, it was quite clear who was administering the assessments and who was not.

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