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Kevin M. Leander & Margery D. Osborne

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# Complex positioning: teachers as agents of curricular and pedagogical reform

KEVIN M. LEANDER and MARGERY D. OSBORNE

We analyse two narratives of teacher-facilitator teams producing elementary science curricula and disseminating them to their peers. We draw on these stories to interpret how teacher-facilitators position themselves with respect to other educators (e.g. peer teachers and development-team members), to real and imagined students and parents, to knowing and learning science, and to pedagogical practices and texts. We read these acts of positioning relationally and responsively. Teacher-facilitators position themselves and their work in highly complex ways to multiple political and social others. These multiple positions raise a range of anxieties and questions for the teacher-facilitators and shape their curricular and leadership roles. Our purpose is, first, to tease out these complexities of positioning and subjectivity, and second, to consider how teachers construct their roles as pedagogical and curricular leaders among their peers. This analysis illuminates thinking about how reform is enacted in schools and how leadership roles are constructed.

Keywords: activity units; curriculum development; hands-on science; organizational change; peer coaching; teacher identity.

Jackie is standing, with her partner Diane, in front of a group of 4th-grade teachers. They are all gathered together on a professional development day to hear Jackie and Diane present the new science curriculum that the two teachers have developed. 'See, here we have the scientific method.' Jackie indicates some pages in a notebook she is holding up in front of the group.

*Diane*: We really should be stressing this at all levels—the scientific method.
*Jackie*: There is a sheet in every unit with the answer key—one clean sheet, one transparency, one answer key (removing one set from its plastic sleeve).
*Teacher 1*: That's your textbook right there!
*Diane*: Ah, yes. Certainly more background than you have right now … People do have their mini-units. I'm sure you all have your mini-units.
*Teacher 2*: What do you mean?
*Teacher 3*: I don't have any mini-units. (21 April 1997)

*Kevin M. Leander* is an associate professor in the Department of Teaching and Learning, Vanderbilt University, Box 330 GPC, Nashville, TN, 37203, USA; e-mail: kevin.leander@vanderbilt. edu. His areas of interest include literacy and space–time, practice theories of identity, digital literacies, classroom interaction, and multimodality. He has published in *Cognition and Instruction, Research in the Teaching of English, Ethos, Reading Research Quarterly*, and *Discourse Processes*.

*Margery D. Osborne* is an associate professor in the Department of Curriculum and Instruction, University of Illinois at Urbana-Champaign, USA, where she teaches early-childhood and elementary science education. Her research interests, located within the intersections constructed between ideas of reflective practice and research in critical and feminist pedagogy, include exploring the dynamic and complex nature of teacher knowledge.

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Jackie and Diane[1] are engaged in developing and writing new science units for the 4th grade at Evansville Elementary School[2] and then presenting those units to their peers for trial and critique. They are part of a school-wide teacher-driven initiative to rethink and rewrite school science curricula so that they could address state and local expectations around content and standards and still fulfil teacher-articulated goals about how science should be taught—as hands-on inquiry. Such leadership roles in school reform agendas are not uncommon in the US; teacher appointments to curriculum decision- and revision-boards are frequent occurrences and cut across hierarchies and seniorities. Those teachers' roles, however, are filled with tensions beyond the intellectual and purely subject-dependent. How teachers position themselves and construct voices to mediate these tensions are important when researchers examine how reform agendas are implemented and how leadership is constructed, negotiated, and enacted.

Current discussions of school reform (e.g. Elmore 2002) often feature the relationship between leadership and enactment. The task of theorizing leadership has evolved from looking at the roles and activities of formal leaders (i.e. principals) to a model of leadership that is more fluid and resides in the evolving roles of the 'on-the-ground' participants in school life. The distributed leadership model (Gronn 2000, Spillane *et al.* 2003, 2004) is an articulation of this model and poses a way of understanding leadership that focuses upon interaction and social processes. According to Spillane and his colleagues, there is a social distribution of leadership where leadership encompasses the work of several individuals and involves the interaction of multiple leaders. Harris (2005: 260) in her analysis of recent scholarship on theories of distributed leadership in schools listed three inherent difficulties or barriers to distributed leadership:

> First, distributed leadership requires those in formal leadership positions to relinquish power to others… Secondly, the top–down approaches to leadership and internal school structures offer significant impediments to the development of distributed leadership… Finally, … distributed leadership poses the major challenge of *how* to distribute development responsibility and authority…

To this list we would add an issue addressed in this paper: the question of operationalizing distributed leadership roles.

When teachers are actively engaged as curriculum and staff developers in school contexts, their work offers a unique opportunity to interpret the complex relationships of school change, an occasion to 'redraw boundaries' (Ball and Cohen 1996: 8) among teachers, new materials, and teaching practices, and think about how leadership roles are constructed within these relationships (Spillane *et al.* 2003). Curriculum development activities, which are historically and geographically distant to schools, are at times separated from discussions of situated school change. However, when teachers themselves are developing and disseminating curricula, these contexts or activity systems (Engeström 1993, Wertsch 1981) concentrate the amount of reform activity occurring in one location, with the result that curriculum production and dissemination, facilitator-teacher relationships, teacher attitudes and practices, and institutional pressures

are brought together within the school site, and particularly within the subjectivity of the teacher-facilitator himself or herself.

Through a close analysis of two narratives of teacher-facilitator teams producing elementary science curricula and disseminating them to their peers, we argue that teachers, as agents of school change, position themselves in relation to other educators (e.g. peer teachers, development-team members, and administrators), in relation to real and imagined students and parents, in relation to knowing and learning science, and in relation to pedagogical practices and texts. We read these acts of positioning relationally and responsively. We contend that these teachers who take on leadership roles do not merely assume a new position or 'location' for their work; rather, they position themselves and their work in highly complex ways to multiple political and social others.

Our interest in positioning is twofold. First, we contribute to a larger discussion on teacher identity by interpreting these acts of positioning as a means of teachers actively constituting their subjectivities. Without adopting either a radical constructivist or structural, culturalist perspective on identity (Holland *et al.* 1998), we consider how teachers assume agency in constituting their subjectivities, and at the same time how this agency is dialogically responsive to, and shaped by, social and political others. What voices and practices do teachers, as agents of professional development, take up or position themselves against? Second, our interest in positioning and teacher subjectivity is related to a broad discussion of school change. What positions relevant to reform are teachers offered and what positions do they construct? How might we move beyond a language of teacher-'centred' reform to understand how reform is 'decentred', how teachers are not sole reform actors, but are relationally positioned in the process of enacting reform?

## Locating teachers in school reform

Sarason's (1982, 1990) mapping of school cultures, including his important analyses of the socio-political positions of teachers, critically foregrounds the limitations teachers face within schools. Sarason and others (e.g. Schwille *et al.* 1983) have also critiqued the gap between those who call for change and those who teach, arguing that focusing upon one or the other is misleading in conceiving of schooling in practice. More recent work on pedagogical reform (Ball and Cohen 1996, Spillane 1999, Wilson and Berne 1999, Wineburg and Grossman 1998) suggests that researchers need to explore the interplay among institutions, leadership, and teacher propensities toward practice and change, and take a situated perspective on teacher change (Borko 2004, Putnam and Borko 2000) and leadership roles (Spillane *et al.* 2003). In this paper, we focus still further upon the subject positions of teachers as a location through which to better understand micro and macro, personal and institutional, tensions of change. However, unlike the analyses above, which move from broad institutional forces and suggest their converging effects upon teachers, we construct a perspective from teachers outwards, a perspective that traces the multiple and multidirectional linkages of the personal, social, and institutional. In doing so,

we flesh out the complexities of the distributed leadership role (Spillane *et al.* 2003), how it evolves and is negotiated between teachers, and the inherent problematics in this process.

Shotter's (1993) description of 'joint action' is provocative and suggestive of our intentions in this analysis. His argument that 'joint action' describes human activity much more than does rational, planned action suggests a relational, responsive, situated perspective on reform:

> Activity of this kind occurs in response to what others have already done, and we act just as much 'into' the opportunities and invitations, or 'against' the barriers and restrictions they offer or afford us, as 'out of' any plans or desires of our own. Thus, the stony looks, the nods of agreement, the failures of interest, the asking of questions, these all go towards what it is one feels one can, or cannot, do or say in any such situations… [A]s an outcome of the joint action between them, people find themselves 'in' a seemingly 'given' situation, an 'organized' situation that has a 'horizon' to it and is 'open' to their actions. (p. 47)

Ball and Cohen's (1996) argument that curriculum materials need to be created with a heightened awareness of 'curriculum enactment' suggests that materials and practices could become more meaningful were they explicitly conceived of as a type of 'joint action'. Five 'intersecting domains' are posited by Ball and Cohen (1996) as descriptive of the landscape through which teachers enact curriculum, including teachers' thoughts about their students, their understandings of the material, their practices of material use, the nature and needs of the classroom as a group, and their views of policy and the broader community (p. 7). These 'domains' are powerful as imaged and actual contexts of curriculum enactment.

In this paper, we build on a relational and situated perspective of curriculum enactment (Ball and Cohen 1996), relating the social practices of curriculum enactment to those of teacher positioning and subjectivity. We work to locate the reform-motivated teacher, creating portraits of the responsive nature of curriculum construction and teacher development. We consider how two teacher-facilitator teams are engaged in developing curricula and practice, and simultaneously, their subjectivities as particular kinds of teachers, leaders, scientists, and persons. We interpret the joint action involved in curriculum enactment in relation to the joint action of assuming and producing positions and subjectivities for oneself and others.

In the first story, we consider how writing is related to self- and peer-evaluation of a completed curriculum, and also to the presenting team's positioning vis-à-vis curriculum. In presenting to their peers, this team uses their written texts to separate themselves from authority, assuming positions 'outside' their curriculum-as-artifact. We further consider how practices of writing and evaluation are manifest within the science unit developed by the team, affording students positions in relation to science similar to those assumed by the teacher-facilitators. In the second description, we build upon this general co-articulation of classroom/peer audience and examine the internal relationship of a staff-development pair, and how their different voices, practices, and interpretations create complex communicative hybrids and difficulties within the context of relating to their peers. This internal

relationship has implications for the effectiveness of the curriculum reform, both in the representations of the teacher-written texts and the ultimate goal of altering classroom practice.

## Background

The primary goal of the school-based, teacher-centred, science curriculum reform project at Evansville (1995–1997) was to provide support and guidance to the staff for developing and implementing activity-centred and interdisciplined science curriculum and teaching practices within elementary classrooms. Such curriculum reform efforts reflect national and local science education policy statements in the US, for example, *Benchmarks for Science Literacy 2061* and *Goals 2000* (American Association for the Advancement of Science 1989, 1993). To sustain such change, we assisted the local teachers and other support staff as they developed an elementary science curriculum that emphasized experiential learning.[3]

Specifically, the project served teachers from grades K–5 of the Evansville School District, and K–8 teachers of the Hinsdale Elementary District (which is not reported on in this paper). These school districts are in rural areas of central Illinois in the USA. Seventeen teachers and administrators from Evansville were involved in the programme, representing three buildings: an early childhood centre, a primary grades building, and an intermediate grades building. Two teachers from each grade level, volunteer grade representatives, worked together as teams to develop the curriculum materials.

The idea for the project was initiated in the early fall of 1995 by teachers who had participated in an earlier and larger science staff-development programme providing in-service training in teaching activity-based science to more than 70 elementary classroom teachers from the region's school districts over a 7-year period (Brown and Sinclair 1993). At Evansville, teachers worked in teams to discuss curricular goals and topics, compile materials and test them, write drafts of curriculum, pilot these drafts, and revise them. We supported this effort by hosting and mediating debate, serving as sounding boards for ideas and providing materials and information. We also worked with the teachers to carve out space and time for their work to proceed. A final step in the programme was the in-servicing of the non-participating classroom teachers in the Evansville district by the writing teams.

The following narratives are composed from a variety of data sources gathered from the staff-development programme in the Evansville district, including classroom observations, interviews with teachers, informal conversations, and observations of large-group project meetings (Fall 1995–Summer 1997). However, the primary data sources interpreted here are a set of science units that the teachers produced, and presentations of these units to peer teachers. The units themselves are collections of written materials that the staff-development teams—pairs of teachers—organized, composed, and published for their peers in notebook form. The materials are primarily lesson plans, but also include background information, bibliographies,

materials lists, parent letters, and assessments. Choice of appropriate materials was left open to the teachers by the project's facilitators, as was the degree to which teachers were told to create 'new' material, synthesize from published sources, or simply collect and index existing materials.

Presentations by the grade-level staff-development teams were scheduled on two separate occasions (Spring and Fall 1997) as a means of introducing the units to their peer teachers. The presentation format was unspecified by facilitators, and the time length (1 hour) was negotiated between the development team and the administrators. Both presentations considered here occurred in the teachers' respective school libraries during staff-development time. In both cases, the teachers sat at tables, and the development teams stood before them and discussed the unit notebooks. In the second story, the team demonstrated science materials as well.

## Team one: Jackie and Diane

*Positioning as response to science, texts, peers, and students*

In this first description, we discuss a set of relationships that extend beyond science teaching and engage pedagogical practice at a more general level. Print texts permit Jackie and Diane as staff developers to depersonalize experience and disavow their own voices. Furthermore, given the stability of texts and text/person distancing, writing permits an efficient and institutionally supported form of evaluation, a judgement of experience. These meanings of writing/evaluation guide our interpretation of how Jackie's and Diane's staff-development practices and voices are dialogic to their classes.

For Jackie and Diane, their staff-development efforts involve their historical and social positioning in relation to what they thought of as a splintered and difficult school community. Even among other grade-level teachers, the reputation of the 4th grade was for infighting, power struggles, and alliance formation. Jackie described this splintering according to lunchtime habits: while other grade-level teachers ate together as a group, the 4th grade was broken into at least three groups. Historically, there was a rift between Diane and some others on the staff, a problem that predated Jackie's hiring and was little discussed. Jackie only remarked: 'Something happened in regards to Diane, and I think opinions are sometimes formed when they shouldn't be, and they're not fair'. In the 4th grade, a few of the unofficial leaders had over 20 years experience in the same school. By contrast, Jackie and Diane were both relatively new to the school (3 and 6 years respectively). Jackie was also new to teaching (3 years experience in public school). Thus, Jackie and Diane expected resistance to the science development project from the outset, an anxiety that they often voiced. Reflecting back on the occasion of their first formal presentation to their peers, Diane noted: 'We were both extremely apprehensive—I was very, very apprehensive'.

In the presentation of their unit to their peers, Diane commented early on, 'This is not meant to be the definitive word on simple machines by any means', a statement which indexes tensions of social positioning and positioning in relation to the unit as a text. Diane introduced the entire

presentation with a comment that Jackie and she did not need the full hour that they had been given by the principal to present the unit. The guiding idea of the event seemed to be to limit the amount of time they were positioned as authorities before their peers, and, during this time, to focus attention away from themselves, their practices, and classrooms to the unit notebook itself. The presentation proceeded by turning the pages of the notebook and discussing them, setting up the occasion as a peer evaluation of the text, an examination of 'the word'.

The social positioning of persons and groups is considered a primary means through which subjectivity forms. Categories of persons (e.g. 'author', 'leader', 'the teacher') are created through regimes of power/knowledge, and people are offered or 'afforded' positions in relations to these categories (Holland and Leander 2004). Yet the practice of identity is not mechanistic and does not operate as a single social–personal dialectic or dialogue. Rather, positioning occurs in historically specific times and places, and particular acts of positioning serve to produce (and reproduce) culturally imagined identity types (including 'the authority') that are used as resources in future acts of positioning (Holland and Leander 2004).

Beyond presentation of the curriculum, Jackie's and Diane's rhetorical forms in writing the notebook established authority in the unit text itself. In their overview, Jackie and Diane demonstrated how the text included an introduction, a glossary of items, and an overview of 'the scientific method'. Even the material look and feel of the unit's pages, individually encased in plastic sleeves, produced (commercially related) authority. At one point in the presentation, the team was asked if new science textbooks were going to be purchased to accompany the unit, and Diane responded that she would not be opposed to this move. Soon afterward, the team presented their work and the conversation we opened this paper with occurred. This exchange presents, in a nutshell, some of the tensions of positioning that Jackie and Diane were negotiating in the presentation. On the one hand, their unit text appeared to be 'authorized', resembling other science texts enough to be seen as a replacement for them by at least one peer teacher. This authority of the text functioned discursively, rhetorically, materially, and somewhat independently of its actual authors, as in the case of a commercial textbook, where authors' names are often difficult to find or absent altogether.

Bakhtin's (1981, 1986) theories of discourse and voice are especially pertinent to this study in that they permit a way of theorizing the position of the individual speaker in relation to broad institutional and social 'others'. Bakhtin[4] insists upon the responsive nature of discourse. The meanings of utterances cannot be understood apart from their responsive relations to their discursive contexts, and all utterances index within them other utterances (thus, other speaker's voices). Discourse is therefore essentially dialogical in its on-going formation and practice.

For example, Diane's remark, 'You all have your mini-units' moves in complex and contrasting directions. 'Mini-unit' is a term used at times to describe topically organized curricula less extensive than a full unit but more developed than a single lesson. Diane assumed that 'mini-units' were part of the common professional culture of her peers; the statement was likely intended as a recognition of their expertise and their agency in producing

materials beyond district-mandated textbooks. However, by implicating her own knowledge and ownership of 'mini-units' beyond the official textbook, Diane began to recruit a personal authority that she was positioning against in other ways. Ironically, Diane's attempt to be socially open toward the audience and not fixed in an official text was experienced as closure by a peer: 'I don't have any mini-units'. Diane responded that Jackie and she 'don't want to lead anyone astray' about the unit being complete, as it was 'totally stripped' except for 'basic units', turning the audience back to the text and away from any discussion of what the 'mini-units' may be and who might actually possess them.

Tensions between the authority of the unit text and the authority of the peer-teacher audience were evident in other moments of positioning during the presentation. Again and again the presenters deferred to peer knowledge and experience. Jackie encouraged the audience to 'tell us where we need to add comments', and Diane reminded her peers repeatedly that much of what is contained in the unit was not new: 'You all know what messing about [in hands-on science] is… Obviously, the science journal is something we've all seen before'. At one point, Diane also solicited a story from an audience member about how a particular experiment, described in the text, had previously worked in her own class. Furthermore, the team constructed the unit as just one text among many, as captured by Diane's comment: 'If you want to do this, fine, I'm just a teacher… In fact, for my science test, I'm using the one from the book and supplementing with other stuff' (21 April 1997). This last comment indexes the team's disavowal of authority, and their separation of their teaching selves from their text-creating selves in this moment of positioning: even they did not subscribe to all of the unit's advice and material.

Our discourse is filled with varying degrees of 'otherness' and 'our-own-ness' (Bakhtin 1986); discourse itself is multi-voiced, or heteroglossic, in nature. Because of this, an individual's voice, or 'speaking consciousness' (Holquist and Emerson 1981: 434), always exists in relation to the other voices through which one positions oneself, and never as an isolated entity. The responsiveness, or multivocality, of a voice can be expressed along several different lines. Temporally, voices do not exist in the present, but in relation to known past voices and anticipated future voices: voices, like utterances, may be conceived of as a 'link in the chain of speech communion' (Bakhtin 1986: 84). This responsive, temporal relation is significant as we consider how Jackie and Diane and the curricula they develop are positioned historically with respect to familiar persons and, just as importantly, to the imagined future responses of these institutions and persons to their goals and developing identities.

In spatial terms, speech for Bakhtin is always 'addressed', whether to someone else or to oneself, and addressees can be either real or imagined audiences in more or less distant locations:

> This addressee can be an immediate participant–interlocutor in an everyday dialogue, a differentiated collective of specialists in some particular area of cultural communication, a more or less differentiated public, ethnic group, contemporaries, like-minded people, opponents and enemies, a subordinate, a superior, someone who is lower, higher, familiar, foreign, and so forth. And it can also be an indefinite, unconcretized *other*… (p. 95)

Although peer relations among teachers within the same school can be readily conceived as an important tension in reform, these physically present relations are only part of the story in understanding addressivity and response.

Jackie reflected on the presentation with her peers in a voice that a student might assume to reflect on a difficult examination: 'I remember us being extremely apprehensive about it. We wanted to make sure that we were well prepared and well versed in all situations.' Jackie further confirmed that part of her anxiety was that she was speaking to people with much more experience than she, teachers who had 'been teaching this particular unit for a long period of time and had a lot of experience—their filing cabinets filled with things that have worked for them'. Jackie's description of 'wanting to be well versed in all situations' for teachers in their audience who were more experienced, with 'filing cabinets filled with things', is a telling comparison. Although both point to the experienced individual, they also locate evidence of such experience or expertise in textual artifacts. Figuratively, Jackie and Diane present their notebook for assessment by a reluctant group of full filing cabinets.

### *Teaching, writing, and knowing simple machines*

In the following section we consider further how Jackie and Diane position themselves in social and textual relations by turning our attention to the unit as a construction of science pedagogy. In Jackie's and Diane's construction and presentation of the curriculum, they articulate their beliefs about science, pedagogy, and one another, and indicate ways in which such beliefs are co-articulated. The movement of their curriculum from hands-on experiences to authoritative texts and evaluation is a telling illustration of a contact zone where competing ideologies of science learning traffic with the voices of Jackie and Diane as they responsively present to their audiences.

The overall direction of the unit is from textual representations of the world, which students respond to in writing, to experience with the physical world, recorded by writing, to another round of text-based world-representations and writing. Within each stage, the writing is typically checked and evaluated. Part of the chapter on 'friction' in Jackie's and Diane's unit illustrates this movement. The unit opens with a borrowed workbook page that introduces friction through several images, such as hands rubbing together, an automobile tyre on the road, and an engine piston moving up and down. The worksheet asks students to identify, by marking with a checkmark or circle, situations in which friction is present to a greater or lesser degree. From these textual representations and recordings the 'simple machines' unit moves into two activities. In the first, the students experiment with the force needed to pull an object across different horizontal surfaces. A worksheet is provided along with the experiment, with designated categories of results and conclusions. The next activity is a worksheet on reducing friction, similar to the first, in which students follow given principles on friction reduction, identify images, and respond to hypothetical situations.

Some activities in the unit are more open than others; a tug-of-war follows the first activity, for example, and is represented as an experience in 'feeling friction'. Furthermore, in classroom practice, Jackie and Diane moved outside the textual authority they created in their unit; their classroom environments were on some occasions less structured than the text's representations. On one occasion, for example, Jackie had students bring into class assorted broken household appliances and toys to disassemble, in order to discover how simple machines were used within them. Students excitedly took apart clocks, a phonograph, a blow-dryer, and a video-game box, among other machines. However, during such relatively open activity Jackie was careful to cue the students toward the principles they had been learning in the unit. She was also very aware of how her own classroom practice 'text' must follow her lesson plan book, left open on the desk for the principal's potential spontaneous inspections. She commented on one occasion being concerned that if she extended an activity beyond an allotted time, and did not mark this change in her plan book, that she could be 'written up' for it.

Moreover, Jackie believed that culminating the children's activity with writing was necessary in the current school culture. Questioned about this practice, Jackie constructed an imaginary meeting with the parents of a student who was 'not meeting standards', a child who might need to be tested for learning disabilities:

> How am I going to go … and say, well, while Suzie was doing this, taking apart the fan, she didn't know how to use the screwdriver properly, she couldn't identify this part or that part, or when we were doing pulleys she didn't know the difference between a fixed pulley and a movable pulley and this is what I observed. I don't think that would be accepted. (14 May 1997)

Jackie discussed how the school culture, including administrators and other teachers, as well as the parents, expected a certain amount of paper-based work and, particularly, paper-based testing. She also recognized that these practices were not entirely externally enforced, relating that some of 'her own personal philosophy' would need to change before she would be comfortable without paper-based testing. Jackie's emphasis upon answer-based writing practices and evaluation paralleled her analysis of children's experience—these can be reduced (and hence evaluated) into a set of discrete skills, such as using the screwdriver and identifying parts.

In the unit, the continual examination of experience through writing is evidenced in how the students begin with the text as an authority about the world, respond to their personal experience with writing, and check this writing against textual authority. Texts and writing practices position students in relation to learning and knowing science. The science pedagogy in Jackie and Diane's unit, and in particular its relationship to writing and texts, indexes positions of authority similar to those evident in their relationship to their audience of peer teachers during this staff-development project. Writing serves first as a means of fixing experience. While experience with the world may be contingent, unpredictable, or even misdirected, texts are stable and authoritative frames through which to interpret experience. Writing is a means to construct and separate authority from a personal voice. Scientific success is constructed as a process of textual right answers and

correct recordings, best summarized through one of the summative assessments at the back of the unit: a notebook evaluation. By means of an evaluation sheet, the student's experiences with simple machines are assessed on the basis of whether the worksheets have been completely and 'properly' filled out, whether note-taking and drawing have been well-executed, and whether class time has been productive. The notebook stands for the student and his or her scientific experiences with the world. As a form that records productive work and appropriate conclusions, the notebook structures, focuses, and evaluates experience *as it should be*. The notebooks can be evaluated through a general rubric or frame, an expanded answer-key. As such, the notebook does not support the expression and development of an individual, personal voice in science, but of the individual student voice in performing and recording right behaviours. This purpose echoes Jackie and Diane's own relationship to their unit notebook.

In sum, Jackie and Diane's text-based practices in the classroom in science pedagogy appear to be re-articulated in relation to science, their peers, and their unit as a text in staff development. Across these contexts, writing is a means through which to depersonalize, fix, and evaluate experience. As a result of this process, writing in both contexts separates the personal, experiential voice from that of proper and correct scientific processes and results. However, from our perspective it would seem simplistic and misleading to posit that Jackie and Diane merely overlay a classroom pedagogical practice unto their staff-development relations, and particularly in their unstable positions as unit *authors*. Rather, as pedagogical and staff-development positions are articulated and refracted against one another, they become increasingly complex. Even while texts are used to fix and evaluate experience across these activities and positions, at particular moments, Jackie and Diane separate themselves from textual authority and even disavow their own authorship.

### Team two: Pam and Betty

*Co-articulations of self, science, development partner, and peer audience*

In the introduction to their co-authored kindergarten unit on water, Pam and Betty write: 'We want to encourage our students to look at the world around them and discover ideas, right or wrong'. This statement can be read in at least two ways. On the one hand, their goal may be to permit students to observe, experience, and discover ideas, *both* right *and* wrong. On the other hand, the statement can be interpreted that students are to observe, and then validate, whether they are right *or* wrong. The first meaning implies an openness to scientific experience that is exploratory in nature, whereas the second meaning suggests a push for the correct responses and evaluation evidenced in the work of Jackie and Diane. In the case of Pam and Betty, both contrasting readings of the text are supported throughout the unit; both agendas of student work in science figure prominently and contrast in surprising ways. The voices of openness and closure heard within Pam's and Betty's statement are not simply speaking about their relationship to science,

however, but also about their relationships to one another as well as to their larger peer audience.

In the following section, we focus initially upon Betty, and interpret how her openness and closure to the science, as a hybrid discourse, co-articulate with the discourse she uses to communicate with her peer audience. Next, we move to another 'layer' or perspective on complex positioning, illustrating how Pam responds not only to the science and to her peers, but also to her relationship to Betty as a staff-development partner. Finally, we suggest how Pam's and Betty's cross-interpretations of science pedagogy and peer relations create multiple tensions of openness and closure.

### *Betty's openness and closure to science and to her peers*

Betty's expressions of openness and closure to science can be heard within the overall structure of the unit. The 'water unit' is divided into chapters committed to specific topics for discovery, such as 'liquids' and 'sink and float'; 'free exploration' is also included as a separate chapter. As a hybrid, the unit has step-by-step sequencing of lesson plans on the one hand (even of 'free exploration') and plenty of prompting and encouragement toward an open, flexible time and goal structure on the other. A series of two unit-activities written by Betty is highly suggestive of a dual stance toward science and pedagogy. In one activity, the children simply make floating fruit sink by weighting them down with different objects. The activity has a game or play-like atmosphere, and emphasizes experience and open exploration. In contrast, the immediately preceding unit activity has:

> the students find out how many paper clips it takes to equal the weight of an apple. Then place the paper clips in water and have them predict what will happen and explain what they think happened discussing surface area.

This activity, or problem set, is obviously complex for kindergarten students, involving weight estimations, measurements, prediction, and the concepts of surface area to mass ratios and surface tension.

Betty describes her orientation to such complexity as emerging from her experiences with activity-based science:

> I've done these kinds of things with the kids before … and I worked with kids with water, and we did bubble things. The bubble thing is what floored me—they caught onto so much more than what I thought they would do, you know they caught onto so much more. (16 May 1997)

Betty is convinced that young children can handle complex material because she has observed them do it; in one instance, she compared how a high school student could not figure out the separation of oil and water 'but my kids understood it'. This practice of complex problem-solving and search for correct scientific answers, accompanied by talk of open play, exploration, and freedom, characterizes Betty's hybrid voice in regard to the science. Significantly, this dual approach has been shaped out of Betty's personal history with activity-based science, including a science camp (an earlier cousin of the current staff-development programme) with an intentional focus on open student discovery. However, it is important to remark that

while these discourses may seem sharply to contrast or embed opposing agendas, for Betty they appear to be highly coordinated and co-productive: 'open' discovery moves toward occasions of high conceptual complexity/learning, which in turn prompts more discovery.

A similar hybrid voice can be heard in Betty's relationship to her peer audience. In her presentation, Betty emphasizes open experiential 'play' with the water and materials: 'These are some of the nifty toys you can use with free exploration'. 'You can make the bubble blowers really fancy!' 'Go back and just have fun with it you guys!' Betty's enthusiasm is catching, expressed as a joyful excitement of sharing an abundance of materials to explore. At the same time, Betty remains at the centre of the presentation, frequently gives answers to the problems posed by the explorations, and thus brings conceptual closure: 'And the thing you discover is that no matter what object you make the bubble with, it will always come out round'. This closure is directed alternatively toward scientific and pedagogical knowledge. Betty's presentational voice is a bookmarked page of teaching how-to's (e.g. 'You must have newspapers in your classroom to clean up'). Betty even frequently suggests to the teachers how to say something, mirroring her practice of offering claims about the natural world: 'You just tell your partner, "Well, I'm going to start the free exploration now"'. Betty's following reflections on her classroom pedagogy are also highly relevant to her peer presentation style:

> I feel better if I see that they're actually understanding it; where if they're not understanding it, then I worry about it because I don't know what good it does, but if I see that they understand what we're doing, I feel, I feel like, you know, everybody's with me on it. (16 May 1997)

Betty imagines her work as an effort to guarantee that the teachers are, like her, understanding the unit, while enthused by it, to assure that her students are understanding and are fully engaged in the science. This perspective and set of goals correspond to Betty's self-construction as 'the science person' at her grade level. Betty's relation to her peers, in summary, is co-articulated with the (hybrid) discourses of her relation to science and to her students, with playful experience as an open vista on the one hand and the movement toward pre-established, authoritative answers to complex problems on the other.

### *Pam: Distinguishing her voice from Betty's*

Pam speaks about openness in ways similar to Betty—in terms of broadly exposing the children to materials and experiences. She places the greater availability of materials as a central issue in shifting all kindergarten science instruction to a hands-on basis, and is optimistic about such change, believing that the entire staff is already oriented in such a direction. However, Pam works both within the peer presentation of the unit and in her informal discussions of it to distance her own voice and approaches from Betty's. A brief summary of background information is critical here for broader understanding. While Betty is nearing the end of her teaching career, with 37 years

of experience (most in the current school), Pam has only been teaching for 8 years ('I've been teaching for 8 years, and Betty, 89'). More significantly, although Pam and Betty share a common wall between their classrooms, Pam was once Betty's student teacher. Pam's historical relationship to Betty, and her current explicit and implicit positioning with respect to her, illustrate how creating a voice and identity that are distinct and separate from Betty's is highly important to her.

The relationship among voice, positioning, and identity, as played out in what these teachers do and how they relate to each other, suggests it would be useful to apply a practice theory of identity in coming to understand their actions and how they represent themselves. Conceiving of positioning as part of a practice theory of identity helps us to make modest claims in two ways. First, we recognize that teachers, like other actors, are not constituting their subjectivities with entirely their own resources, but are rather drawing, relationally, upon cultural types, discourses, and artifacts that circulate across time and space. Second, the ethnographic perspective of practice theory also affords us a vantage point on how teachers are actively involved in their own positioning, and take up agency, however modestly, in shaping their senses of self.

During the course of a presentation to their peers, Pam notes at different occasions that the teachers do not have to strictly follow the unit, but can 'do it any way'. She emphasizes the 'free exploration' chapter of the unit over the others, believing that 'especially for kids of this age' this sort of open discovery-based learning is most important. On more than one occasion in their peer presentation, Pam publicly responds to Betty's move toward conceptual complexity with a comment about the flexibility, adaptability, and easy usability of the unit. At one point, Pam indirectly critiques Betty's experimental designs in the unit as too difficult: 'Now, I don't do the weight [process just described by Betty], I just did the sinking and floating, so it's however you want to do it' (21 April 1997). Pam shared with us that she thought that Betty's orientation toward more complex ideas could alienate some of the teachers, and so it was important to de-emphasize conceptual complexity. This value appears to function as a pedagogic principle for how Pam approaches her own students as well as the teachers. At the same time, Pam expresses this tension between conceptual openness and complexity/closure, between her voice and Betty's, as a productive difficulty in writing the unit, as potentially bringing a type of balance of perspectives to their work:

> In the writing, I think we complemented each other—she would get off on water displacement, and all these things that I don't think a kindergardner can, maybe, handle: terms, and stuff… When we were writing the unit, I'd say, I'd say, maybe, it's fine to put that in there as an extension, but not as something that all the kids are going to handle. She encouraged me to do a little bit more of that, and I encouraged her, maybe, to not to do quite as much, just to kind of balance it out. (16 May 1997)

Pam's interview statement can be read as an account of teamwork and complementarity. At the same time, it is also a story of how Pam's individual voice/identity on the team is necessary, a story more fully developed in ways discussed below.

In addition to the issue of overcomplexity, an issue of curricular content, Pam also interprets Betty's general approach to her peers as overly authoritative, and thus as a form of closure:

> She [Betty] is very much centred on what she's doing. She's got very specific ideas, is very straightforward about what needs to be done and how it needs to be done, where I'm more of, I guess, maybe a better listener, open to new ideas. I don't think she and I have all the answers, that's why I want to get more ideas and better ideas, if something works for one teacher, it's nice, I want to know about it, so I can be better, and I think maybe she's not quite as open as I am. (16 May 1997)

Note the important co-articulation in Pam's critique of being 'very much centred' and having 'very specific ideas'. Pam appears to interpret Betty's dogmatic means of communicating as coordinated with specifically defined, conceptually complex curricula. Whereas Pam reflected on the peer presentation as being too directive, and not permitting the teachers enough time to engage with the materials, Betty thought the presentation was 'about what [she] wanted to get done… What the teachers need to do is sit down and decide what they feel comfortable doing'.

In contrast to Betty, Pam imagines her identity as a listener as being partially characterized by admitting a lack of knowledge, an identity that she constructs as mediating between the unit and the on-going facilitation of her peers:

> I think people just look on her to the point where, that's Betty, and that's the way she is, and everyone knows how much or how little to take of what she says. You know, just her difference in presenting—I mean, you can tell, she's really dominating, but she—she's a great teacher. It's just, to be honest, I think if they have questions, I think they'll be more apt to come to me with things because I think maybe I'm a little better listener, or more open to, 'Well, I don't know for sure, why don't we try this?' and if they want to change something, I think, I'm a lot more open to, 'O.K., let's change something, that idea didn't work, it failed', where she maybe doesn't want to—ever want to admit something like that. (16 May 1997)

Note in this description that Pam is not standing outside the current situation, but is imagining future encounters and constructing two related roles and voices. She imagines first the generalized 'other', a teacher who knows 'the way' Betty 'is' and 'how much or how little to take'. Second, she imagines her own role as a listener and begins to give voice to possible responses: 'Well, I don't know for sure, why don't we try this?' Pam positions herself within the staff-development relation not only through her interpretation of Betty, but also through constructing peer readings of Betty.

However, as with Betty, Pam's voice is complex and cannot be read simply as a critique of Betty's relational control and conceptual closure. She also, by contrast, critiques Betty's experiential openness, especially as this applies to the messy, disorderly use of materials. At one point in the presentation, Betty sets out to demonstrate liquid mixtures in her classic playful-yet-ready-made style: 'You can make it a deal and say, "I want to see what water does, and now I want to try a little Karo syrup"'. Pam's response is, 'Well, let's just do something that's not too terrible to clean up'. Later, Betty

hesitates, but then is ready to make some bubbles for the teachers, and Pam responds, 'Oh, we've all made bubbles'. Still further along, Betty discusses making huge child-enveloping bubbles in the classroom, and Pam comments, 'Now you know why Betty's room is the worst one to clean up'. If Pam wanted to respond to Betty alone, it would be more likely that such comments could be given as private asides, or in a quiet, non-presentational manner. Here, however, it is evident that Pam is responding to her audience of peers as much as to Betty. With her 'We've all made…', and 'Now you all know…', Pam forms alignments with her peers that set her apart from Betty's way of (messier) working, while affirming the value of more controlled, orderly participation in teaching and learning the unit. Pam's closure and containment of material-based experience not only relate to a personal teaching style, but are a strategic position to keeping her peers open to using the unit. She expresses the belief that her peer teachers will be more open to change that involves less mess and less conceptual difficulty; in brief, that her own voice is an important mediator in the process of change.

### *Pedagogy, peers, and partners: cross-interpretations of one another's voices*

More than just providing a reading of the unit, this account suggests the reading of the unit that Pam and Betty are engaged in as writers and presenters as involving anticipation of the responses of their peer audience. However, in this case their positioning with respect to their peers is also articulated with their positioning with respect to one another. For example, as Pam shapes her voice and work for her audience, within this articulation is a response to how she imagines their common audience responding to Betty. Such 'triangular' interpretive positions are operative in both Pam's and Betty's voices. Furthermore, embedded within these relations are highly suggestive cross-interpretations, sharply contrasting understandings of one another's positions and audience relations.

This reading can perhaps best be illustrated by considering the writers' responses to one another's constructions of 'openness'. Whereas Betty speaks of openness as playful classroom experience and as an enthusiasm to engage in complex material, Pam critiques this voice as potentially closing off the interest and motivation of their peer audience. Whereas Betty imagines that hands-on science is a breezeway to pre-established responses to difficult questions, which she has ownership of as a 'science person', Pam positions against this authoritative discourse, imagining it to close off productive dialogue with her peers.

Conversely, Betty interprets Pam's privileging of less-guided student experience as not guaranteeing the learning of either students or teaching peers. It is a type of openness without purpose, a long question without response. In an interview Betty commented that Pam 'comes to everybody for ideas. She's very good—she doesn't do that too often'. The ethic implied in this statement, and in Betty's other discourse, is that although it is good to be open to ideas, being too open is being too unstructured within the teaching/facilitating relation, thus demonstrating a lack of authority. As a

further complexity of their voices, Betty appears to interpret Pam's more controlled and tidy sense of experience as less motivating to the peer audience, a type of closure that constrains her efforts to spontaneously construct 'hands-on demonstrations', a presentational genre itself that nicely captures Betty's own hybrid discourse.

In sum, although both teachers share goals of opening up the science and opening up staff development, they are likely to read one another's 'openness' as closing off peer relations, and potentially thwarting staff development. Thus, even if both Pam and Betty were to share identical understandings and values of openness to science, this story illustrates that their intersecting and conflicting positionings of themselves, their peers, and one another are central to understanding their staff-development discourses and activity.

### *Teaching practices, teacher-facilitator subjectivities, and science content*

In this form of staff development, curriculum is not produced and then sent off to an audience, a 'conduit theory' of communication.[5] Nor is curriculum simply developed in response to 'an audience' as an abstraction. Rather, curriculum development, like any communicative act, is responsive at every turn. Furthermore, curriculum is co-constructed with teaching and facilitator subjectivities, teaching practices, project goals, historical awarenesses and future anticipations of peer audiences, and cross-interpretations of development-team members.

Both sets of descriptions have suggested the ways in which teaching practices and curriculum are co-articulated with the teachers developing positions and subjectivities. With Jackie and Diane, their pedagogic practices of writing and assessment are reflected into the meanings of their unit as a project, their positions as presenters, and their struggle to both construct personal authority and disavow such authority by means of a text. In the case of Pam and Betty, specific issues germane to activity-based science teaching were illustrated, including Betty's move toward conceptual complexity and Pam's desires to retreat from conceptual goals while prompting 'orderly' experience. We maintain that these general and specific teaching practices are highly dialogic to the teams' voices and practices as staff developers.

At the same time, it is too simplistic to imagine that a person carries the same subjectivity and set of practices from one location to another—that these positions mirror one another. Rather, it is likely that a teacher's practices and voice are reconfigured in important, on-going ways as he or she constructs his or her identity and work as a staff developer, an argument supported by Vygotsky's (1978) notion of the transformation (and not simply the reproduction) of social meanings by individuals through internalization. The case of Jackie and Diane is suggestive of such reconfiguration. In the teams' understanding of their work and presentation, it is their writing and selves that are under examination by their peers. They are presenting a good notebook, like their own students, to teachers believed to have more authority. Within this set of relationships, and at this juncture, Jackie's and Diane's voices partially index those of their own students. Jackie's and Diane's story

suggests that it is not simply a 'role' that is partially reproduced and responded to in the subjectivity of the peer staff developer (e.g. a 4th-grade teacher responds to every audience like a group of 4th graders), but an entire learning context and set of voices, including those with authority and those without, the meanings of having knowledge and the meanings of lacking it.

Furthermore, in terms of the relations among peer facilitation, teaching practices, and goals of change, the stories prompt us to reconsider the meaning of hybrids in discourse (Bakhtin 1981, 1986) and in teaching practices (Cuban 1993) for different participants within staff development. Hybridization seems everywhere evident and to be a productive way of describing change in persons and practices. Partial assumption of new voices and practices, blended and mixed with more familiar forms, is an elegant way of understanding the incremental nature of change.

At the same time, it is important to consider for whom the described 'hybrid' appears as a hybrid, for whom contrasts and discontinuities are evident. The description of Betty illustrates this issue. Through the meanings Betty has made of activity-based science experiences, and her own history of schooling and training with them, she has come to believe that such work can and should move toward a high degree of conceptual complexity, and that scientific informational end-points are an important goal in the work. Betty constructs the openness of activity as leading toward the development and closure of concepts. In the development project, however, conceptual closure was de-emphasized and even critiqued. It is tempting for us to read Betty's beliefs and practices as a hybrid of old and new—as 'partial change'. However, for Betty, her work does not appear to be experienced as a tension or mixture, but as a coherent and relatively stable whole. While hybridity might tend to be associated with instability or partial change from a researcher's perspective, from the practice of a practitioner, hybrid practices and voices may be quite stable. In the context of these stabilities, practitioners might view a change process to have been completed, whereas outside facilitators may interpret such practices and subjectivities as unstable, mixed, or incoherent.

Although our discussion has focused upon responsive relationships among persons, embedded within these relationships are the subject-matter of science and accompanying ideologies about what science is and how it is best learned. The stories suggest ways in which the meaning of science learning and knowing, and its potential reform, are highly articulated with broad-based historical teaching practices, such as writing and evaluation in Jackie's and Diane's case, as well as with interpretations of former training, such as Betty's perspectives on the goals of openness, at least partially shaped through her experiences in a science camp. Furthermore, the meaning of science learning is responsive to teacher-facilitator constructions of their own positions (e.g. Pam's construction of authority in contrast to Betty's or Jackie's) and with interpretations of teamwork and possible peer response. The science of the reform effort cannot be removed, or even considered, apart from the human relationships and activity of reform in which it is embedded. From a Bakhtinian standpoint, the stories illustrate how contrasting, and even oppositional ideologies are indexed in the voices and discourses that the teacher facilitators take up. Although this reform effort

has a stated ideology concerning the nature and purpose of activity-based science, stated in grant documents and articulated in group meetings, more pertinent for research is situating and understanding the development of multiple, contrasting ideologies within this context.

Shotter's (1993: 49) discussion of a 'lived ideology' is provocative with respect to how subject-matter curriculum development is conceived of as an on-going response to interests, positions, and breakdown:

> Thus, as a resource to draw upon, a lived ideology exerts its influence at just at those dilemmatic moments of uncertainty in everyday human affairs when routine forms of coordination break down, and people must construct between themselves a new way of going on. It will determine the positions they put forward and the justifications they offer. Thus, while an intellectual ideology may provide the basis for the resolution of a final dilemma, a lived ideology provides all the resources for the struggle producing it.

The interpenetrations of science with the lived-experiences of teaching and facilitating are a richer vantage point to conceive of content reform and the ideologies that develop through it, than are idealized, 'intellectual ideologies', such as programmatic statements of goals and purposes. It is tempting in reform efforts to merge or confuse the two forms with one another, either in expectations for change or assessments of it. Furthermore, in the Heidegerrian tradition Shotter argues, along with Engeström (1993), that the moments of breakdown or rupture within the processes of change are fascinating portholes through which we may view the lived ideologies of reform, the kinds of ruptures and negotiations we have attempted to foreground in this paper.

### *Peer relations and teacher/facilitator subjectivities*

The importance of the teacher/facilitators' understandings of their relationships to their grade-level peers has also been illustrated in the stories. The development of the science curriculum units is responsive to the knowledge, expectations, and authority of grade-level peers. Other responsive audiences also enter into consideration. Jackie, for example, considers the response of parents and administrators to the construction of her unit and how the science work is assessed. Yet in both cases, the response of peer teachers seems dominant, for self-evident reasons. The anticipated response is not constructed simply as a concern for how the 'work' might be read by the peers, but for how they will interpret and accept 'me and my work', or a voice and its message. This responsiveness is directed both backward and forward in time, to historical understandings of the teachers' identities and authority among their peers as well as anticipations of their acceptance by them in future encounters. The stories have illustrated how diverse facilitator subjectivities are shaped by responsiveness to peer relations. Betty, for example, constructs her position and authority as a 'science person' for her grade level, whereas Jackie and Diane minimize and disavow their personal voices as staff developers.

Peer relationships and their histories should not only be imagined as a participating 'audience' for the reception of the materials, however. Rather,

Pam's and Betty's story illustrates the complex dynamic of peer relationships within the staff-development team itself. As Pam and Betty collaborate, they make concessions and negotiate their work with respect to one another. Here, however, we have suggested ways in which they construct and position their work and corresponding subjectivities with respect to one another as interpreted within the relationship to their peers. They interpret and critique one another by anticipating the interpretations and critiques of others. This cross-dynamic, or triangular, reading of self-partner-audience is significant for a perspective on the processes of the team's staff-development efforts and, equally, for understanding their personal constructions of voices/identities as staff developers. Pam, for example, constructs an image of her subjectivity as staff developer through a critical reading of Betty's subjectivity within the team's relationship and practices.

## Conclusions

*What positions do teachers assume as teacher-facilitators?*

The narratives presented in this paper provide a portrait of the responsive nature of teachers engaged in curriculum and staff development. The stories demonstrate ways in which the development of curriculum and the development of a teacher-facilitator subjectivity are in dialogue with one another. One type of positioning evident in the descriptions is the general and specific teaching practices and ideologies that shape the ways in which these teachers construct their work and roles as facilitators and leaders. In the first story, Jackie's and Diane's classroom practices and beliefs about writing and assessment have important effects on the ways in which they develop their curriculum, and particularly on how they understand their roles in staff development. In the second story, Pam and Betty's interpretations of the goals of activity-based science contrast in significant ways. These conflicts of interpretation, which are only partially explicit within their relationship, are complex; it would be a vast oversimplification to say that one teacher is more of an activity-based science teacher than the other. Rather, the teachers' practices and discussions of practices index quite different ideologies about the goals of activity-based science. These ideologies shape the dialogue between Pam and Betty, their partially conflicting goals in constructing curriculum for an audience, and the hybrid voices present within their written work and presentations.

Furthermore, although it is tempting to read the facilitator role as a type of mirroring of the teacher's role, where much of how the teacher teaches will be reproduced regardless of the audience, the descriptions of Jackie and Diane suggest that the dialogue between these roles is much richer than simple reflection. Rather, in Jackie's and Diane's story we have to look beyond the teaching role itself to the entire teaching context. Jackie and Diane not only borrow from their teaching practices (i.e. in writing and assessment) in constructing themselves as facilitators, they also are responsive to the roles of their own students, and appear to assume aspects of student subjectivities within the peer facilitator-peer relation.

In addition to their own teaching practices, ideologies, and contexts, the teachers are also responsive to many different audiences within their work. Within both teams, the constant voices of grade-level peers come into play, raising a range of anxieties and questions for the teacher-facilitators: What will the peers consider authoritative? What do they already know and do? What are their positions with respect to me (the teacher-facilitator) as a person and within my role? But other, more distant audiences enter into the dialogue as well—Jackie, for example, imagines a potential future conversation with a parent of a student ('Suzie') who is having trouble in her classroom. Of course, the teachers are also highly responsive to distant audiences in the very nature of their development work, which entails borrowing and redeveloping 'best ideas' produced in distant locations by unknown authors and packaged in guides and internet documents. On a micro and local level, perhaps the most intriguing responsivity to audience illustrated here through Pam's and Betty's story is partner-peer cross-interpretations. In each case, what becomes clear is that both curriculum development and the co-development of the self as facilitator are 'addressed' in Bakhtin's sense—that teachers are highly responsive to these audiences through the entire course of development.

### *Locating change: what develops?*

We have illustrated and argued thus far that understanding a teacher's classroom practices, relationships, and beliefs about science and institutions allows us a much better understanding of his or her work in curriculum and staff development as an act of responsive positioning. In one sense, the teacher-facilitator subjectivities we have explored are a unique configuration within a particular teacher-centred model of change, and it could be tempting to read this analysis as a discussion of the problems and potentials inherent in such a model. However, from another perspective, the present model simply heightens, and thus brings to light, the teacher-facilitator aspects of *all* teacher roles, and hence the inevitable multiple relations in which all teachers are engaged within movements of change. In this manner, we might rework our central question from 'How do teachers position their work and subjectivities as teacher-facilitators?' to 'How do the complex positions of teacher-facilitators inform researchers about teacher subjectivity and activity in any reform effort?'

All teachers select and develop their curricula for some audience; all teachers find themselves within complex relationships to other staff and students; and all teachers, even the most isolated, respond to these real and imagined audiences within the constructive act of classroom teaching/curriculum development. To teachers, this perspective is not particularly surprising. However, for researchers interested in promoting and researching school reform, understanding 'curriculum reform' (i.e. the change of an object), 'school reform' (i.e. the change of a system), and 'pedagogical reform' (i.e. the change of an activity) by way of the careful consideration of the on-going development of individual teachers—and their positioning and multiple relations with respect to several contexts—is a highly complex but needed task.

A teacher's 'modification' or accommodation of externally driven change is all too often seen as the corruption of a reform effort, as 'partial' change. Such views not only reveal inadequate theories of change, they also construct the teacher as a thoughtless and relationless appropriator of materials. He or she becomes a technician rather than the teacher-facilitator he or she always has been (Apple and Jungck 1990, Ball and Cohen 1996).

Whether we, as researchers, express surprise and disappointment at the shifts in reforms brought on by teachers 'incompletely' carrying them out within the limiting contexts of schooling, or whether we assume that such shifts, alterations, and ruptures are themselves the significant stories of change, reveals a good deal not only about where we locate change, but also about the roles we assign to teachers. Cuban (1993: 286) writes:

> [I]f the design for a change in pedagogy gets modified as teachers implement it in their classrooms, has the reform occurred? And whose perspective on the change counts more: the researcher's or the teacher's? Thus far, the answer has been clear: The researcher's view of change counts far more among policymakers than the teacher's view.

On the one hand, a relational perspective on change, with a firm focus upon the multiple voices that the teacher addresses in his or her work, can be a strong argument for the general conservative tendencies of education, a hermeneutic argument that traditions inhabit us, never permitting us to fully escape them (Gadamer 1994, Habermas 1990). Moreover, this stability can be located in the specific ways in which teachers reproduce the institutions they participate in, such as Jackie's and Diane's assessment and writing practices, or in the durability and authority of anticipated peer responses to possible change. On the other hand, such a view can support an argument for complex and long-term views of change, perspectives that do not divorce the development of curricular materials and institutional contexts from the concurrent development of individual persons. Furthermore, by better recognizing teachers' various voices within a relational theory of change we may be better able to understand the nature of the hybrid positions from which teachers speak, ask for whom such positions are hybrids, and conceive of how targeting disruptions to an entire institutional–material–personal system might promote change. Despite the overwhelming stability of most institutions, institutional structures do evolve, as do the individuals that construct them.

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## Notes

1. Background information on how teachers became involved in this initiative is available in Sinclair *et al.* (1997).

2. Names of schools and teachers in this paper are pseudonyms.
3. The study could be broadly described as a 'Phase 2' professional development study in which 'researchers study a single professional development program enacted by more than one facilitator at more than one site, exploring the relationships among facilitators, the professional development program, and teachers as learners' (Borko 2004: 4).
4. Also Voloshinov (1973).
5. Critiqued by Reddy (1993).

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