Hugh Mehan's *Learning Lessons* Reconsidered: On the Differences Between the Naturalistic and Critical Analysis of Classroom Discourse

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This article begins with a review of the place of Hugh Mehan's Learning Lessons *in the development of the naturalistic study of classroom discourse studies, and especially the sequential analysis of naturally occurring classroom discourse. It then turns to the emergence of an alternative program for classroom discourse studies, in the particulars of critical discourse analysis. There we find a "formal–analytic" program for discourse studies. The middle section of the article takes up the characterization and the differences between these two programs through a critique of formal—and critical—studies of classroom discourse. The article then concludes with an analysis of a fourth-grade lesson on fractions, to suggest what the sequential analysis of naturally occurring classroom discourse may tell us about the work of instruction in the early grades. My aim throughout is to reaffirm the premise and program of naturalistic inquiry as the central innovation of classroom studies in the last 30 years.*

KEYWORDS: classroom discourse, critical discourse analysis, ethnomethodology, naturalistic inquiry, sequential analysis.

This article was first prepared for a conference panel that returned to Hugh Mehan's *Learning Lessons* (1979a) to review and assess its place within the continuing development of what I want to call the "analytic culture" of classroom studies.[1] The culture I have in mind includes those studies broadly characterized as "qualitative," and classroom discourse studies in particular. They have been a major voice and transformative influence within the educational

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research community (and some of the most formative contributions were by members of the panel). The very notion of "discourse" has been taken up in new ways and found new expressions that have been transformative too. Beginning with Mehan's *Learning Lessons,* this article examines some of those transformations.

Characterizing change is a task that entails sketching a figure from the ground, and thus it calls for some sense of intellectual history. Educational studies have seen extraordinary changes in the last 30 years, changes in analytic cultures, topical formulations, cross-disciplinary influences, cultures of publication, and most especially in the lived experiences and analytic voices now found in the academy. We have witnessed the emergence of new "colleges" of thought, visible and invisible (Fleck, 1935/1979), yielding a methodological *heteroglossia* that is both unfinished and hopefully secure. Proposals for the naturalistic study of education's tasks and settings have been a principal site for these developments. And it is in the interests of an analytic heteroglossia that I think it may be productive to examine where we have come in matters of naturalistic classroom studies, for which *Learning Lessons* was a benchmark demonstration—and by no means the only demonstration—of how the naturalistic study of classroom discourse might be considered and what it might find.

Hugh Mehan's *Learning Lessons* both marked and expressed a new promise for classroom studies, and was largely received that way as well. Much as we see in the more recent influences of activity theory and discourses on the postmodern, the programmatic initiatives of *Learning Lessons* were quickly recognized, taken up, and extended by a larger community (cf. Bruner, 1986; Casson, 1988; Cazden, 1986; Erickson, 1986; Gilmore & Glatthorn, 1982; Green & Wallet, 1981; Newman, Griffin, & Cole, 1984; Wilkerson, 1982). Its topics, interests, and methods began appearing in the larger analytic community and were read as both an invitation to and confirmation of the promise of the naturalistic study of the everyday life of classrooms. It promised, and I think faithfully so, to begin dismantling the "black box" of classroom pedagogy that had been both the object and enabling premise of a prior generation of instructional research.

It was not that *Learning Lessons* (hereafter *LL*) was so utterly or shockingly new, as it was an articulate and careful extension of a map that others had been working on too (cf. Cazden, John, & Hymes, 1972; Cook-Gumperz, 1986; Erickson, 1975; Erickson & Shultz, 1978; Ervin-Tripp, 1972; Gumperz & Hymes, 1972; Heap, 1977; McDermott, Gospodinoff, & Aron, 1978; McHoul, 1978; Merritt, 1977; Mishler, 1979; Payne & Hustler, 1980, 1982; Schultz & Florio, 1979; Sinclair & Coulthard, 1975). It was a mapworks that suggested how we might have analytic use for the ethnographic profusion or "lived orderliness" of classroom lessons in their interactional detail. Rather than constructing analyses via nominal codes or stipulations to formal theories, *LL* was pointing to an orderliness of classroom lessons for which the participants themselves were actively engaged in producing their teaching and learning, its successes, failures, and relentless contingency, in full and public view,

and moreover and especially, in the interactional detail of what indeed they were saying and doing. Among other things, *LL* was pointing to a world where the first analysts on the scene had no professional credentials, but rather a practiced competence to their affairs, if only we could unravel the code. For educational studies, *LL* was an early initiative in the study of "situated action," though the phrase had not yet been widely announced in educational journals and would not be for another 10 years or so (Brown, Collins, & Duguid, 1989; Greeno, 1991; Lave & Wenger, 1991; Rogoff, 1990; Wertsch, 1991; but see Cook-Gumperz, 1977; Heap, 1977; and McHoul, 1978, for earlier formulations still).

The Relevance of the Disciplines

As with much, if not all, innovation in educational research, *LL* was reading into relevance work from elsewhere in the disciplines to bear on educational contexts and problems. This seems to be part of Education's station as a professional college. We can fairly say that educational research has traditionally borrowed its methods from the disciplines (from psychology, history, linguistics, anthropology, and sociology), and nowhere is this more so than in the movement toward "interpretative" studies (as the intellectual histories of the panel participants will also show). Mehan was working from prior studies that were distinctively sociological and ethnomethodological, and I want to briefly say something about them before returning to them in greater detail later.

Though our contemporary coolness toward history may have dulled our sense for it, scholarship has always been joined to personal histories and professional relations of mentoring. Mehan's curriculum developed in the context of his studies with the sociologist Aaron Cicourel, who was an early student and formulator of the sociology of "ethnomethodology."[2] Mehan was, as far as I can tell, party to a remarkable cohort of graduate students who found in Cicourel's mentorship access to an analytic program that was, and still is, distinctive for its insistence on the dissolution of the generative and hugely resilient binaries that have organized modern social science.

As a way of speaking of it, ethnomethodology (EM) was a program that set out to dissolve the analytic privilege of speaking authoritatively on behalf of a world that could not know its own affairs. The premise of modern social science has been that the order, meaning, and structure of ordinary worlds are fundamentally hidden from ordinary view. We find its summary expression in the familiar distinction between the formal structures of professional analysis, on the one hand, and the vernacular organizations of ethnographic worlds, on the other. Commonly known as the "macro-micro divide," this binary has animated countless treatments of how these two worlds are to be set into an ordered relationship, where the very terms of the question tend to foretell the resolution: Formal structure structures whatever sense ordinary worlds may have of themselves, and it then falls to formal analysis to see, as the natives cannot, what the real or greater order of their affairs may be. This charge—and its implicit competition with "the natives' point of view"—

has been perhaps the most stable maxim of social science and educational research as we know it (see Garfinkel, 1967; Sacks, 1992; Sharrock & Watson, 1988; and Zimmerman & Pollner, 1970, on the competition).

In its stead, EM pointed to local structures of practical action in everyday worlds. It re-sited the locus of social order from distal organizations of formal structure shaping action from afar to local orders of competent practice and practical reasoning, assembling order from within. Its earliest expression in educational studies may well have been the volume by Cicourel and his students, Mehan among them, *Language Use and School Performance* (1974). It was, and is, a penetrating collection of classroom studies, seldom seen or read today, that continues to show the purchase and relevance of the naturalistic study of "the routine grounds of everyday life" for understanding the institutional life of public schooling (see, e.g., MacKay's, 1974, demonstration of the impossibility of the claim of standardized tests to assess "proficiency"; *how* students parse a question is precisely what standardized tests cannot show).

A central and identifying interest for EM was in natural language use as the engine of order, meaning, and structure in everyday life (Garfinkel, 1967; Sacks, 1992; see also Bogen, 1999; Lynch, 1993; and Sharrock & Anderson, 1991, on EM's continuities with Wittgenstein's, 1958, natural language studies). It went looking for social order and structure as ordinary practical enactments, found them substantially in the production of naturally occurring discourse, and proposed a rigorously naturalistic program for studying them. Where others had found deficits of order and structure in ordinary worlds, and thus the authorization to fill in the missing grounds, EM found instead dense fields of discursive social action and took a disciplined interest in their constitutive organizations.

In the process, it was leveraging a program of naturalistic study from the promise of programmatic initiatives about the primacy of social worlds and their social construction (Berger & Luckmann, 1967; Schutz, 1964). And where Berger and Luckmann offered the provocative image of a world wherein we author our affairs but do not notice the authorship, EM was building material descriptions of what such authoring work looked like in actual cases. It was pointing to the intimate, reflexive relation of meaning and structure, finding its topics in the ignored orderliness of ordinary conversation, for example, as different from formal accounts of "language," "structure," or "function."

For Mehan, classrooms were places where we could take serious interest in how, indeed, ordinary worlds are set in place not from afar, as though distant hands were animating anonymous action, but locally, contextually, and interactionally. While constructivism has become a programmatic commonplace in much of the contemporary literature in educational studies, for some it has been an enduring technical interest, and *LL* was an early suggestion and demonstration of the possibility of describing the constructive exercise of classroom instruction in close, naturalistic detail. It was showing us the clock-works of "learning lessons" as a practical enactment, and this is what we found so exciting and instructive about it.

Competence, Interaction, and Sequential Organization

The analyses of *LL* entailed a reconceptualization of some very familiar professional analytic terms, most especially the notions "competence," "discourse," and "interaction" itself. The most analytically radical subtext may have been that these things were more than middle-level conceptualizations or professional ways of speaking. "Discourse" and "interaction" were to be appreciated instead as fields of ordinary social action—things said and done with a practiced discipline that were available to naturalistic inquiry and perhaps even revealing description. And "competence" was no longer to be understood as an evaluative metric for scaling. Mehan was proposing an understanding of "competence" that had no use for deficit models at all. Instead, and affiliating to Hymes's (1974) formulation of "communicative competence," this was an order of competence that referred the analyst not to "talents" or "abilities" but to an interactional competence—a competence of and to interaction—where the orderly production of classroom lessons was among its achievements. Competence was not then an invidious measure, but a competence *to* "the active modes of human production and construction, the concrete observable 'work' of people that assembles orderly social entities" (Mehan, 1979a, p. 130). Such an understanding entailed treating culture

> as intersubjective praxis (that is, human productive and comprehension practices) instead of either a subjective state or an objective thing. . . . Treating culture as human productive practices makes competence interactional in two senses of the term. One, it is the competence necessary for effective interaction. Two, it is the competence that is available *in* the interaction between participants. (Mehan, p. 130, italics added)

These things like competence and its interactional work—and they were "things" now, ordinary, vernacular things—were available for study precisely because they were themselves public fields of action. Interaction and discourse-in-interaction are public enactments. They are built for their inspection and co-construction by the parties who are so engaged in the work of achieving their common understanding, as in, for example, the practical intelligibilities of a lesson's question, or its answer. And these possibilities for treating classroom discourse and interaction as the practical work of a local cohort of participants substantially turned on bringing to bear a sequential analysis of the instructional discourses that Mehan found in his corpus of lessons in the early grades.

LL and the journal articles that accompanied it (e.g., Mehan, 1974, 1978, 1982) were an early introduction to classroom studies of an understanding of discourse and interaction as deeply sequential organizations. They produced some of the earliest demonstrations in classroom studies of the relevance of the studies of natural conversation produced by Sacks, Schegloff, and Jefferson (1974) and their students and colleagues (the corpus of conversational analytic studies is now large and diverse; see Atkinson & Heritage, 1984; Drew

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& Heritage, 1992; Schegloff, 1992; and Ten Have & Psathas, 1995, for reviews and collections). It was a distinctive reading of "discourse" and "interaction" that *LL* put into play for classroom studies, one that pointed to their temporal, sequential organizations for the analysis and description of the work of teaching and learning. In this light, the work of teaching and learning, as the orderliness of discourse-in-interaction, was to be seen as local, contingent, and achieved, and inseparable from its practiced, turn-by-turn production.

IRE Sequences

LL is perhaps most widely known for Mehan's detailing of the interactional organization of the Question with the Known Answer and the "IRE" sequences it produces. It was substantially a study of how teachers ask questions whose answers they already know, how such questions initiate remarkably regular interactional sequences of instruction, and how students learn to become proficient at jointly producing them, bringing into alignment both the normative and substantive tasks that any next teacher's question may present to them. The familiar life of such questions is nicely expressed in Mehan's (1979b) title "What Time Is It Denise?" and how we would hear the question if Denise were a first grader learning to tell time (and hear it differently, and expect different horizons for it, if she were a coworker or even a teenager coming home on a Saturday night). It will be considered more closely in a later section, but for now, some general remarks are in order.

Mehan's study examined how lessons are organized in the early grades. In his materials, and as found in a substantial body of work by others before and since, teachers do indeed, and often enough to hold our interest, produce their lessons in ways in which the question with the known answer is a central organizing resource (cf. Baker, 1992; Bellack, Kliebard, Hyman, & Smith, 1966; Cazden, 2001; Davies, 1983; Heap, 1985; Macbeth, 1991, 2000; McHoul, 1978; Merritt, 1977; Michaels, 1981; Payne & Hustler, 1980, 1982; Sinclair & Coulthard, 1975; Wells, 1993). Commonly known for the "IRE" sequences of "Initiation-Reply-Evaluation" that they initiate, questions with known answers are a venerable pedagogy for the teaching of novices. In its familiar form, the teacher asks a question whose answer she knows, a student replies in the next turn, and the teacher then remarks on the adequacy of the reply in the third turn.

Without question, there are other pedagogies-for-novices in the world; this is the central insight of studies in the anthropology of education that describe what could be strange or disinviting about classroom lessons for children who know their learning differently (cf. Au & Kawakami, 1994; Collins, 1989; Lave, 1984; Lee, 1995; Phillips, 1983; Rogoff, 1990). But *LL* was describing in interactional detail how these regular, familiar, and cohort-based organizations of classroom lessons were assembled by teachers and students alike, and assembled in such a way that they were, in the first instance, lessons in their own discursive construction. They were not only "lessons about," but virtual, praxiological curricula for *doing* them, for every student who did not

yet quite know how to do them. In the early grades, the very organization of instruction is the first curriculum in the room, from which it follows that social action and discourse-in-interaction are of a piece with the earliest instructional organization of the room.

Mehan's analyses were by no means normative, having little use for the "normative paradigm" (Wilson, 1970) of mainstream social science. But his settings—the lessons—were. Though these were classrooms of native and nonnative children (a circumstance already well known on the two coasts by the mid-1970s), and though they were instructed by a distinguished professor of education and language studies, the lessons *LL* examined were themselves quite ordinary and recognizable. They were the kinds of lessons whose organizations remind us that this is public schooling in the early grades. In my view, it was their very recognizability that incited interest. *LL* was recommending a program of analysis that had use for these most ordinary things in the life of classrooms. It was in this way a major installment on the promise of naturalistic studies of classrooms life, and it achieved what the very best ethnographic studies of familiar places achieve, namely, an analysis and description of ordinary worlds that then teaches us about their organizational life in ways we had not imagined. The analyses of *LL* were striking and instructive precisely because of our deep and taken-for-granted familiarity with the settings they brought into view and how we could then see and hear them differently.

Classroom Discourse and Classroom Discourse

As suggested above, the insights and analyses of *LL* were, in their time, very well received (e.g., see the reviews by Barr, 1980; Swidler, 1982; Tannen, 1981; see also the critical review by Heap, 1981). Their reception now, however, both as a body of findings and as an analytic program, seems decidedly more mixed. Shaped by a resurgence of theorizing as the central task of a research literature, and by the profound influence of the discourses that fall under the rubrics of the postmodern and critical theory, the very lessons that *LL* brought into view—lessons in the social organization of teaching and learning in the early grades—have become familiar objects of a power/knowledge critique, along with the settings they organize.[3]

Understanding the play of criticism in contemporary educational studies is central to a reading of where we are now in the naturalistic study of classroom life. Though *LL* was an early and innovative study of classroom discourse, "discourse" has since become a very different object of study in the literature. The difference is both striking and pervasive, and one often has to read closely to discover just which order of "discourse" is the interest of a classroom discourse study, and when. I want to pursue the differences with some care, to develop a reading of the alternative discourses that have emerged in classroom discourse studies.

We can usefully say that there are now two "discourses" at play in the literature of classroom discourse studies. And while we could imagine that

they are bringing kindred objects into alignment, this may not be so. The differences are profound, and that they share the term *discourse* can make it difficult to see between them. For that reason, I want to characterize the two programs of discourse analysis found in contemporary classroom studies, and speak of their differences programmatically and as a list of sorts. The first, as found in *LL* and the works that informed it, I want to call studies of "naturally occurring discourse" (NOD). The second, and more recent, expresses central themes and distinctions of a "critical" analytic program, annealing the works of Foucault and Gramsci in the particulars of "critical discourse analysis" (CDA). The phrase collects a large and growing corpus of studies for which power, ideology, and asymmetrical relations of power are among the central and identifying analytic formulations (cf. Chouliaraki & Fairclough, 1999; Clark & Ivanic, 1997; Corson, 1995; Fairclough, 1989, 1995a, 1995b; Freebody, Luke, & Gilbert, 1991; Gee, 1996; Gutierrez, 1994; Gutierrez & Larson, 1994; Gutierrez, Larson, & Kreuter, 1995; Lemke, 1995; Luke, 1994, 1997; Van Dijk, 1993; Young, 1992). CDA articulates a critical rethinking in the literature with respect to both the findings *and* the program of studies of NOD, and now has a secure place in the literature of educational studies. Using Fairclough (1989, 1995a, 1995b) as my central exemplar, I want to develop a reading of CDA and the differences between these two programs for classroom discourse studies as a collection of themes and their inflections upon them.[4]

Public and Hidden Order

The play of discourse in *LL* and the literatures that affiliate to it was an extension of the naturalistic and interpretative analytic programs that emerged in the 1950s and 1960s in sociology and language studies (cf. Blumer, 1969; Garfinkel, 1967; Goffman, 1969; Gumperz, 1971), and in the 1970s and 1980s in educational studies (cf. Cazden, John, & Hymes, 1972; Erickson, 1975; Jackson, 1968; Rist, 1970; Wolcott, 1967). Discourse, in classrooms and elsewhere, was a "natural" object first, a member's object and practice. It routinely referred to talk, or conversation, or talk-in-interaction on ordinary and actual occasions. NOD stood on behalf of an interest in "language-in-use" and in the order it displayed for those who used it. Indeed, a dissatisfaction with formal theory animated the move to naturalistic studies, a sense that ordinary worlds had been "taken for granted" by formal analysis as much as they had by ordinary members (see Cazden, 2001; Erickson, 1986; and Mehan, 1982, for instructive discussions of the dissatisfactions).

Most especially for *LL* and the sociologies it drew upon, NOD was striking for its profoundly public character. Rather than the hidden-from-view play of formal and/or theorized structure, NOD posed the study of a kind of social structure that was deeply public. It understood the constructive exercise whereby intersubjectively accountable worlds were assembled as the work of cultural members, undertaken in full and public view. The achievements of "common understanding" (Moerman & Sacks, 1971/1988) or of "intelligible actions performed on singular occasions" (Lynch & Bogen, 1996, p. 265)

were among the discursive organizations that studies of NOD aimed to bring into view, for the ways in which these were the practical enactments of ordinary members, encountering their "others" and their joint tasks in the full light of interaction. As Garfinkel and Sacks (1970) argued, the mastery of natural language *use,* meaning the organizations of discourse-in-interaction, was to be appreciated as the central mark of cultural membership.

Studies of NOD posited a world of public, inspectable meaning making as the site of order and structure in everyday life. Their premise was that ethnographic worlds owned and displayed a depth of order and structure that was available for naturalistic inquiry and description, and in their many iterations, studies of NOD set out to build those descriptions. They took interest in the discourse—the conversations—of ordinary lives, settings, and occasions for the ways in which order, meaning, and structure are assembled and achieved from *within* them, and in real time.

There is, then, and as of the public order of interaction, a realism attached to studies of NOD, one premised not in formal discourses on the "real" but rather grounded in the durable sense of real worldly affairs that we, as ordinary members, find in every next gesture. The realism implicit to *LL,* for example, was the realism that premises naturalistic observation itself—the practical realism of ordinary, evident worlds complete with truths, facts, and objectivities in abundance. Realism was not then simply a taken-for-granted by the professional analyst, but rather was a part of the fabric of the natural social worlds that naturalistic study aimed to describe. It was not a realism "slipped in," but one understood as the standing achievement of the constructive exercise (see Latour, 1988, p. 173, on how "a little relativism takes one away from realism; a lot brings one back").

Contrastively, the discourse that we find in critical discourse studies (CDA) is, by my account, and fairly so I think, a theoretical object first. It is part of the substantial move in educational studies to return theory to its station as the identifying narrative of a research community. I offer this assessment with some sense of irony, insofar as the signal call of the movement called the "postmodern" was the announced demise of master narrativity and the complexes of certainties that it entails (Lyotard, 1984). But the larger point is that for CDA, and across its many expressions, discourse is a formal-analytic object—"Discourse" with a capital "D" in Gee's (1996) discussion—conceptually assembled from the powerful literatures in critical theory and Foucauldian analyses of power, history and knowledge.[5] It is, then, in the first instance, a formal object of professional analysis rather than a vernacular practice of everyday life, containing within its very conceptualization an encompassing formal account of social order and its structures.

Though there are different formulations of CDA to account for (see Clark & Ivanic, 1997; Luke, 1997; and Van Dijk, 1993, for reviews), Foucault's archeological studies are a common resource across them. The order of "Discourse" Foucault introduced to the analytic community is a historiographic formulation, a way of speaking of the play of broad social-historical formations, largely out of view of the historical actors who alternatively deploy, enact,

and/or suffer them (Foucault, 1979, 1980). This formal-analytic Discourse is a heavily laden or sedimented object, and when it comes to bear on any actual occasion of social life or action, it does so as the play of unseen forces, formal and theoretic. Fairclough's (1989) account is emblematic. He understands the play of Discourse as that of structures of underlying conventions, ordered in and through relations of power:

> I regard these conventions as clustering in sets or networks which I call *orders of discourse,* a term used by Michel Foucault. These conventions and orders of discourse, moreover, embody particular ideologies. . . . The way in which orders of discourse are structured, and the ideologies which they embody, are determined by relationships of power in particular social institutions, and in the society as a whole. . . . The idea of 'power behind discourse' is that the whole social order of discourse is put together and held together as a hidden effect of power. (1989, pp. 28, 31, 55)[6]

In this, CDA is analytically quite normative, in the modern tradition of the analysis of "social facts," that is, facts of order, structure, and causation that are unavailable from the natives' point of view, and only available to professional disclosure (Durkheim, 1964). These are the tasks of a modern social science, and though distinctive in its critical-theoretic attachments, the formal and formative organizations that CDA brings into view (of power, knowledge, and the "reproduction of macro structure" [Fairclough, 1995a, p. 45]) tend to reinscribe the project. Said differently, whereas the move to naturalistic study in educational research was animated by a discovered appreciation for the local order of ethnographic worlds and what is durable, knowing, and instructive about them, the move to CDA inverts the ethnographic premise: For the critical analysis of Discourse, it is precisely what the natives do *not* know that organizes the analytic program.

These differences between NOD and CDA usefully express the tension between naturalistic study and theoretic study, as they do between analyses that would describe and those that would explain. The difference between explanation and description is central to Fairclough's (1989, 1995) critique of studies of naturally occurring discourse, and conversational analytic studies especially.[7]

> I am using the term 'descriptive' primarily to characterize approaches to discourse analysis whose goals are either non-explanatory or explanatory within 'local' limits, in contrast to the 'global' explanatory goals of critical discourse analysis. (1995, pp. 42–43)

Yet, the difference is also central to much of the postpositivist critique of the ambitions of positivist social science (cf. Kaufmann, 1958; Rorty, 1991; Winch, 1958). Explanations promise the analysis of causation, and the interpretive move in social science substantially began with a critical reappraisal of the very possibility of such a science of meaningful social worlds.

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In these ways, and though distinctive for how it does so, much of the critical discourse literature preserves the venerable "onion skin" image of social worlds, wherein we move from the outer shells of formal structure and historical determinations to interior fields of naive appearances and subjective states. Their formal relationships are set in play by the ways in which power and hegemony are concealed by technologies of consensus, for how they are insinuated into everyday life but unnoticed, for how "ideology is most effective when its workings are least visible" (Fairclough, 1989, p. 85). The very premise of concealment delivers at once the task and authorization of formal analysis: to assemble the gaze that can reveal what the natives do not see, and its formative place in their ordinary experience.

Further, once we stipulate that "ideology is pervasive in language" (Fairclough, 1989, p. 2), "Discourse" is understood as the formal governor of "discourse." It yields an analytic program in which the vernacular expressions of actual worlds are made out on behalf of autonomous structures. Thus, for Fairclough, "actual discourse is determined by socially constituted *orders of discourse,* sets of conventions associated with social institutions" (1989, p. 17). As Gee observes, "It is sometimes helpful to say that it is not individuals who speak and act, but rather that historically and socially defined Discourses speak to each other through individuals" (1996, p. 132). In this formative relationship between Discourse and any actual occasion of speaking, "discourse" (lowercase) is routinely in the service of "Discourse," and the first asymmetry on the scene is this theorized relation that is interior to CDA's program.[8]

In these organic and determining connections, ordinary worlds are understood as structure's venues, the sites where formal structure shapes common ground. It is a program to be appreciated for its analytic power, range, and attractiveness. Nothing evades its accounting; there is no ethnographic observation, no expression of naturally occurring discourse or activity that does not show the play of formal structure. "Discourses are ways of being in the world, or forms of life which integrate words, acts, values, beliefs, attitudes, and social identities, as well as gestures, glances, body positions, and clothes" (Gee, 1996, p. 127).

In this sense, I want to say that CDA is an aggressive analytic program, as were the formal modern programs that came before it. They leave no domain of social life unavailable to formal-analytic inquiry. There seem to be no limits to the territories they would order, and they are in these ways very grand narratives. Within this analytic program, naturally occurring discourse—as we find in *LL,* for example—becomes the occasion for demonstrating the practical purchase of theorized structure in ordinary experience.

False Consciousness

Critical Discourse studies thus tend to be marked by an abiding skepticism about what indeed the natives know, premised and assured by the invisibilities of power and formal structure (see Sharrock & Anderson, 1991, on social science as professional skepticism). One could fairly remark that it is a venerable,

if not pan-cultural, impulse to find in the "unseen" the genealogy of the merely witnessable. And whereas the analytically radical impulse of natural language studies was to find the locus of social order and meaning in the local organizations of everyday life—and even on their "surfaces"—CDA returns us (and the locus of order) to the structures, concealments, and even moral authority of formal analysis.

Furthermore, what indeed the natives *do* know of their affairs is rendered a perennial candidate for more and less explicit accounts of "false consciousness." The characterization has always, and necessarily, accompanied the critical theoretic impulse. The devalorization of not only traditionally privileged discourses, such as science, but of everyday discourses is unavoidably caught up in the stipulation to hegemonic organizations. As Hall observed of kindred developments in the Birmingham School of Cultural Studies, "The encounter between British cultural studies and Marxism . . . was located and sited in a necessary and prolonged and as yet unending contestation with the question of false consciousness" (1999, pp. 100–101).

Thus, when Fairclough turns to the question of what to make of "common sense" as the field of understandings one finds in naturally occurring discourse, he both turns to Garfinkel's formulation of the "familiar common sense world of everyday life" (1967) and rewrites the order of knowledge it expresses:

> The effectiveness of ideology depends to a considerable degree on it being merged with this common-sense background to discourse and other forms of social action. . . . 'Common sense' is substantially, though not entirely, *ideological* . . . ideological common sense as *common sense in the service of sustaining unequal relations of power.* (Fairclough, 1989, pp. 77, 84)

Finding in ideology the operations of a process of "naturalization" whereby common sense elides its ideological nature, a question and a conclusion unavoidably follow:

> Acknowledging the phenomenon of naturalization is tantamount to insisting upon a distinction between the superficial common-sense *appearances* of discourse and its underlying *essence*. But what then are we to make of the *explanations* people give, or can be persuaded by the analyst to give, of their own discourse practices? Explanation should be seen as *rationalizations* which cannot be taken at face value but are themselves in need of explanation. (1989, p. 92)

And further:

> To put the point more positively and more contentiously, the concept of ideology is essential for a scientific understanding of discourse, as opposed to a mode of understanding which emulates that of the partially unsighted discourse subject. (1995a, p. 45)

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If so, "rationalization" becomes a trump card for critical analysis, the rejoinder to which there is no rejoinder, but only "rationalizations all the way down." The privileging of formal analysis is then complete, and the lineage of this kind of analytic skepticism dates at least to Plato's allegory of the cave. It was these kinds of "totalizing" accounts that were the object of naturalistic critique, a critique, in Garfinkel's (1967) iteration, that had no use for understanding ordinary actors engaged in their practical tasks, settings, and occasions as "judgmental dopes" for the projections of formal theory (cf. Blumer, 1969; Garfinkel, 1967; Goffman, 1964; Schutz, 1964). Among other things, it was a critique of the certainty that ordinary persons—the natives, whether fifth graders or their teachers—could not usefully, competently, or instructably be in possession of their affairs, irrespective of how the estate of theory would know them. Where such certainties prevail, ordinary actors are unavoidably de-authorized from knowing their affairs, and a "deficit model" organizes our understanding of *their* understandings and actions.[9]

Analytic Registers

These programs for the analysis of "discourse" thus pursue brightly divergent paths, and the differences are further expressed in the kinds of analysis they propose for naturally occurring discourse. For analysts of natural conversation, their orientation to the sequential production of discourse in real time was animated throughout by a sociological interest in the constitutive powers and organizations of social action (cf. Garfinkel & Sacks, 1970; Heritage, 1984; Levinson, 1983; Sacks, 1992; Sacks, Schegloff, & Jefferson, 1974; Schegloff, 1992). The sequential analysis of naturally occurring discourse understands the routine organizations of social order, meaning, and structure that we find in everyday life as the achievements of vernacular and disciplined cultural practices. We find them wherever social members pursue their practical tasks on actual occasions. Thus, Mehan took interest in the "structuring of school structure" (1978) as a matter of the competent practices and orientations of students and teachers, and as their practical activity in the room. The very organizations of classroom lessons he found were in this sense locally and interactionally produced, and therefore contingent, practiced, and methodic.

Naturally occurring discourse is then understood and appreciated as a disciplined organization, an analytic organization without benefit of high credentials. The competence of those who produce it includes their sustained analysis and crafting of its turn-by-turn production, as they (and we) hear in its ongoing production—and reflexively produce—the developing intelligibilities of "talk in its course." The task of professional analysis is then one of building a description of the members' discursive practices as the first analytic practices on the scene, for which a brief example may be useful.

It was an early finding in the analysis of natural conversation that conversationalists produce and listen for the projectable completion of turns already under way. Any next turn will show in its production a first possible

point of completion and, should it continue, subsequent possible completions (Sacks, Schegloff, & Jefferson, 1974). NOD entails finely measured productions and hearings of this kind, such that when we find overlapping talk, where one person begins while another is still speaking, we will find it methodically placed in ways that show the overlapping speaker's analysis of the talk that is under way. The following example is lifted from a ninth-grade English class (see the Appendix for transcript notations).

```
sc3:1
((The teacher is giving the background to a story she is about to read.))
      229.  T: It's a private prep school, kay? (.h) An in it,
      230.  S:            // (                   )
      231.     (1.0)
      232.  S: (        )
      233.  T: in this piece' uv writing, he um:, describes a period of his
               life. =
      234.  S:                   // (     )
  →   235.  T: = Eddie, I want you to lissen really carefully, okay?
  →   236.  S:                        // I understan' really well. =
      237.  T: = Becuz thissus an example of a' goo:d (.h) well,
      238.     thissus' ah—thissus an example, I won't say how
      239.     good it is. . . .
```

The address to Eddie in line 235 seems motivated by the talk of lines 230, 232, and 234. It becomes a call for him to listen, and in the placement of his overlapping rejoinder in line 236, Eddie produces palpable evidence for the careful listening that has been called for: He begins his turn on the word "carefully," and overlaps the call for agreement that is tagged to the end of the teacher's turn ("okay?"). With his overlapping remarks, he virtually produces the agreement before it is called for; the placement of his overlap *shows* his careful listening. That is, he shows his listening *in* the placement of his remarks, and as their placement, he shows his analysis of the projectable course of the teacher's developing turn. The teacher then resumes without gap or overlap, resuming her address to everyone, while fitting the reason for her reproach to the lesson that is under way. The fluency of their exchange, complete with "precision timings" (Jefferson, 1973), conveys the sense in which I mean that competent practice and native analyses are at play in naturally occurring classroom discourse.[10]

The interest in NOD is thus an interest in the social organization of tasks, settings, and identities as they are produced and assembled in interaction. The sequential analysis of discourse points to social order, meaning, and structure as naturalistic and praxiological organizations, and, centrally, to naturally occurring discourse as a primordial site of social action and order (cf. Sacks, 1992; Schegloff, 1988, 1995, 1996). The interests for sequential analysis, and naturalistic inquiry, are in the affairs to which the parties themselves are "demonstrably oriented" (Sacks, Schegloff, & Jefferson, 1974), and in this, the analysis of NOD suspends the professional privilege of deciding in advance the relevancies of the field for the participants.

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Often we find CDA analyses in the company of real-time transcripts too, but the analysis is not then necessarily sequential, nor constitutively ethnographic. We often find something more akin to "content analysis," wherein the relevant contents (e.g., asymmetries of power) are found in the stations, identities, tasks, and words of, for example, students, teachers, doctors, patients, police, and witnesses (the examples are lifted from Fairclough, 1989). An ideal, egalitarian "speech situation" commonly anchors these analyses, wherein a first, virtual analysis of the idealized situation organizes the commentaries on actual ethnographic materials (see Fairclough's, 1989, and Young's, 1992, deployments of Habermas's, 1979, "Ideal Speech Situation"). In the virtual space of the ideal situation, the parties are relieved of invidious appointments, distinctions, or privileges, and in beginning with an idealized situation bereft of the identifying marks of actual tasks and occasions, the analyst is then free to appropriate the "value added" features that the idealized fiction has erased, as resources for assembling the analysis of the ethnographic materials. We can see something of how it works in the following example.

Fairclough reports an interaction between a doctor at a teaching hospital and a group of medical students in a premature baby ward. He offers it as an example of "the exercise of power in a type of 'face-to-face' discourse . . . what we might call an *unequal encounter*" (1989, pp. 43–44). The analysis thus begins, and is arguably achieved, in the very characterization of the scene, at least insofar as the analysis is motivated to demonstrate "techniques of control."

(1) Dr: and let's gather round . the first of the infants—now what I want you to do is to make a basic . neo-natal examination just as Dr Matthew's has to do as soon as a baby arrives in the ward . . . will you do that for me please . off you go
(2) S: well first of all I'm going to (   )
(3) Dr: [first . before you do that is do you wash your hands isn't it I . cos you've just been examining another baby. . . .

The transcript runs to 21 turns, of which only three are shown here. At its conclusion, the analysis begins:

> One immediate striking feature, marked by the square brackets, is the number of times the doctor interrupts the student. . . . [Five instances are noted.] I think he interrupts in order to *control* the contributions of the student—to stop him beginning the examination before washing his hands, to stop him repeating information or giving obvious or irrelevant information, to ensure the student gives the key information expected. . . . On the basis of examples of this sort, we can say that power in discourse is to do with powerful participants *controlling and constraining the contributions of non-powerful participants.* (Fairclough, 1989, pp. 45–46)

The analysis also takes note of the use of "negative questions" that call for agreement ("did we not . . . might we not . . . ") and "reduced question

forms" that sound "abrupt and curt," and, of particular interest to classroom contexts,

> the way in which student contributions are evaluated . . . positive and encouraging as they are, these are still techniques of control which would be regarded as presumptuous or arrogant if they were addressed to an equal or someone more powerful. (Fairclough, 1989, pp. 45–46)

That novice medical students would be told how to proceed in learning their medical practice seems to carry the burden of this analysis of "control." Thus, the asymmetry it points to is assured by the professional order of the workplace, including the order of its pedagogy. Yet the evidences for asymmetry in the naturally produced discourse (interruptions and questions that sound "curt") are entirely a matter of an overhearer's disengaged impressions and attributions. Though the analyst may conjecture about remarks that were controlling or arrogant, there is no evidence that the parties found them that way, where to so find them would lead us *into* the discourse, as a matter of its emergent production. But the transcript and the order of detail it records as a contingent and sequential organization are largely unexamined, and the analysis proceeds instead as a kind of moral categorization of utterances by terms that have been constructed elsewhere, whereby professional, organizational identities are rendered invidious ideological ones.[11]

At risk of belaboring the point, but in the hope of showing how CDA can lose and even misread the sequential order of naturally occurring discourse, a second example may be useful. Young (1992) provides the following analysis of a classroom science lesson (no grade level is indicated). It is offered as an example of a discourse organization called "guess what the teacher thinks":

> T: What happens to the air?
> P: It gets warm.
> T: Yes, it gets warm and what happens to it then?
> P: It rises.
> T: So what happens?
> ALL: Hot air rises!
> T: Right. So *our* conclusion is that hot air rises.

Of this exchange Young observes:

> Normally when a teacher ignores a pupil answer and recycles the question it indicates that the answer is wrong. The pupil who answered "It rises" was obviously correct, but the form was not canonical. When the question was recycled the whole class correctly intuited that the error was one of form, not substance. The teacher was then able to announce the conclusion as theirs. This is an instance of a general feature of the dominant pattern of classroom communication. (Young, 1992, p. 110)

Yet, the analysis mis-sights the exchange. The teacher has not marked "It rises" as incorrect; nor has she ignored it. "Unmarked" third turns—including those that pose next questions—are routinely affirming evaluations. Rather than ignoring, the teacher has shifted the structure of address from P to the cohort and is using the *correctness* of P's reply, and the prior one, as a resource for the cohort to recognize in both their correctness *and* the changed structure of address, the lesson formulation she is asking for now. In this kind of "telling order" (Morrison, 1980) a correct answer by one can become a resource for a correct reply by all (and, often enough, sequence closure; see Macbeth, 2000, p. 53, for a very similar organization).

In these examples, CDA tends to practice a normative social science, as an authorization to analyze ethnographic settings and the actual tasks and local organizations that lend them meaning, from elsewhere. We can fairly say Fairclough and Young are reading their topics "off the world," using ethnographic settings (and transcripts) as docile fields for writing formal analysis. In addition to the question of how these analyses have use for the situated order of naturally occurring discourse, ordinary worlds may pose additional problems when we set out to find in the material detail of inter-action the evidences of formal structure. The problem is not that we would not find structure, or power, in the classroom. For most children schooling is a mandate, and classrooms have their impositional orders. It is rather that disengaged versions of autonomous power obscure the structure and power that we may find there.[12] As Hustler and Payne observe, "members' own sense of social structure may not relate to the analytical distinctions . . . proposed by sociologists" (1982, p. 62). And as Bloome and Talwalkar point out in an otherwise appreciative review of Fairclough's corpus, "One cannot simply make a list of linguistic features and code a transcript to illuminate power relations" (1997, p. 108). To treat naturally occurring discourse as the expression of formal-analytic Discourse is to offer a decontextualized analysis in the name of contextualization, the relevant context here not being the engagements and orientations of the participants, but rather the analytic authority of a powerful literature. In this way, CDA tends to deliver a critical social commentary in the company of a normative analytic one.

As noted at the outset, though words, phrases, settings, and even literatures are shared between them, the analyses of NOD and those of CDA are fundamentally incommensurate programs. As Sharrock and Anderson understand it, these are differences "not between rival theories or hypotheses so much as between alternate 'modes of analysis'" (1987, p. 291). If so, this critical reading of critical discourse studies can be interpreted as an argument for analytic autonomy and restraint, recognizing that no single program can leverage every analytic problematic. When we render vernacular classroom tasks and discourse organizations as theory's articulations, we are sure to miss what indeed is vernacular about them. Though the spirit of this comparative account is not without its edge, its purpose has been to disentangle the pitfalls of reading the one (NOD) through the program of the other (CDA). Naturally occurring discourse shows an order of practice unavailable

to formal theory but distinctively available to the analysis of its sequential production, in situ. Such analyses will not answer critical-theoretic questions in formal-analytic terms, but those are not the only questions, or terms, for inquiry.

Questions With Known Answers

There is still a last piece to this comparative treatment, with respect to classroom studies. Classroom studies of naturally occurring discourse show an array of topics and interests, from classroom socialization and activity organization, to cross-cultural teaching contexts, to curricular studies (e.g., studies of literacy, math, and science). And a recurrent object of critique in these studies—whether of their findings, their methods, or both—has been the Question with the Known Answer and the three-turn sequence of IRE that *LL* and a corpus of studies before and since have detailed. This is the familiar order of cohort instruction or "teaching to the class," and it has become a regular topic of critical reanalysis (cf. Fairclough, 1989, 1995a; Gee, 1996; Gutierrez, 1994; Gutierrez & Larson, 1994; Lemke, 1995; Luke, 1997; Young, 1992).

In ways, the Question with the Known Answer affords a material basis for the critical analysis of ordinary classroom practices. It provides a point of "attachment" to ordinary worlds, where finding such places is central to CDA's program. Critical discourse promise to show how hegemonic structuring has been insinuated into the fabric of everyday life, or the "organized assemblage of meanings and practices . . . values and actions which are *lived*" (Apple, 1990, p. 5), and the Question with the Known Answer can look like such a place. Thus, Gutierrez and Larson (1994) find in classroom recitations—which are routinely the order of Questions with Known Answers and third-turn evaluations by the teacher—a "hegemonic discourse." Young finds in IRE sequences a process in which "the teacher *as* an authority on the subject matter is converted into being *in* authority not just over the conduct of the work of the classroom but over the subject matter" (1992, p. 111). And Mehan (1998) has recently expressed his own critical reappraisal of IRE sequences as "recitation scripts," in which students compliantly read the lines they have been assigned.

The Question with the Known Answer is also and immediately available as a "didactic" (Bruner, 1996), "banking" (Freire, 1970), or "acquisition" (Lave, 1990) model of instruction—a social technology for the transmission of "discrete and measurable units of information" from those who have it to those who do not (Poole, 1994, p. 125)—and is thus part of an informationalist pedagogy. In places, *LL* leaves itself open to such a reading. For example, in discussing the several "functions" of classroom interactional sequences, Mehan finds that "elicitations engage participants in the exchange of academic information about factual matters, opinions, interpretations, or the grounds of their reasoning" (1979a, p. 74). Similarly, in IRE sequences, "The teacher provides information to the students, elicits information from them and directs their actions" (1979a, p. 134). One can also find in *LL* a reliance on still other

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familiar analytic formalisms, as in the distinction between "form and content" (see chapter 4), whose formal relations are first cousins to those between "context and meaning" (and whose dissolution was effectively argued by Mishler's, 1979, account of the unity of "meaning-in-context"). We can find in these places and others a residual "informationalism," and having found it, shift the analytic focus away from a program of "constitutive ethnography," for how the sense and meaning of questions and answers are constituted in interaction, and to the play of the apparatus for handling information's conveyances, including critiques of its power, privileging, or control. In doing so, however, the criticisms will tend to preserve a residual informationalism too.

On the other hand, it may be useful to be reminded of the settings that the early studies of classroom discourse brought into view: cohort instruction in the early grades. It would not seem to be too great an analytic risk to stipulate to power differences between young children and their adult teachers. Surely there are, and for reasons that may have little to do with exogenous structures of power and far more to do with our cultural understandings of young children as social members. One could certainly propose to revise those terms, and such proposals are venerable: Rewriting our understandings of who children are and the worlds they occupy is a signal topic of Enlightenment modernism, from Rousseau, through Piaget, to *Sesame Street.* It is certainly an engaging project, and perhaps the larger difference for this article is then between programs of cultural reform and those that set out to describe and understand cultural practices, in situ.

In this light, the sequential organizations reported in studies of naturally occurring classroom discourse are neither transmission devices nor instructional models. They are rather descriptions of cultural practices, or the local, interactional organizations of lessons-in-their-course as the parties talk and work their way through them. Findings about Questions with Known Answers are part of a larger description of what can be called the first curriculum of classroom schooling, a curriculum in practical competencies and interactional organizations for producing novel ways of speaking, listening, acting, waiting, looking, and so forth, in concert. There was a play in the phrase "Learning Lessons," and the greater part of it was not that they were "learning their *lessons,*" but that they were learning how to *do* them. Learning how to do their lessons, and how they are regularly produced, was the curriculum that Mehan and others brought into view. When students turn to their lessons—really, meaning the formal curriculum of tasks, skills, and report cards—they leverage these first lessons in how indeed they can be done.

An Alternative Reading of the Question With the Known Answer

Though the Question with the Known Answer (hereafter QWKA) has become a familiar object in the literature and now a familiar object of criticism, and though on any given occasion we may have our dissatisfactions with it too, I want to suggest that it may also be an enormously useful, organizationally complex, and pedagogically powerful "language game." I want to offer some

reasons to figure that it does extraordinary work in the world, and why it is that those of us who are teachers or parents, or otherwise charged with the instruction of novices, might find it difficult to do our day's work without it. I want to characterize it in the following ways.

Far from being a mechanism or device for the transfer of information, classroom discourse and the QWKA are interactional organizations that are of a piece with the instructional field. The three-turn "IRE" sequence is a deeply constructive (or constitutive) exercise routinely deployed in the work of making "knowledge" public, witnessable, and observable from any chair in the room. Most especially I want to suggest that if one has the task of teaching those who profoundly do not know their curriculum, one must find a way of doing just that—making knowledge evident and visible—and that *this* task, distinctive to teaching and learning in the early grades, may have far more to do with the "persistence of recitation" (Hoetker & Ahlbrand, 1969) than any complicities in hegemonic formations. Whether or not our novitiate knowledge of this or that subject will ever become formal or conceptual or even informational, it will first be *demonstrable* knowledge, or knowledge joined to an evident field, for which the work of interaction, and specifically discourse-in-interaction, is perhaps the most evident field in the room (cf. Heap, 1985).

Elsewhere (Macbeth, 2000), I have spoken of classroom instruction as the work of "installing" knowledge in the room. The QWKA is a central resource for the installation. Its familiar three-turn organization is a constitutive field of action wherein lessons take shape as organizations of practical tasks, objects, and understandings that novices can find and do. I want to briefly describe two of its identifying features in classrooms, the first a rather global feature of what it means to do instruction this way, the other a more technical—but not only technical—feature of how it works across its familiar three turns.

Unavoidably, it seems, as a pedagogy for novices, classroom instruction organizes the room with the assurance that knowledge is already in place, and thus organizes the teaching and learning as a process of revealing it. By "revealing" I mean nothing so simple as a hunt for prizes in the garden, but rather a way of "looking and showing" that is deeply social and discursive and reflexively constitutive of what indeed is found. Rather than the revealing of a positive object, it is more nearly the revealing of a gestalt object, for which the QWKA and its sequences, especially for novices, organize both the ground and the figure it promises. Notwithstanding the wisdom of maxims such as "discovery learning," a curriculum for novices will have its normative bases; discovery itself presumes them. And while it may be an insightful conclusion to our adult inquiries, it would be difficult to organize a pedagogy for children on the understanding that "nothing is settled." In this sense, the assurance that knowledge is already in the room is genuine and leverages the work of showing it.

The work of these kinds of instructional sequences turns on the understanding that teachers already know the answers to their questions, and

students know this whether or not they themselves know the answer in its particulars. The constitutive powers of questions with known answers provide for a way of knowing that is locally warranted in the assurance that an adequate answer or account of whatever the task at hand may be will be shown. *That* it will is what is assured. How it is then built and shown is substantially the work of the three-turn sequence of Initiation-Response-Evaluation, and how the parties orient to these sequences across the contingencies of their interactional production.

In practice, each of the constituent actions of IRE sequences (the teacher's initiating question, the student's reply, and its evaluation by the teacher in the next turn) can be done in an indefinite number of ways, and one of the more delicate organizations has to do with the teacher's third-turn evaluation. As it figures into the materials presented below, a few general remarks are in order. As Mehan and others have observed, the three-turn sequence of IRE is composed of two sequences of adjacently paired turns: The teacher's initiation and the student's reply constitute a first pair of turns (IR), and the student's reply and the teacher's third-turn remarks constitute a next pair (RE). The order of adjacently paired turns is described in studies of the sequential production of natural conversation (see Sacks, 1992; Sacks, Schegloff, & Jefferson, 1974). Generally, the pair shows a first and a second "part"—such that in the presence of a first part (as in, for example, a question, greeting, or offer) a second is called for, and at times powerfully so (greetings, questions, and offers are difficult things to ignore).

One finding in the literature on natural conversation of particular relevance to the production of IRE sequences as adjacently paired turns is the notion of a "preference" organization across the paired turns, for how the second turn, in the presence of its first, is produced (see Heritage, 1984; and Levinson, 1983, on markedness; Pomerantz, 1984; Schegloff, Sacks, & Jefferson, 1977). Rather than a social-psychological account of what anyone might prefer, "preference" has to do with how alternative next-turn possibilities are differently produced and realized in discourse. It is a production account of the asymmetries of next-turn possibilities (Lerner, 1996) whereby conversationalists, *in* the production of their talk, show to one another its developing horizons. For example, in the presence of an offer (which can be accepted or declined), there is a "structure of preference" for an acceptance in the next turn, as there is for a second greeting in reply to a first greeting or an answer in next turn to a question. In terms of their sequential production, "preferred" next turns are routinely produced "on time," or within normal intraturn durations. Yet an offer may not find an acceptance in return, but if not, the rejection or demur tends to be produced in a regular and marked way too, namely: "Dispreferred" next turns are routinely delayed in their production. We routinely find a pause or other temporizing before we hear them, and that they are produced this way permits all parties to the scene to see and hear the developing course of, for example, an invitation that is about to be declined.

Turn transitions—where one turn ends and another begins, and the durations that are produced across them—are then places of important interactional

work wherein sequential horizons and projectable actions are foreshadowed, such that the parties can sometimes see through them to see the shape of next turns and, more important, what work they will likely do. Turn transitions are of a piece with the public orderliness of discourse and what it achieves, as we see in the teacher's third turn of IRE sequences. They also show the order of preference organization. Roughly, positive, affirming third-turn evaluations by the teacher are produced "on time," while negative evaluations, in their various forms, tend to be delayed in their production, where delays have their varieties too (see the discussion of line 47 below).

These third-turn organizations and orientations to how they are produced are central to the public character of classroom instruction. They produce instructional fields wherein the adequacy of a student's reply is first available not propositionally or informationally, but observationally and interactionally in the sequential production of the teacher's third turn, and for anyone who would be listening. For those students who do not already know it, they find the adequacy of a reply not only, or firstly, in what an answer says, but in the unfolding sequence of which it is a part. Students can *hear* the adequacy of replies *in* the production of teachers' third turns, and thus can know an adequate or failed reply without themselves knowing what a correct reply would be. For them, "correctness" is an interactional object first, and classroom discourse is usefully understood as a grammar of activity in and through which students can see and find the sense of their lesson in the detail of its discursive-interactional production.

An Exemplar

Having pursued this discussion as a matter of arguments and formal distinctions, I want to turn to a transcript of a brief sequence in a fourth-grade math lesson on fractions.[13] On the wisdom that examples are at least as useful as arguments, I want to offer an analysis of it as a course of instruction, and the formative place the sequential organization of the discourse holds within it. Math may be an especially useful place to look as it is there, if anywhere, that we might imagine that instruction is in the business of producing and conveying something like correct propositional or informational knowledge.[14] To foreshadow the conclusion, the knowledge—and competence—that both teacher and students rely upon in pursuing their lesson is not, in the first instance, mathematical, but rather knowledge of how their lessons are interactionally produced. In these materials, teaching-and-learning-fractions owes to their fluency with the QWKA and its allied sequences. And as we find them here, the discourse shows an organizational life more nuanced and complex than our familiar readings and critiques of these kinds of instructional sequences may suggest.

The sequence runs 53 lines across 15 turns by the teacher of various lengths, well over half of which (perhaps 9) are questions whose answers she knows. It is then a potentially rich sequence for seeing what work these

questions may be doing. We will pay particular attention to them, but not only to them. As with any occasion of naturally occurring interaction, multiple organizations and orientations are at play, and here they include, for example, the play of "party structure," or how the familiar order of the room shows an organization of two parties—the teacher and the cohort—and the alternation of the talk between them (cf. Heap, 1985; Macbeth, 1991; McHoul, 1978; Payne & Hustler, 1980). Party structure organizes cohort instruction and includes resources for deciding who among the class will speak their party's next turn. On any actual occasion, cohort organization is a delicate and changeable thing, as we see in these materials.

The work of party structure is alive in the teacher's first turn in line 24, where she "picks up" from her prior lesson and sets out to find a first respondent, and again in line 27, where she formulates a question whose answer she knows and nominates Mario to answer it. Note how Mario is found after a first solicitation to the cohort for self-nomination, how he is named in the last position of the turn that selects him, and also how, via that placement, everyone in the room has a warrant to listen to the turn-so-far (McHoul, 1978).

L5:1
(Near the beginning of the class. The teacher has "1/2" written on the board, and refers to it as she speaks. Students whose voices can be clearly differentiated are numbered consecutively S1, S2, and so forth. "Sm" indicates a chorus of voices.)

	24.	T:	Who remembers a fraction that equals one half.
	25.	T:	R'member we can make it do any:thing.
	26.		(3.0) ((soft chatter))
QWKA	27.		Whát do we do to make an equal frâction, Mario.
	28.		// ((upsurge in chatter))
	29.		(1.0)
	30.	T:	Who can help 'em ou:(t).
	31.		(4.0) ((chatter))
QWKA	32.	T:	Who can help him out wh' we have an e::qual fra:ction.
	33.		I need: to make this something else.
	34.	S1:	I know.
	35.	S:	[( )
	36.		(1.0)
	37.	S1:	I know.
	38.	T:	[(-) you're âlmost—(right)
	39.	S2:	// Ah ha, ha ha, look 'it he say it right here?
	40.	S:	// ( )
	41.	T:	// Shh:
	42.	S3:	Jus' take the two an tha one and see what makes them two?
QWKA	43.	T:	Kay. B' whut am I gonna dó ta' the two and tha one?
	44.	S:	Cha:nge them. =
	45.	S:	[( )
	46.	S4:	= Davíde it.
QWKA	47.	T:	I can daví:de it?
	48.	S5:	Time:s it.

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QWKA 49. T: Or I can tímes it.

QWKA 50.   By whát nûmber?

51. S5:   Two or one.

52. S: [One

QWKA 53. T: Two or one or ah' what?

54. S5:   Ah zzero (.) oh no ah' one.

55. Sm: // (   ) s Six or fifty. = ((overlapping chatter))

56. T: = Or ah' ssix (.) or ah' fifty:

57.   (1.0)

58. S5:   One hun:dred.

59. S: oh:-

60. T: N- or ah hún:dred. N-

61. S5:   // A thousand?

QWKA 62. T: Can I do this-

63.   (1.0) ((T. writes on the board.))

64.   E- hh thousand up hee:re an: two down here? (0.5)

65. S5:   Yá.

66. S: (No)

QWKA 67. T: [I can do that?

68. Sm: No:: =

QWKA 69. T: = Why can't I do that. =

70. S6:   = Hs- has to be (tha) ssame. (0.5)

71. T: Héy:.

72. S6:   Has t' be equal.

73. T: // Derrick.

74.   (0.7)

75.   It has t' be tha sa::me (0.3) nûm:ber.

76.   (1.0)

77.   tha same number, so give me âny number. . . .

For ease of discussion, I want to re-present the sequence in smaller fragments, and work through them to a collection of issues.

Fragment 1

QWKA 27.   Whát do we do to make an equal frâction, Mario.

28.   // ((upsurge in chatter))

29.   (1.0)

30. T: Who can help 'em ou:(t).

31.   (4.0) ((chatter))

QWKA 32. T: Who can help him out wh' we have an e::qual fra:ction.

33.   I need: to make this something else.

34. S1:   I know.

35. S: [(   )

36.   (1.0)

37. S1:   I know.

38. T: [(-) you're âlmost- (right)

39. S2:   // Ah ha, ha ha, look 'it he say it right here?

40. S: // (   )

41. T: // Shh:

42. S3:   Jus' take the two an tha one and see what makes
          them two?

QWKA 43. T: Kay. B' whut am I gonna dó ta' the two and tha one?

Having said something about what is orderly about Mario's nomination, I want to note that in his nominating turn, the teacher formulates what turns out to be the lesson: *Whát do we do to make an equal fraction. . . .* The answer is the object of their lesson, and if only as a reminder, it is their lesson because it is very likely that they do not yet know how to do it. Thus, her task, and theirs, is to leverage an answer and procedure into view, in and through the organization of their talking about it, and we want to look for how they do that in the sequential organization of their lesson-discourse.

A next observation is that while the question goes to Mario in line 27, it does not stay with him for long. Following a pause in line 29, it becomes a question for anyone to answer in line 30. McHoul (1978) finds a regular organization of student replies wherein, on hearing the question, the nominated student is entitled to a pause or delay before answering without risk of competition from other members of the cohort. As they develop, however, those pauses and delays can become understood in other ways as well, such as the nominated student did not hear or understand the question, or, having heard it, cannot reply. Apparently, across the duration of line 29, the latter is the teacher's surmise, and she turns the question to the entire cohort in line 30, seeking self-nominations again for someone who can answer the question and thereby "help Mario out."[15]

She does so twice, in lines 30 and 32, and in turning the question to the cohort, she is initiating other work as well. The work of turn transition includes the work of identifying whose next turn it will be, and in the question *Who can help him out* we have the initiation of a "pre" sequence for finding her. The first student who replies in line 37 orients to it in this way: He offers not an answer, but his candidacy for answering ("I know") (see Sacks, 1992; and Schegloff, 1980, on the varieties of pre sequences and the work they do).

We do not know what he knows, or with what resources the teacher makes her assessment in line 38 ("You're almost right"). Nor do we know why she quells the talking in line 41 ("Shh"). But in line 42, a different student self-nominates and offers a substantive answer to the question "what must we do to make this something else." For her, the "Shh" was distinctively heard as an occasion *to* speak, and though marked with the uncertainty of a question's intonation, *Jus' take the two an tha one and see what makes them two?* is a first candidate answer. Measured from the initiating question of line 27, and across its reformulation in line 32, we hear in this turn the "R" of the IRE sequence, and then hear the teacher's third-turn remarks in line 43: *Kay. B' whut am I gonna dó ta' the two and tha one?* The teacher both accepts the candidate answer with her "Kay" and finds in it grounds for formulating a next QWKA, this one vernacular too, about what math "doing" is to be done next.

We can note a couple of things about the teacher's third-turn remarks, none the least of which is that in no recognizable way are they a remark on the *correctness* of the student's tentative answer, but rather on its adequacy as a reply, for the practical, instructional, discursive purposes at hand. For the math of the matter, "Jus' take the two an tha one and see what makes them two?" is a bit of a puzzle, as the student's uncertainty allows. But third-turn

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evaluations are not simply matters of correctness. This one is part of a constructive exercise wherein the teacher has found in the reply both the discursive resources for posing a next question and the lesson-relevant resources for formulating a next task. Irrespective of the math of the reply, it yields a next curricular field for their collective operation, and is a helpful answer in that way.

> Fragment 2
> QWKA 43. T: Kay. B' whut am I gonna <u>d</u>ó ta' the two and tha one?
>   44. S: <u>Ch</u>a:nge them. =
>   45. S: [(   )
>   46. S4: = D<u>a</u>víde it.
> QWKA 47. T: I can daví:de it?
>   48. S5: <u>Ti</u>me:s it.
>   49. T: Or I can tímes it.
> QWKA 50.   By <u>wh</u>át <u>n</u>ûmber?

Line 43 is the next QWKA, and is heard by the cohort as addressed to everyone and thus available to whomever speaks first. A first student replies in 44, and a next in line 46, where the second is competitive with the first and placed without gap or overlap between them.[16] We thus have competing answers, where both are responsive to the question of what we will "do" with the numbers at hand, and where the second answers with a math-relevant formulation ("divide it") rather than a vernacular one ("change it"). We can fairly say the second student is finding math in the question, and both students can reasonably expect from their lessons learned about questions with known answers that evaluative remarks would be forthcoming in the teacher's next turn.

Yet while third-turn remarks by the teacher are usually in order in such places, and are usually heard as doing the work of evaluating student replies, and *are* so heard by these students, the teacher produces a turn in line 47 that, while oriented to the work of a third turn and produced to be heard that way, is organizationally more complex.

The question of line 47 ("I can divide it?") chooses between the competing answers and is thus a first remark on their usefulness. It is also a question whose answer the teacher knows, and thus it might be treated, analytically, as the initiation of a next IRE sequence. But in its placement, line 47 shows an orientation to the work of third-turn evaluations in the following way: As discussed above, negative or skeptical third-turn evaluations are routinely "marked" in their production by the teacher, where the most familiar markedness is a delay in either the turn's or the evaluation's production. In this they observe the "preference" organizations found across adjacently paired turns in ordinary conversation, and these delays are routinely heard as virtual harbingers of the (negative) evaluations they defer. In the particulars here, the question of line 47 addresses the reply of 46 ("Divide it") but delays the evaluation that is projectable for the sequence-so-far. The students (all students) then hear in the question, *as* a deferral of third-turn remarks, evidence of a

failed answer in line 46, and hear across the exchange a practical warrant for answering differently in line 48 ("Times it"). Though a QWKA, the work of the question of line 47 is produced by her and recognized by the students in its sequential placement, and in *this* placement it is heard within the normal order of third-turn remarks. What the teacher already knows of her question is thus shown by her and found by them in the developing sequential order of the discourse.

Further, and like her prior question (line 43), the teacher's orientation in asking this one ("I can divide it?") seems not to be a matter of soliciting or assessing correct replies, but rather a matter of showing or revealing the practical math that would be responsive to her question of line 27: "What do we do to make an equal fraction?" She is speaking to bring a practical procedure into view discursively, rather than mathematically, if only because the mathematical resources are precisely those that she is teaching, and they have not yet learned. I want to say she is using one competent hearing—the students' hearing of the sequential organization of third-turn remarks—to leverage another. More closely still, she is using their competent hearing of the placement of her question "I can divide it?" and how it offers up the asymmetrical pair of answers "yes" and "no" to bring into view a different pair and asymmetry between alternative mathematical operations—division and multiplication—for which the first of the pair ("Divide it") has already been produced. The hearable skepticism of her question in line 47 is not, then, a matter of mathematical correctness. For those who know the math, one could indeed divide both terms of a fraction to yield an equivalent value, and thus reasonably answer "yes." Rather, she is using the one hearing, about how this "yes/no" question works in this third-turn environment and the competence the students already possess to hear it, to show the other.

That it works this way can be heard in the student rejoinder of line 48: "Times it" is not an answer to the question "I can divide it?" It is rather an answer that "sees through" the question, to find the larger sequence in which the question is embedded, and on whose behalf it is working. The recognition it displays is not one of mathematical reasoning, but of practical discursive reasoning, about the grammars of practical action that IRE sequences set in place. Rather than consulting the math, the students are consulting the most evident, vivid, and palpable field at hand, the discursive field itself. For those who do not know their lessons already, they will find their curriculum in the lesson's practical enactment; for them, the "math" of their lesson is a discursive-interactional object first (cf. Macbeth, 2002). In this way, the reply of line 48 answers the question of line 43, and finds its third-position assessment in line 49.[17]

These are not matters of information transfer, and certainly not mathematical information transfers. They are matters of competent hearings of interactional structure and sequence as children come to know them in classrooms, in and through the discourse they produce there. As the sequence continues, the teacher shows again that she is not simply engaged in assessing correctness, but rather has other purposes, for which her central resource

is the routine grounds and orientations to IRE sequences themselves. She is working with the ordered possibilities alive in the discourse and its sequential, projectable horizons to enact ordered possibilities in the math too.

> Fragment 3
>
> | | | T: | Or I can tímes it. |
> |-------|-----|-----|---|
> | | 49. | T: | Or I can tímes it. |
> | QWKA | 50. | | By whát nûmber? |
> | | 51. | S5: | Two or one. |
> | | 52. | S: | [One |
> | QWKA | 53. | T: | Two or one or ah' what? |
> | → | 54. | S5: | Ah zzero (.) oh no ah' one. |
> | → | 55. | Sm: | // ( ) s Six or fifty. = ((overlapping chatter)) |
> | | 56. | T: | = Or ah' ssix (.) or ah' fifty: |
> | | 57. | | (1.0) |
> | → | 58. | S5: | One hun:dred. |
> | | 59. | S: | oh:- |
> | | 60. | T: | N- or ah hún:dred. N- |
> | → | 61. | S5: | // A thousand? |

In line 49, the teacher offers her third-position assessment, and (in the "Or . . . ") allows that "divide it" and "times it" are indeed both useful answers. She continues her turn to produce a next QWKA in line 50—*By whát nûmber?*—and receives an answer in line 51: *Two or one.* A familiar way of doing positive third-turn remarks is to repeat the answer offered, and the teacher does so in her next turn and continues with a next initiation as a "tagged" question: *Two or one or ah' what?* Though it has the tendentious mark of a QWKA, with the positive assessment in hand, the trailing question is not then a remark on the adequacy of the answers so far. But it is more than a question whose answer the teacher knows. The tagged "what?" instructs the students in the kind of answering that is relevant here, that there is more to it, but the more of it is not premised on a first failure. It instructs our hearing of the kind of question the question of line 50 was: that it was a question whose answer(s) is known, on the one hand, but admits of other answers, on the other, and is available to anyone *to* answer, as a matter of the party structure of the room. That the students have been so instructed, in both the character of the question and the possibilities for answering it, is progressively revealed over the next several turns.

The arrowed turns of transcript show the developing production of the students' answers. Many students are answering.

> | | | | |
> |-------|-----|-----|---|
> | QWKA | 53. | T: | Two or one or ah' what? |
> | → | 54. | S5: | Ah zzero (.) oh no ah' one. |
> | | 55. | Sm: | // ( ) s Six or fifty. = ((overlapping chatter)) |
> | | 56. | T: | = Or ah' ssix (.) or ah' fifty: |
> | | 57. | | (1.0) |
> | → | 58. | S5: | One hun:dred. |
> | | 59. | S: | oh:- |
> | | 60. | T: | N- or ah hún:dred. N- |
> | → | 61. | S5: | // A thousand? |

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The teacher picks them up in turn and repeats them, where doing so is the virtual work of evaluation, and each next answer and response seems to give the students, and S5 in particular, confidence to offer still another.

It is, however, a confidence marked with uncertainty too, and that it is is shows us how they are taking the measure of just what this question is about, and what kind of answering it entails. The issue of "kind" is an organizational matter, of how the answering will be organized and assessed. We could say the students begin producing a fourth-grade "random number generator" in their responses as they discover that "any answer" will do, especially the student identified as S5. Each answer shows a developing hearing of the question, as she and they discover a novel and forgiving answering field: Every answer and each number receive the teacher's affirmation. Though initiated by a QWKA, this appears to be a very different kind of knowing question, one that uncouples our normal expectation for QWKA-initiated sequences wherein any answer is exactly what will *not* do. We can say that the teacher has deployed what she and they know of the sequential organization and projectable horizons of QWKAs to produce one that unties its familiar practice.

Students are thus hearing in the teacher's remarks of line 53 onward both the open horizon of a question that owns no single answer and an open invitation to any member of the cohort to pursue it. In this way, the propositional work of the question is reflexively tied to its social, discursive organization. The question, substantively, is heard in and through the discursive organization for answering that it sets in play. We can say the question is *found* that way and is heard as a question calling for, and pointing to, an indefinite collection of apt, correct, relevant answers, by a cohort of entitled answerers, and this is what it receives across lines 54–61. The familiar order of the discourse is transformed in the multiple, overlapping answers by different self-nominating students, overlapping the teacher herself in line 61.

```
Fragment 4
QWKA  53.  T:   Two or one or ah' what?
→     54.  S5:  Ah zzero (.) oh no ah' one.
→     55.  Sm:     // (      ) s Six or fifty. = ((overlapping chatter))
      56.  T:   = Or ah' ssix (.) or ah' fifty:
      57.       (1.0)
→     58.  S5:  One hun:dred.
      59.  S:   oh:-
      60.  T:   N- or ah hún:dred. N-
→     61.  S5:                          // A thousand?
QWKA  62.  T:   Can I do this-
      63.       (1.0) ((T. writes on the board.))
      64.       E- hh thousand up hee:re an: two down here? (0.5)
      65.  S5:  Yá.
      66.  S:   (No)
QWKA  67.  T:   [ I can do that?
      68.  Sm:  No:: =
QWKA  69.  T:   = Why can't I do that. =
      70.  S6:  = Hs- has to be (tha) ssame. (0.5)
```

71.	T:	Héy:.
72.	S6:	Has t' be <u>e</u>qual.
73.	T:	// <u>D</u>errick.
74.		(0.7)
75.		It has t' be tha <u>sa</u>::me (0.3) <u>n</u>ûm:ber.
76.		(1.0)
→ 77.		tha same number, so give me <u>â</u>ny number. . . .

The overlap of line 61 is methodically placed at the first possible completion of the teacher's turn of line 60. We cannot know what the teacher was beginning to say with the "N–" (perhaps "Now"), but we can note that she cuts it off, permits the student's answer to proceed ("A thousand?"), and then immediately produces a next QWKA in line 62: *Can I do this-*.[18] She then multiples the numerator of the "1/2" that she had written on the board by a thousand, leaves the denominator unchanged, and finishes her question: *E- hh thousand up hee:re an: two down here?*

The question in line 62 turns the discourse to one for which there is indeed a normatively correct answer: to agree or disagree with the correctness of a mathematical move. We could say it is a discursive move to "regain control" in that it returns the class to the possibility of error or accountably correct answers and the kind of deliberate speaking that entails. The question is heard as a question for the last speaker, by her (S5) and by the cohort, and returns the lesson to the structure of teacher nomination and the familiar order of speaking, listening, and the rights and obligations thereto.

Whereas the question of line 53 had unhitched these normal turn-taking and answering practices, the question of line 62 reproduces them, and is quickly recognized as doing so. S5 answers, another student seems to answer to the contrary, and the teacher starts simultaneously in her third turn with a QWKA that is again projectable for a negative evaluation. In this case, however, and unlike the "I can divide it?" of line 47, the question of line 67— *I can do that?*—really is the harbinger of a negative evaluation, and in answering together in line 68, the cohort shows its recognition of how the teacher is speaking now and virtually does the evaluative work the teacher's question projects.[19] Their joint reply collaboratively reproduces the normal order of the room and shows us again how the QWKA and its three-turn sequences establish public fields, spectacles even, for producing the order of the lesson and its contents. Working from their answer, the teacher's latched third-position remarks in line 69 (produced without gap or overlap) both affirm their answer and pose a next question whose answer she knows.

Though we could say the teacher has regained "control" or returned to the normal order of speaking and listening, control is not her only project. The instruction is continuing. Latching to the cohort's response in line 69, the question *Why can't I do that* is itself latched by a student's direct answer in line 70 ("Has to be tha same"), which then receives the teacher's appreciative *Hey::* in 71, and the student's reformulation of his answer in line 72: *Has t' be equal*. In this way, the QWKA of line 50—"By what number?"—is worked

through consecutive sequences to a formulation of its answer: The "what" of "what number?" is the "same number."

In arriving at how we multiply both terms of a fraction by a same number to yield an equivalent fraction, the teacher has organized, and the class has formulated, the answer to the question of line 27: *Whât do we do to make an equal frâction, Mario.* It has long since not been Mario's question, and this is afforded by the party structure of cohort instruction. But the larger point is that in the organization of the discourse, and especially by the work of a series of QWKAs and the several kinds of sequentially ordered work they do, their lesson has been produced not by mathematical reasoning, but in and through their practical discursive reasoning, and centrally by what the students fluently know of how their lessons work.

"Any Number"

Perhaps the most engaging feature of this work of producing a math lesson for those who do not know it is the practical production of the mathematical object that we (and they, first) have just witnessed, namely, the production of "any number" as a math-relevant thing that the students can see and use. It shows itself in line 77, as the practical demonstration of what they now know of their lesson is about to begin: *so give me âny number.* . . . As an object, "any number" is a part of the mathematical field that the students must learn and know if they are to successfully navigate the math that is their lesson. And we might observe that "any number" is no simple thing. It is an object within the formal logic or culture of math, for those who have mastered it already, wherein we have mathematical operations and the fungible fields upon which they operate.

The demonstration will show the common use of "any number" in the operation of making equal fractions, and one cannot own the math of the lesson without seeing "any number" as a central object. It must be shown and taught as an evident and even palpable object, and thus available to fluent use by these novice students. But in these materials, at least, "any number" is not in the first instance a mathematical object at all, but rather a discursive one. *Any* number comes into view not by logic, information, or propositions about numbers, but rather as the vernacular practice of producing "any *answer*" (across lines 50–61) as a useful, correct, and acceptable reply to a question that is itself useful for those who do not know their lesson already. Said differently, "any number" is an enacted object first, and their discourse across the transcript shows us a virtual alchemy in which ordinary discursive organizations yield practical mathematical objects. In the detail of their instruction, and as matters of the naturally occurring discourse, we have a glimpse of the serious work and resources the QWKA affords for the teaching and learning of those who genuinely do not know their lessons. They only know how to *do* them, and that and how they do, and what orders of knowledge and competence they thereby achieve, are more than formal accounts of discourse with a capital "D" can say. We also begin to see the delicacy, range,

and complexity of knowing questions, a range far more extensive than familiar accounts of IRE sequences may suggest.

We might further observe how thoroughly ad hoc the teacher's task—and the lesson's course—has shown itself to be in these materials, and fairly wonder in what measure the practical enactment of classroom teaching and learning is the skillful, practiced production and shaping of an irremediably ad hoc exercise, notwithstanding the wisdoms of an immense literature on instructional plans, programs, and theories. That classroom teaching is relentlessly ad hoc should not be understood in opposition to more tidy formulations of professional practice. Instructional plans and curricular objectives are real enough. The greater point is that they owe their classroom lives to the practiced production and negotiation of the moment-to-moment possibilities that every next enactment of classroom teaching and learning assures. Thus, the ad hoc, rather than an oppositional formulation of professional practice, is its praxiological life. We might usefully suggest that the most professional among us are the finest navigators of the contingent horizons of classroom interaction as a field of action and instructional possibilities. More simply, neither we nor this teacher could have dreamed the course of her lesson as we find it here. And we find it for the public, witnessable ways in which they produced and found it too.

Conclusion

The analysis of this lesson is intended, in part, to show how the discourse cannot be disengaged from the lesson. The discourse, including questions with known answers in their various forms, brings curricular fields into view for children and affords them competent access to their lessons not as propositional structures, but actionable ones. In this light, "naturally occurring discourse" is neither a representational medium nor a device for information transfer. It is rather a demonstrable field of projectable action, to which, in the particulars of these materials, mathematical practices are being hitched. Through the discourse, the math of their lesson is "taken up" in the mereness of their talk together—as it must be for novices—and the QWKA is a substantial organizational resource for doing so. Note further that it is not a resource in some disengaged sense, but in precisely the ways in which these students know, recognize, and can produce the order of their tasks in concert, as fluently as the production of a next turn, on time. Thus, rather than detailing a medium of transmission or control, the sequential analysis of naturally occurring classroom discourse shows us the serious work of the socially constructive exercise in the education of young children, and how deeply and thoroughly collaborative—and competent—it is.

Having come this far, there is a further point on which these materials may offer some instruction on the differences between the naturalistic study of classroom discourse and the formal-analytic study of critical discourse structures. It has to do with a familiar topic of the postmodern critique of modernism, and that is the recurrence in the modernist analytic program of

structural binaries and oppositions (e.g., objectivity and subjectivity, structure and function, science and nonscience; see Cherryholmes, 1988; Denzin, 1997; and Tyler, 1987, for discussions). Their dissolutions have very much to do with the promise of a poststructuralism.

Binaries and oppositions make regular appearances in critical discourse studies, most commonly in reissuing the most venerable binary of them all: the divide between the "micro" and "macro," or the life worlds of ordinary actors, and the formal structures that set them in play. Ethnomethodology in particular recommends a different understanding of "structure" wherein the structure of social order is at once, or reflexively, the structuring of competent practices for assembling the order, meaning, and coherence of ordinary affairs. EM recommends an understanding of order and structure produced "from within" the practical contingencies of meaning making, as in the meaning of a question or reply, its local history, sequential implication, and the familiar worlds of tasks, occasions, and identities that meaning reflexively achieves. There is no deficit of structure in ethnographic worlds of naturally occurring discourse. But rather than the structure of historiographic formations or ideological expressions, we find the practical or praxiological structures of everyday life, locally assembled in vernacular practice.

In the measure, we find a dissolution of the kindred divides between order, structure, and meaning. The sequential analysis of classroom instruction shows these dissolutions well. Discourse-in-interaction is a constitutive field of sense and meaning, *and* order and structure. Our students find each in the presence of the other, as they assemble the interactional coherence of actual tasks, on actual occasions. In this way, and especially for novices, the interactional order of their lesson and its meaning as a curricular matter for whatever their lessons may be are densely "joined at the hip," and we may have in the material detail of our math lesson a suggestive exhibit of what this kind of structure, and poststructuralism, could mean.

An interest in questions with known answers and IRE sequences is not, then, an identifying interest of sequential analysis, though it is a common (mis)reading that studies of naturally occurring classroom discourse in some way recommend them. Questions with known answers figure into studies of classroom discourse not because of an attachment to a professional program of instruction, but because they are an organization we routinely find, and may well be the most familiar organizational enactment of classroom lessons to this day. No doubt there are others, as programs of cooperative learning and the like promise. They too will show their sequential, moment-to-moment organizations and orientations in fine detail, as they too encounter the problematics of teaching those who do not know their curriculum. We can look forward to those analyses as matters of naturally occurring classroom discourse as well. In every case, we can take interest in understanding how discourse-in-interaction leverages topics, contents, distinctions, procedures, *understanding,* and so forth into view for those who do not own them already. We may critique and/or theorize the solutions that teachers and students find for those tasks if we choose, but the tasks remain. For that reason, we can be

assured that however they manage their teaching and learning on actual occasions, it will continue to be instructive for us.

To return to the larger argument of the article, these kinds of findings about the work of teachers and students (they are findings about *their* findings) tend to be lost by analyses that treat classroom discourse as expressions of prevailing structures of power, Discourse, and their formal-analytic relations. When it comes to actual occasions, Critical Discourse Analysis tends to miss the work of classroom discourse in producing fields of meaning, order, and structure in discursive action. Instead, it finds other work and other, critical-theoretic fields. In appreciating the differences between them, we affirm the analytic heteroglossia that the program of naturalistic studies of classroom life—in its intellectual diversity—has labored to secure.

APPENDIX

Transcript Notations

Transcript notations are derived from the conventions developed by Sacks, Schegloff, and Jefferson (1974). The aim is to render the sequential production of interaction as it sounds. Punctuation marks note pace and intonation. The teacher is designated T. Student speakers are designated S. Students whose voices can be clearly differentiated are numbered consecutively (S1, S2, etc.). "Sm" indicates a chorus of voices. Pauses are noted in seconds, e.g., (2.5). Micro pauses are noted by a period (.).

___ Underlining shows emphasis or loudness.
* * Asterisk notes soft speaking.
- Hyphen indicates the point where a word is cut off in its production.
: Colon indicates a sound stretch on a word or word portion (e.g., "no::").
´ Accent indicates a rising intonation.
∧ Caret indicates a rise–fall contour.
// Double slash notes the point at which one speaker begins, overlapping with another.
= Equals sign notes speaker transition without gap or overlap.
[Left square bracket show two turns beginning simultaneously.
( ) Parentheses around a speaker's words indicate an uncertain hearing of what the speaker said. Empty parentheses indicate talk that could not be heard well enough to transcribe; the length of the empty space is measured to length of the turn.
(( )) Double parentheses mark off scenic descriptions and accounts.
→ Arrow indicates a line of particular interest in the discussion.

Notes

[1] The occasion was the April 2000 meeting of AERA in Seattle. In keeping with the program theme, the invited panel was titled: "Learning Lessons: What Have We Learned and How Have We Learned It." Participants included Courtney Cazden, Frederick Erickson, James Gee, and Carol Lee. Hugh Mehan served as discussant.

[2] Ethnomethodological studies are not a single program, though they show a common interest in describing the constitutive practices or "members' methods" for constructing familiar, competent worlds of everyday life. They tend to treat the notion of the "social con-

struction" as actual work in the world, and thus available to naturalistic inquiry and description (see Button, 1991; Heritage, 1984; Lynch, 1993; Maynard & Clayman, 1991; and Sharrock & Anderson, 1986, for discussions).

[3] It is the larger organization of cohort-based instruction—the signal innovation of modern pedagogy dating to the early 19th century (cf. Cuban, 1982; Hamilton, 1989; Hoetker & Ahlbrand, 1969; Hogan, 1990; Johnson, 1994)—that seems to be the object of critique, and not only for critical studies. Criticisms of "school learning" are commonplace in popular culture as well as the research literature, and professional programs for, say, small group instruction, cooperative learning, and individualized instruction offer their critiques of cohort instruction too.

[4] Fairclough's corpus is not only interested in classroom discourse; his critical discourse studies have addressed the media, advertising, and political and popular discourses as well. He has also furnished some of the formative discussions of critical discourse analysis as an analytic program, and for that reason serves as a point of reference for our discussion.

[5] "Formal-analytic" is a phrase of art in the ethnomethodological literature. It refers to social science analyses that find in ordinary worlds the operations of formal structures, functions, ideologies, epistemes, and so forth. Formal analysis resolves the indefinite array of ethnographic occasions, meanings, tasks, situations, identities, and practices into "synoptic" statements of formal structure (Sharrock & Watson, 1988; see also Button, 1991; Garfinkel, 1996; Lynch, 2000). Theorizing is its canonical practice.

[6] At the same time, however, Foucault has left us a rich and "polyvocal" corpus on the play of power and differentiation. Overwhelmingly, he draws the power of disciplining, individuating engines: the power to order, instruct, marshal, extract, know, and these things as part of the unremarkable operations of an epistemic regime. But as Ross (1995) observes, Foucault was not relieved of difference in his several formulations, and he speaks very differently at the end of chapter 2 of *Discipline and Punish:* "We must cease once and for all to describe the effects of power in negative terms: it 'excludes,' it 'represses,' it 'censors,' it 'abstracts,' it 'masks,' it 'conceals.' In fact power produces; it produces reality; it produces domains of objects and rituals of truth. The individual and the knowledge that may be gained of him belong to this production" (Foucault, 1979, p. 194). On the other hand, the passage immediately yields to chapter 3: "Panopticism."

[7] For pointed exchanges between the programs of conversational analysis and critical discourse analysis, see Schegloff (1998, 1999), Wetherell (1998), and Billig (1999).

[8] The asymmetry, however, is not simply deterministic; it also organizes the possibilities of resistance and transformative change: "It is sometimes argued that a Discourse perspective is deterministic, predestining people to success or failure. . . . Nothing could be further from the truth. The history of Discourse is a history of struggle, contestation and change" (Gee, 1996, p. 137; see also Fairclough on "Social Struggle in Discourse," 1989, pp. 68–73). It is these possibilities for resistance and counternarrative that set critical Discourse theory apart from its historical-material antecedents. However, the alignments of CDA within the contemporary literatures are complicated by tensions between neo-Marxist structuralisms and poststructural elements of the postmodern. In discussing the critics of critical discourse analysis, Fairclough finds them both among the "new right" and among those who study naturally occurring discourse, but reserves special mention for the poststructuralism of Lyotard and the pragmatism of Rorty. Of them all, the "more fundamental attack on ideology comes from post-structuralist and post-modernist theory" (1995a, p. 16; see also Chouliaraki & Fairclough, 1999, p. 33, on the implications of poststructuralism for critical theory's program and for science more generally).

[9] Note that Garfinkel, Schutz, et al. were not then arguing that ordinary actors "really really" know, or were theoretically sophisticated, "naturally" knowing, and so forth. Theirs were not heroic arguments. Rather, they were pointedly interested in how indeed the natives know, manage, and assemble their meaningful worlds and do so not as a matter of propositional contents, but as the work of producing whatever quiet agreements and common understandings yield their "worlds in common." They had no use for "false consciousness" or any of its derivatives, and had no quarrels with the natives as to whether or not they could know what they are up to (Garfinkel, 1967). Moerman articulates this alternative, nonskepticist sensibility: "To become familiar with a culture is to find no surprises

in it and to regard native explanations as analyses instead of data" (1969, p. 450; see also Mehan, 1979a, p. 175).

[10] We might also say that Eddie is "resisting" the teacher (both in the furtive talk and in his reply). In the vernacular, it is certainly a recognizable characterization. We could then theorize the word "resistance" and develop a formal account of their exchange. But such an account would tell us nothing of what, as a matter of practical discursive action, he is doing, or how. No one is required to take interest in the "how," but if we do, a formal analysis will tell us little about it.

[11] Robinson observes the same difficulty for Fairclough's analyses: "That the discourse analysts are prepared to make normative judgments about the texts they analyze is apparent from the negative, even condemnatory tone that accompanies some of their illustrative analyses. . . . What is less apparent is the normative theory that justifies these evaluations. What is the theory of power, or of education, that leads to the condemnation of, for example, interruptions, unequal participation, and the bureaucratic processing of individual? . . . Given the interest of discourse theorists in precise features of interaction, this gap in Fairclough's work is puzzling" (1995, pp. 112–113). Having fairly sighted the "gap," however, Robinson then offers to fill it with a "normative theory of power"—and a virtual structure of evaluative codes—that continues to reserve to the analyst the prerogative to say for the record what the occasion means for its participants.

[12] See Hustler and Payne (1982), Macbeth (1991), Payne and Hustler (1980), and Watson and Goulet (1998) for analyses of "power" as the parties find it in the course of their ordinary affairs. These are interactionally produced and managed asymmetries of tasks, rights, obligations, identities, and so forth rather than autonomous ones. They are local rather than global.

[13] The sequence was recorded in an urban elementary school of diverse native and immigrant children in San Francisco, served by a remarkable staff of dedicated teachers and administrators under the leadership of the school's principal, Judith Kell. The recording was part of a federally funded "Even Start" program. Judith Kell, the principal of the school, wrote the grant.

[14] I am trading on received cultural images of math as the "queen of the sciences" and thus a site of logical-propositional knowledge production and use, which it is. But studies of math and math education are respecifying what we mean by logic and propositional knowledge. They remind us that there is no relief from the social construction in matters of math too (cf. Ainley & Pratt, 2001; Ball, 1993; Cobb & Bauersfeld, 1995; Forman, 1989; Greeno, 1991; Livingston, 1987; Meira, 1998; Schoenfeld, 1998; Sfard, 2000; Sfard & McClain, 2002). Though math education is not the motivating interest of this article, the analysis of our lesson may have some relevance for those discussions.

[15] "Who can help him out" is transformative in a few ways. Not only is it a question whose answer the teacher does not know, it transforms the question, the sequence, and the kind of answering it calls for. The answer will be heard as part of an offer of assistance—and not only to Mario—for which judgments of correctness are not the only relevant ones.

[16] Line 45 cannot be heard, though its placement can. It starts simultaneously with the speaker of line 44 (noted by the left bracket) and suggests a shared orientation to the teacher's question.

[17] Turn locations are numbered in transcripts. Turn positions refer to places within a sequential organization. Thus, a "third-position remark" could be produced in the "nth" turn of a sequence, as we have here in line 49 (see Sacks, Schegloff, & Jefferson, 1974).

[18] In full, the teacher cuts her turn off twice in line 60, first in responding to line 58 and again as she is overlapped by line 61.

[19] The question "I can do that?" also sets in play a preference organization. It is a question that calls for an agreement in the next turn, to a disagreement, that is, an agreement to its hearable skepticism about S5's reply. Preference organizations across adjacently paired turns are part of what is hearably tendentious about QWKAs and their third-turn assessments. They are part of how students *find* the question and *hear* the assessment. Note also how "cohort replies" tend to do different things than replies by single students. Cohort replies tend to establish the consensual basis for next questions; they are "summative" in the sense of securing a consensus before proceeding to the uncertainties of next questions and answers.

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