

The Intertextual Objectification of Identity in Science Class

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This paper describes one way in which students can develop durable local identities in science classrooms. When students enter new classrooms or lab groups their identities are indeterminate, to varying degrees. Over time, however, students and teachers generally come to identify a given student in robust and predictable ways. The process of developing a stable local identity is intertextual. A more durable identity emerges across events, as signs of identity come to presuppose a consistent trajectory of identification that extends across events. The various trajectories of identification that an individual could have traveled normally get narrowed down, as events of identification become indexically linked along a more rigid trajectory. Such objectification of identity across a trajectory is only provisional, however, as aspects of identity can solidify and then change across events as well. This paper traces the social identification of one student across the course of a two month curriculum unit, showing how he developed a complex but robust identity across several weeks in a new lab group. The analysis first describes entextualization within classroom events, showing how the focal student was positioned in increasingly recognizable ways over a few minutes in one lab group activity. Then it traces the student's emerging trajectory across many such events, showing how his identity solidifies, and in some respects becomes fluid again, as he gets identified across events. The paper also shows how this solidification depends on conceptual and physical resources particular to science classrooms, including resources drawn from the curriculum. Thus the paper shows one way in which the objectification of academic subject matter and the objectification of classroom identities can interrelate, when the solidification of social identity is facilitated by academic resources.

"Objectification" in a broad sense occurs in all language use, both in its denotational and interactional functioning (Sapir, 1921; Silverstein, 1992). Sometimes "objectification" indexes more specific theoretical projects, like Marxist analyses of how capitalist exchange relations induce systematically distorted perceptions of both objects and people (e.g., Horkheimer & Adorno, 1947; Liechty, 2005; Lukács, 1922). In this paper I use "objectification" instead to index a shift in social scientific approaches, away from positing objects and toward positing processes as ontologically basic. Instead of proposing an object like "culture," "identity" or "mind" as an explanation for an observed regularity, social scientists have begun to analyze the processes through which such objects come into being and remain stable (e.g., Bickhard, 1994; Csordas, 1994).

This paper examines how the local social identity of one middle school science student emerges, solidifies, becomes fluid again and then re-forms over two months in a classroom. Like other apparently stable objects in the human world, "identities" exist only when people use various resources to stabilize them. The objectification of the student's social identity happens as predictable models of identity come consistently to be presupposed for him, but this process involves more than just the habitual application of stable social models. The analysis shows how the objectification of identity is complex: more than one type of objectification, and heterogeneous resources, all make essential contributions. I focus on two interrelated types of objectification that occur in this and similar cases, one that takes place within events of identification and the other across such events. The paper illustrates both these types of objectification and shows how they interrelate. In addition, the paper describes how resources from the physical environment and the science curriculum contribute to the student's emerging identity.

Entextualization within Events

Normally, some category or categories of social identity come consistently to apply to a student in a classroom, such that people can reliably identify that student as being a certain kind of person. Participants and analysts have proposed various types of objects to explain how this occurs. Some argue that individuals have psychological attributes that explain the identities they acquire in classrooms. Teachers and students might identify Johnny as a "nerd" because he has a certain personality. Some argue that societies have categories of identity which they impose on individuals, often because of the individual's demographic location. Teachers and students might identify Johnny as "learning disabled" because the society expects some students to occupy this category and people like Johnny are often labeled this way. Others argue that language labels students. Linguistic markers reliably indicate demographic location, and students are identified because of the way they speak. Teachers and students might identify Johnny as "limited" because his speech sounds "wrong" or "uncultured."

All of these explanations have some truth. People do have stable tendencies as individuals, societies do have readily available categories of identity and habitual ways of using language are routinely interpreted as predictable indicators of identity. In everyday life we commonly accept one or another of these accounts when identifying someone. From an analytic point of view, however, allegedly stable psychological, social and linguistic objects do not suffice to explain identification in practice. As Garfinkel (1967), Goffman (1981), Silverstein (1992) and others have pointed out, people are often identified in ways that violate what one would expect, if one inferred from personality,

social categories and/or linguistic regularities. Nerds sometimes get identified as "cool," students from traditionally disenfranchised groups sometimes get identified as promising and students who talk in non-standard ways sometimes get identified as exemplary. In practice, social identification is an accomplishment that cannot be explained solely with reference to psychological, social or linguistic objects.

Silverstein (1992; 1993) and Silverstein and Urban (1996) offer a more complex account of how signs of identity come to have both expected and unexpected meaning. Their account of "entextualization" can be used to explain how speech comes to identify individuals in practice, in a setting like a classroom. The linguistic and non-linguistic signs that we take as indications of social identity do not rigidly index a given identity. They only come to have more definite meaning over the course of a discursive interaction, as subsequent signs recontextualize or reinforce earlier ones. Someone may have been calling Johnny a "dork" because he is a nerd, but that person may also have been joking, or s/he may even have been trying to break into a high status group by establishing a teasing relationship with someone who is obviously not a nerd. Participants and analysts only know what the sign "dork" meant over time, as subsequent signs come to presuppose one or another of these interpretations. These subsequent signs coalesce into what Silverstein (1992), following Jakobson (1960), calls a "poetic structure" of mutually presupposing indexical signs that collectively lead participants and analysts to infer how they have been identifying the individual.

In a classroom, then, we cannot assume that students with characteristic personalities, or from certain social backgrounds or who speak distinctively will inevitably be identified in typical ways. Nor can we assume that use of a given sign of

identity necessarily has one predictable meaning. We must instead investigate how students get identified as events of identification unfold, as signs of identity come to have more definite meaning in the context of subsequent, mutually contextualizing signs. The process of entextualization, thus understood, describes event-level "objectification." Across the course of an unfolding event a student who might have been identified in various ways comes to be identified in some more definite way. His or her identity becomes more durable and object-like, as various signs accumulate in a mutually-presupposing configuration that comes to establish a more definite identity over the course of the discursive interaction.

"The Grab" on February 27

Consider the following example of entextualization. The focal student is "Philip," an African American middle school student who has recently been moved to a new lab group in science class, in a diverse suburban school district in the U.S. The other group members are "Gloria," "Natalie" and "Sean." Gloria and Natalie are Latinas, and Sean is Anglo. Before Philip was moved into their group, Gloria, Natalie and Sean had established expectations about who would play various roles in the group—who would serve as the group's spokesperson with the teacher, who would manipulate the lab apparatus, who would accept others' answers and who would insist on doing things him or herself, and so on. The arrival of Philip in the group potentially changed these expectations about students' local identities. The other group members knew some things about Philip: he cared about science and he worked hard in school; he volunteered answers to the teacher's questions, and the teacher treated him as if he understood

science; he had been teased for these behaviors by some other students in the class. But they did not yet know how he would behave in their group or how they would treat him. Early in their time together as a group, his local identity solidified within events as certain signs of identity came clearly to presuppose something about who he was as a group member, a student and a peer.

Philip changed groups on February 13. The following interaction happened on February 27. As was typical for this class, students had listened to a lecture from the teacher about relevant subject matter, then to her description of how they were to do the lab. The following transcript begins with the teacher asking students to start the lab activity.

- T: When you have done both of those ↑thi:↓ngs (.), raise your hand, and I'll come around and check it. [Then you can get ↓started.]
[((S, G, and P all raise their hands, one following the other))]
- 5 S: (X Excuse me. X)
 ?:: You're supposed to put zero with the paper towel on ↑it? =
 T: =Yes.
(6.0) ((other students talking in the background))
((P picks up the paper towel then puts it back down))
- 10 S: Ah, might not work [right.]
 G: [Plea:se.]
 P: Might work.
 S: It [says]
 P: [That's weird. It says negative XX]
((T comes to the table. P's hand is still raised))
((Gloria zeroes the scale herself))
- 15 P: Wait. (3.0)
 P: Now, we should let-
 T: [K-]
[((T moves away from the table. P's hand is still raised.))]
- 20 (.)
[((P takes the paper towel off of the scale))]
 S: [No::: =]
 G: =What are you ↑do:ing?
 P: We should let (.) we should let it finish, [then (X X X)=]
 25 *[((P puts the paper towel back on the scale))]*
 G: =You stupid re:tard.
[((G reaches toward the scale with one hand. P grabs her hand. G reaches with her other hand. P blocks her with his hand and arm.))]

30 P: [I need that. Stop.]
 S: [Push ze:ro.] =
 [((*P zeroes the scale. G tries to twist her hand out of P's grasp.*))]
 P: =[Let me (.) let me figure it out first.]
 G: [Let go (.) let go of my fucking hand.]
 ((*G pulls her hand away*))
 35 P: (Damn.) I wasn't (.) I wasn't holding your
 hand, idiot. [You] were holding my thumb.=
 G: [↑ What?] ↓Shoot.

At the beginning of this lab activity, the group members do not know how they will position themselves and each other. Because of the social and physical organization of the classroom, some member(s) of the group must interact with the teacher—responding when she expects a response from the group, going to the front of the room to collect materials and asking her questions on behalf of the group. Because the lab apparatus permits only one person to manipulate it at any given moment, some member(s) of the group will have to do the actions required in the lab, while others will sit back and complete the worksheet based on the results others obtain. Since Philip is new to the group, they do not yet know whether he will want to be the conduit to the teacher and the person to manipulate the apparatus, and, if he does, they do not yet know whether Gloria, Natalie and Sean will allow this.

At line 2, Sean, Gloria and Philip all raise their hands in response to the teacher's request. Philip does so only after noticing that the others have raised their hands. With this act, all three students are positioning themselves as potentially the group's conduit to the teacher. At line 8, Philip lifts up the paper towel sitting on top of the scale. Both Sean and Gloria react immediately at lines 9-10, apparently discouraging Philip from touching the apparatus, and Philip puts the paper towel back on the scale. At line 13 Philip says "it says negative." He is puzzled because, with the paper towel removed, the electronic scale registered a negative number as the weight. (This happened because the

scale had been zeroed with the paper towel on top). At line 15 Gloria leans in and pushes a button on the scale, zeroing it herself now that Philip has put the paper towel back on top. Philip says "wait" and then at line 21 takes the paper towel back off the scale. His intentions are unclear here. It could be that he does not understand Gloria has just zeroed the scale and prepared them for the subsequent task. It could be that he does not want to let Gloria be the one to zero the scale, but instead wants to do it himself. The most likely interpretation, in my opinion, is that he was puzzled by the negative reading that had appeared before and wants to understand why that happened.

Whatever Philip's intentions, Sean and Gloria react as if he is disrupting the group's activity at lines 22-23. Sean says "no:," and Gloria asks Philip what he is doing. From their point of view, Gloria's zeroing the scale had set them up to begin the lab, but Philip unproductively continues to experiment with removing the paper towel. At line 24 Philip zeroes the scale with the paper towel removed and then replaces it. Gloria reacts verbally and physically, both calling him a "retard" and reaching in to zero the scale again with the paper towel on top. At this point in the interaction Sean and Gloria have lined up together against Philip. They have a substantive disagreement about lab procedure, with Sean and Gloria acting as if the group should zero the scale with the paper towel on and Philip acting as if they should zero it with the paper towel off. Sean and Gloria are also resisting Philip's bid to be in control of the lab apparatus. By picking up then paper towel twice, and by re-zeroing it after Gloria did, Philip has acted as if he has the right to manipulate the group's apparatus. Philip's identity as a member of the group is at issue here, in two respects. First, what is his position in the group? Does he

have the right to control the group's apparatus? Second, what is his status as a student? Does he understand the lab activity well enough to zero the scale properly?

At line 27, Philip physically stops Gloria from reaching the scale and re-zeroing it with the paper towel on top. He grabs her right wrist with his right hand, before she can reach the scale. She then reaches her left hand forward, and he places both their right hands in the way, blocking her access. But he immediately uses his left hand to zero the scale with the paper towel on top. His action is deliberate and assured, and he does not correct it subsequently, so it looks as if Philip has accepted Gloria and Sean's approach to zeroing the scale. Gloria and Sean also act as if the scale is now zeroed properly. They make no attempts to re-zero it, even when Philip gets up and leaves the table several seconds later. (By line 27, Philip seems to understand that the scale needs to be zeroed with the towel on top, and he may have understood this all along. Unlike Gloria and Sean, he was also interested in figuring out why the scale gave a negative reading earlier, without the towel on top. By zeroing the scale with the towel on top at line 31 he abandons this sideline exploration and begins the assigned lab activity).

Even though the dispute about zeroing the scale is over, questions about Philip's position in the group remain. From lines 27-34, Philip was holding Gloria's right hand and was blocking her left hand from reaching the scale. After Gloria extricates her hand at line 35, Philip moves his torso forward over the table and places his forearm on the table between Gloria and the scale. He also says "let me figure it out first" at line 32. With these actions Philip continues to act as if he is in charge of the group's lab apparatus, empowered to manipulate it as he sees fit. Gloria has both verbally and

physically challenged Philip's claim, and the question remains at line 37: will Gloria and Sean allow Philip to position himself as controller of the lab apparatus?

The answer seems to be yes, as we can see in the next segment.

- G: (Don't) touch me. Eww= now I got diseases and (X).=
P: <You touched me.>
40 P: I'd walk. I'd try to get (.) [↑away.] [You touched me.]
G: [I didn't] [touch you.]=
G: =Why would I want to touch you?=
P: = [Why were you] grabbing my thumb, smart-?
P: [(Tst.) To get sick?]
45 (.)
G: You were grabbing my h↑a↓nd. I was trying to let go, and you wouldn't let
[go. So I had to (.) I had to (X)] your thumb (X).=
P: [I was not grabbing your hand.]
G: =Stupid a:ss
50 P: I did not grab your [(.) I did not grab (XX).]
G: [Shut the fuck up. ((G closes her lab manual and
throws across the table. N puts it in a neat pile with her own manual))]
G: °God (.) damn i:t.°
(4.0)
55 P: (No) (.) [(No)] ((P gets up and walks away from the table))
T: [Make] sure you ↑ba:ll it up before you weigh it and then you
spread it out o:ver the top of the scale.
(2.04)
G: °I swear to God. ° (X X). Go tell the fucking teacher, (man). (2.0)
60 G: [EW. See look how he left my hand yo, look at this.]
[(((G abruptly drops her pen and wipes her right hand with her left))]
(3.6) ((P returns to the table and G picks up her pen again. P puts the steel
wool on the scale. It rolls off and he has to put it back on.))
G: Who knows what he has on [his hands.]
65 S: [°Dumbass. °]
G: (Go:sh) yo.
?: ((in the background)) Tries to (.)
G: Grips on your f↑ing↓ers
(1.2)
70 T: Make sure you write (.) the units ↑down. So you're writing it in grams.
((S, P and N lean forward to read the scale. P writes in his notebook))
N: °Two point (.) two. °
(9.05) ((students talking in the background))
P: (Mm, k) ((P takes something off of the scale))
75 G: Sexual harassment.

Before line 51, starting before the beginning of the first transcript, Gloria has had a lab manual in front of her, neatly opened and folded back to the appropriate page. She also

has a stack of papers for note-taking and a pen. Philip also has an open lab manual, a stack of papers and a pen. Sean and Natalie have only papers and pens, but no lab manuals open in front of them—although it appears that there are extra manuals, closed and available on the table. Sean and Natalie are also sitting at the corners of the table furthest away from the front of the scale. They cannot see what the scale reads, and so they will have to rely on Philip or Gloria to tell them the results of the lab activity. Gloria and Philip, then, have positioned themselves as most involved and most in control of the lab activity. But at line 51, after Philip has physically blocked her from touching the scale, Gloria gives up on following the lab instructions herself when she closes and throws her lab manual across the table. From this point on, she allows Philip to be the only group member who follows procedures in the lab manual and manipulates the apparatus. At line 55 Philip also goes up and gets the steel wool that will be part of the group's lab apparatus for the day—thus establishing himself in another way as the student in charge of managing lab activity for the group.

After line 51, then, Philip has successfully identified himself as the group member in charge of the apparatus. At the beginning of the lab session, it was unclear whether he would be able to occupy this position, because both Gloria and Sean contested his attempts. But he perseveres, and Gloria unhappily acknowledges his position with her action at line 51 and with her acquiescence thereafter. This does not mean that Philip's identity in the lab group is settled, however. Being in charge of the apparatus and serving as the conduit to the teacher can be important aspects of a student's identity in a lab group, but they are not the only ones. In Philip's case, his identity as a student and his identity as a peer both remain at issue.

Both before and after line 51, Gloria and Sean identify Philip as a bad student and an untrustworthy source of information about their academic tasks. During their dispute over how to zero the scale, Gloria called Philip a "retard" (at line 26). With his comments at lines 9, 22 and 30, Sean told Philip what to do and implied that he did not understand how to zero a scale correctly. At line 65 Sean calls Philip a "dumbass" when he inadvertently lets the steel wool roll off the scale. These comments show that Philip's identity as a student is at issue. If we rely on the usual classroom stereotypes, we might expect the student in charge of the apparatus to be knowledgeable about the curriculum and respected as a good student. But Gloria and Sean have indicated that Philip might not fit this stereotype. Philip wants to control the apparatus, but he may not know what he is doing academically. We will have to examine further clues from later in the interaction to see how and whether Philip's identity as a good or bad student solidifies.

Philip's identity as a peer is also at issue in this interaction. These students have many possible models available to identify each other—as "cool," as "nerds," as "burnouts," as "outcasts," as "hot," and very large number of other possibilities—models drawn both from the specific domain of schooling and from the larger culture. Gloria's response to "the grab" has implications for Philip's identity as a peer. They engage in a dispute over what happened—did Philip grab her, or did she grab him—and this dispute has implications for who Philip is as a boy and an adolescent peer in the classroom. In the course of this dispute, Gloria escalates the description of what happened, from Philip's description of "hand holding" (line 35) to "touching" (38, 40) to "grabbing" (43, 46, etc.) to "gripping" (68) to "sexual harassment" (75). She continues to complain about his having touched her hand, for several minutes (from lines 33-152). In the segment

above (at lines 38 and 64), she complains about his having diseases and being dirty. She also curses at him and becomes visibly angry at lines 51-53.

By describing their physical contact in these ways, Gloria identifies Philip and herself as recognizable types of people. Instead of focusing on the issue of which student controls the apparatus, she shifts to the issue of what kind of peer Philip is. His identity as the group member in charge of the lab activity may be settled, at least for the moment, but a question still remains about what kind of adolescent Philip is. It may be that Gloria shifts from focusing on the lab activity to characterizing Philip's identity as a peer because she has lost the struggle for control of the apparatus. Perhaps she wants to get even by attributing a negative peer identity to him. This may be the case, but she probably also wants to head off misinterpretation of the physical contact that she and Philip had. "Holding hands," if that is what they were doing, may indicate some sexual attraction or potential romantic involvement. Other students, and perhaps Philip himself, might claim that their "hand holding" had implications for their relationship. Gloria demolishes that possible interpretation as quickly as she can.

One might object that this reads too much about romantic involvement into a simple grab. But these students are adolescents. Gloria and her friends say something in almost every class to indicate that they think of boys in the class as potential romantic partners, or that they want the boys to think of them as potential partners. In another class session, for instance, Gloria, Natalie and a friend have the following exchange.

- N: Yea:h he looks so different.
G: You left my table too.
N: I'm serious he loo- he's so tall.
N: He's hot now, I'm serious.
5 N: Oh he's <X been X>.
L: We were ice- we went ice skating XX.
N: Oh my [gosh.]

G: [She's like < he's so hot now >.]
 N: [He has not changed].
 10 N: He has not- no everybody in elementary
 school thought he was hot so, nothing new. And like
 when you look at him he look- man you should see him.

According to Natalie and Gloria, some boys are "hot." In the next segment Gloria indicates that she herself would be interested in having a boyfriend.

G: [Did I just hear him say big breasts?]
 P: [I hope we get to do XXX].
 N: What?
 G: I thought I heard him say big breasts?
 5 N: Who?
 G: QUINTIN.
 ...
 G: <SINGING I need a boyfriend.
 SINGING>.
 N: Oh my god, [you're desperate.]
 15 G: [That is so hilarious]. Yeah, I'm desperate.
 N: You know-

From lines 1-6, Gloria seems to be flirting with Quintin, a boy in the class—or at least she is teasing him using sexual terms. At line 12 she sings, during class, for everyone to hear, about how she needs a boyfriend. Thus Gloria makes it clear that she is interested in romantic relationships with boys, or at least that she wants to flirt with boys about the possibility of romantic relationships.

After Philip grabs her hand on February 27, however, she makes it very clear that he is not a boy she would even consider. At lines 38 and 60-64, she talks about the kinds of diseases she might have contracted from touching Philip. She also calls him an "ass" (line 49) and tells him to "shut the fuck up" (51). Thus Gloria distinguishes clearly between the kind of boy she might consider as a romantic partner, like Quintin perhaps, and the kind of boy Philip is. Philip is disgusting, and he can be directly insulted and cursed. Although Gloria may have ceded control over the lab apparatus to Philip, she will not back down in her characterization of him as a low status peer who cannot even

be imagined as a romantic partner. Philip initially contests Gloria's claim that he did the grabbing, from lines 35-50, but from that point on he goes back to the academic task and does not respond to her continued complaints and insults.

At line 75, then, three aspects of Philip's identity are in play. First, he has established himself as the student in control of the lab apparatus and the group's conduit to the teacher. This aspect of his identity remains stable over the rest of the interaction. Second, Gloria and Sean have tried to identify him as not so smart, as misunderstanding and misdirecting their lab activity. This aspect of Philip's identity remains somewhat indeterminate at line 75. Sean and Gloria position him as dumb, but Philip continues to act as if he knows what he is doing. Third, Gloria has treated him as a low status peer who can be insulted publicly and whom she would never even consider as a romantic partner. Philip does not contest this, after line 50, until later in the interaction. He could have fought back against Gloria's insulting talk, or he could have claimed that she protests so much that she really must be romantically interested in him. Depending on others' reactions, he might have then been identified as a higher status peer. But at line 75 it looks as if Gloria's characterization of him as a low status peer might stick.

As the interaction continues, Philip continues to struggle against Gloria and Sean, as they try to characterize him as incompetent and prone to academic mistakes.

- S: [Look, you're s'pose] to spread it out [(.)over the thing
G: [Spose to spread it out
over that, ↓stup↑id. It's gonna shed. ↓Look ↑it. (X) took all that off.
(1.4)
80 P: Ok, I'll t- [(.)]I'll ↑ ball it up.
G: [hh]
P: We can [re- do it.] Make sure that [(XX)]
G: [What are]" you- ? (.) hh = [Now you]shedded m↑o↓re. You're
so- (.) now it's two point ↑o↓ne.
85 P: Well-

The experiment is to weigh a piece of steel wool all balled up, then stretch it out and weigh it again—thus testing to see whether mass is conserved through changes in shape. Gloria and Sean claim (correctly) that in stretching out the steel wool Philip let some small pieces fall off, thus changing the second reading and making it seem as if mass was lost. Philip acts as if it was an honest mistake and proceeds to re-do the experiment, while Gloria calls him "stupid." This conflict over the second aspect of Philip's identity does not get resolved in this interaction on February 27. Sean and Gloria continue to act as if he is stupid, while Philip acts as if he is a competent student.

Later in the lab, Gloria and Natalie switch into Spanish and Gloria complains about Philip some more. Neither Philip nor Sean understands Spanish, and they ignore the girls during this time. For them, the talk in Spanish simply excludes them from the interaction and shows that Gloria and Natalie have a bond with each other. For Gloria and Natalie, their talk keeps Philip's identity as a low status, annoying person salient. Gloria switches back into English in the following segment, continuing to identify Philip as stupid and low status.

- (5.25) ((*P returns to table, puts paper towel on scale.*))
- S: We don't need the paper towel any ↓more.
 (4.18) ((*P takes the paper towel off the scale and it flutters to the floor. He picks it up.*))
- 135 G: Dummy.
 (1.99)
- G: He has no control over his ↓finge↑rs. Ha ha ha.
- P: Ok↑a↓y.
- G: Ha ha ha. ((*G drops her pen and pulls her hair back.*))
- 140 (3.0)
- T: U::hm.
- N: Ok, then one, two.
- P: If I had no control over my fingers how could I do this? ((*P twirls his pencil in his hand as if it were a cheerleader's baton.*))
- 145 G: (.) Cause you're retarded.
- P: No.

At line 143, Philip apparently concludes that he has had enough, and he tries to fight back against Gloria's comments about him. His small display of manual dexterity does not impress her or anyone else, however. Gloria calls him "retarded" at line 145, and neither Philip nor anyone else defends him. At the end of the interaction, then, Philip's identity as a low status peer seems relatively solid.

This analysis of the discursive interaction on February 27 shows how objectification occurs at the level of individual events. When the students began their lab activity on that day, it was not completely settled what kind of person Philip was going to be. Was he going to be in charge of the lab activities? Was he intelligent? Was he a respectable and perhaps even a desirable peer? Over the course of the interaction, it became clear that Philip was in charge of the lab activity and that he was a low status, undesirable peer. These aspects of Philip's identity could have turned out differently. Sean could have taken Gloria's side and together they might have insisted that Gloria run the lab. Sean and Natalie could have joined Philip and teased Gloria about how much she must have enjoyed holding Philip's hand. But these things did not happen, and across the event Philip's identity as in charge of the lab and as low status became more durable.

The participants used various resources to accomplish this event-level objectification of Philip's identity: they deployed highly presupposing signs, like Gloria's cursing of Philip, in public, to his face; they indexed publicly circulating models of personhood, like the model of "good" students as ones who quickly understand new tasks and complete them without effort or confusion; they were constrained by the physical layout of the task, which afforded only one person control over the apparatus; and they were constrained by the curriculum and classroom organization, which specified one

right answer to the lab questions and rewarded students for quickly reaching that answer. All these resources, and others, came together as they identified Philip as in control and as low status, and as they struggled over whether he was academically competent. Entextualization, then, is a form of objectification that takes place at the timescale of events and that depends on heterogeneous resources.

Intertextuality

Social identity, however, does not get established only within events. However Philip might have been identified across those few minutes on February 27, that event could have been an aberration, or his local social identity might have shifted after that point. I have argued elsewhere, following Dreier (2000) and Agha (2003; in press), that social identification is best conceived across a trajectory of events (Wortham, 2005; 2006). Just as one comment in an interaction can turn out to be uncharacteristic or irrelevant to the identification of an individual within a speech event, as subsequent signs come to presuppose a different identity for the focal individual, the identity that becomes entextualized within an event can turn out to be uncharacteristic or irrelevant across events. Sometimes individuals are consistently identified, of course, and sometimes one event is pivotal for the lasting social identification of an individual. In such cases analyses of single events can suffice. In general, however, individuals' identities emerge across trajectories of events and we must trace this emergence over time. Whoever Philip may have become during the interaction on February 27, we need to examine his social identity development on other days as well. This requires studying the objectification of identity across time, as various potential trajectories of identification get narrowed down

to a more rigid trajectory and as a more stable identity emerges for the individual. This is a different type of objectification, not within events but across them.

This sort of objectification across events has been described recently as "intertextual" or "interdiscursive" (Agha, in press; Agha & Wortham, 2005). In addition to examining the entextualization accomplished within events, phenomena like the formation of registers (Agha, 2003), socialization and social identification (Wortham, 2005) require that we examine chains or trajectories of signs across events. Events are linked to each other, as signs in neighboring events index each other, and these linkages facilitate social identification and other important social processes. A register, for instance, is not a static association between linguistic forms, types of inhabitable personae and types of events. It is instead a reflexive model of language use, one that emerges across trajectories of speech events, as a set of speakers increasingly take certain forms to index some model of personhood. Agha (2003; in press) describes how such models develop across events, through a process he calls "enregisterment." A "trajectory of identification" involves the development and application of such a model to an individual across a chain of speech events (Wortham, 2005). A register emerges over historical time as certain signs come systematically to index a model of the individuals who typically use or are characterized by those signs. This process also happens locally, in groups, as local versions of more widely circulating models are established and used to characterize individuals (Wortham, 2006). Social identification in this sense occurs across an intertextually linked trajectory of events, as models of personhood become more rigidly linked to an individual. Stable social identities, then, are accomplished not only through entextualization within events but also through intertextual trajectories

across events, as models of personhood emerge and come to characterize individuals. Objectification thus happens across events as well as within them.

Philip Identified as a Student

In Philip's case, we have data across more than two months, from about a week before he entered the group with Sean, Gloria and Natalie to the end of the curriculum unit in early April. Thus we can only examine the emergence of identity across these weeks, without knowing about the trajectories Philip followed from the beginning of the school year, after the curriculum unit or outside of this one classroom. In classrooms the beginning of the academic year can be crucial, because teachers and students often do intensive identity work in their first months together (Wortham, 2006), and important identity development can also take place across settings (Dreier, 2000). Nonetheless, the detailed data on Philip across two months reveal trajectories of identification that involve his identity as a student and as a peer. These trajectories illustrate how objectification can occur intertextually as well as within events.

On February 6, about a week before Philip changed lab groups, members of his original group teased and denigrated him, in ways like the following.

- L: Two was-
Q: We can do it [how we-]
P: [If we do that-] if we did it
5 systematically we are more likely to find
something that's going to do something.
O: Oh, big words.
P: Systematically is not a big word,
[it only has three] syllables.
L: [For me it is.]
10 P: X
Q: See, I told you he's a loser.
P: X, Huh?
Q: Nothing.
P: I'll go toss it.

15 Q: Okay, you do that. He's a loser, nobody likes him.

Here Oliver and Quintin pick on Philip for suggesting better ways to do the lab and for using "big words" to explain his suggestions. This sort of cruel treatment may have been one of the reasons that the teacher switched Philip into a new group.

In some ways Oliver and Quintin's treatment of Philip here is similar to how Gloria treated him three weeks later: they insult him to his face and thus treat him as a low status peer. Unlike Gloria, however, Oliver and Quintin do not contest Philip's claim to be a better student than they are. They tease him for being a good student, while indicating that they do not care about his academic success. On February 27, as we have seen, Gloria and Sean may have been a bit less nasty in identifying Philip as a low status peer, but they also contested his claim to be a good student.

When Philip entered the new group on February 13, Sean, Gloria and Natalie knew that Philip had been treated as a low status peer by Oliver and Quintin—because the lab tables were close together and these boys had not done their teasing quietly. From whole class discussions, the new lab group also knew that Philip often answered the teacher's questions and that the teacher recognized him as a good student. Philip's social identity in the new lab group was nonetheless somewhat indeterminate. Would Sean, Gloria and Natalie continue to treat him as a low status peer? The earlier teasing had come from the boys in his group. Would Sean be friendlier than Oliver and Quintin? Would Gloria and Natalie feel empowered to denigrate him so much? Would this new group value his academic contributions more, since they apparently cared more than Oliver and Quintin about succeeding in school?

The following analyses trace Philip's emerging identity in his new lab group across the two months of the curriculum unit. I first examine his emerging local identity

as a student, including questions about whether he is in charge of the group and whether he is academically competent. In the next section I examine his identity as a peer, including questions about whether he remains low status and whether he builds successful peer relationships despite this low status. In practice, of course, these two aspects of his identity (as a student and as a peer) influenced each other. Analytically, it is useful to separate them at first. The subsequent section discusses interrelations across these types of identity. It turns out that academic identity and peer identity can be interrelated, because each type of social identification depends on resources drawn from the other domain.

On February 13, Philip, Gloria and Natalie cooperate in a lab activity. Gloria starts out in the first line questioning Philip, who has been manipulating the lab apparatus. But the interaction goes very differently than it did on February 27.

- G: What are you doing?
N: The next- one, vinegar and baking soda.
P: What? I got the next thing that we need.
N: [X X X]
5 P: [We're not supp-] we're just supposed to leave
that alone for now.
N: Oh yeah we have to wait every-
P: So we go- go do- we do the next one.
G: We didn't even finish the first one.
10 N: No we have to- that's- we have to do, the
[second one now.]
P: [We're supposed to] do the sec- second one.
We're supposed to do the rest of them while this
one's X. This one's just bad.
15 N: Very clear X.

At lines 3 and 5, Philip explains what the group should be doing, and at line 7 Natalie accepts his explanation. Gloria objects at line 9, but Natalie then takes Philip's side at line 10. At line 15, where she is making an observation about the color of the experimental liquid, Natalie continues to engage in the experiment with Philip. Note that

Philip, Natalie and Gloria use "we" in this segment to refer to them all as a lab group. Here they act as if they care about doing the lab correctly and as if they are a cohesive group acting toward that goal.

Gloria is somewhat less committed to the activity than Natalie, and she makes a joke or two, but Natalie keeps working on the lab with Philip. A few seconds later they are interrupted when a student from another table throws a note at Gloria.

- 40 N: Escribió otra nota?
[Did he write another note?]
G: A ver que dice.
[Let's see what it says]
P: No.
- 45 G: Why are you guys arguing so much?
N: They're writing you a note.
P: I have no clue what that is.
G: That was to you.
P: I don't care. I don't want it.
- 50 N: You don't need to have it. It's for you.
No sabe nada más que hacer.
[He doesn't know what else to do]
G: Vinegar. [Clea=r.]
N: [Smelly.]
- 55 G: Ugly, smelly, and cloudy X.
N: Wouldn't it be kind of creamyish or something like-
P: Yes. [It's runny.]
G: [It don't look creamyish.] It's [clea=r.]
P: [No.] So why don't
- 60 we just [say when you're-]
G: [Runny=].
P: when- when you're done because I've- I've got [XXXX.]
G: [Ugly, smelly.] Nasty smelling. E:w. It smells so nasty.
N: So you put smelly, greasy?
- 65 P: Hm?
N: It looks greasy to me.
P: Just say runny.

At lines 46-50, Gloria and Natalie both tease Philip, but in an apparently lighthearted way. They pretend that the note is for him, even though it is apparently written in Spanish. At line 51, Natalie does say something unflattering, in Spanish, about Philip's inability to respond to their teasing. But then the girls go back to the lab activity. By line

61, when Gloria accepts Philip's descriptor for the experimental liquid, the girls seem to be working with Philip on describing the experimental substance.

From the teacher's point of view, the three of them were working well together—so well, in fact, that she comments positively on their group.

- 90 T: I love when I am hearing people reading
the directions from the lab manual [to each other.]
G: [Oo::]
N: Bubbles.
G: It fizzes, What are you doing?
95 P: Just checking what happens if I- um, it doesn't-
it doesn't seem to do it again.
P: Hm.
T: You could do a little more like that.
G: It created a gas.
100 P: Mhmm. It reminds me- it looks like soda.
G: Yeah, I know.

By lines 100-101, Philip and Gloria are clearly working together cooperatively on the lab activity. On February 13, then, Philip, Gloria and Natalie cooperate. They act as if they all care about doing the lab, and as if Philip is a member of the group working toward that end. This makes Philip's local identity in the new lab group potentially very different than it had been in his prior group the week before. He is identified here as a good student who is valued by others for his intelligence and his attention to the lab activity.

There is some evidence of tension between Philip and the girls as well, however. As noted above, the girls tease him from line 46-52. As he did on February 27, Philip also controls the lab apparatus on February 13. Gloria responds to this in a couple of places by asking "what are you doing," even though she does not press the issue. From lines 53-66, and elsewhere, Gloria and Natalie also talk to each other more than to Philip. So the girls do not treat Philip as a friend or as an equal partner in the lab activity. They nonetheless engage productively with him when he does something successful in the lab

activity, when they are excited about the outcome of an experiment or when they want academic information from him.

This pattern continued, during February and intermittently into March. On February 26, for instance, Philip, Natalie and Sean work on answering questions from the lab manual.

- S: Yeah. First one's-
P: I think- I think all of them are the same and the paint is same or more.
N: I put-
5 P: They- they could take off the old [paint-]
S: [For the first one I think it's more though.]
N: I think it's [more for] number one.
P: [Why? Because it's-]
N: Because if it's folded it's more
10 organized and more space and less-
[-um, I guess X.]
T: [When we do the tallies, make sure you're reading the question right, like it asks you will the rumpled weigh more-]
15 P: I think it's the same.
N: I put number two for less, because-
[-some of the water could have evaporated.]
T: [More less or the same than the folded.]
P: I think it's in general, that when they're nice
20 and folded [X X weigh the same as when it's crumpled up.]
T: [Or else you may say less when you mean to say more.]
N: Yeah but it [gives it more], gives it
25 more, um-
S: [Oh I see.]
P: It gives you more space to put stuff, but-
N: Yeah but it gives it more- if it's rumpled it-
P: If you have the same amount of stuff, like really
30 if you have the same amount of stuff, I think it should-
S: The glass at seventy should weigh more than the glass at thirty-five.
N: You put more? I thought it would weigh less.
35 P: I'd have to agree with you.

Here the three students discuss their answers to the question, offering their opinions and giving evidence to defend their answers. Throughout this segment, with some

interruptions, Philip and Natalie carry on a conversation about whether a crumpled piece of paper will weigh the same as the same piece flattened out. They treat each other here as viable interlocutors.

Natalie and Sean are also concerned to get the right answers, and Natalie treats Philip as a potential source of such answers on February 26. She often asks Gloria for the answer, but when Gloria is absent Natalie readily turns to Philip.

- S: I know it turns [to ash, but ash weighs less.]
N: [What'd you- what'd you put for number three?]
P: The wick does probably.
N: What'd [you put for] number three? Is it physical or-
5 P: [I don't know.]
S: I put chemical but I don't know.
P: I think that's physical.

At lines 2 and 4 Natalie asks Philip for his answer, apparently assuming that he is a good source of correct answers. Natalie and Sean behave similarly on March 12.

- P: There's still some solid in there.
N: I don't like the smell of vinegar at all. Does it weigh less or more?
P: Hm? It's weighing less already but- we haven't
5 gotten- we haven't gotten- getting rid of all the stuff in there yet. Stupid stuff. Oh I think that's about it. Geeze that was a small change though.
N: No, what is it? Did it already get figured out? Is it-
P: Te:- no wait, te:n- ten thirty- ten of- one o three point nine.
10 N: One o- three point nine?
P: You know that's about- that's only about point two change. Oh. Let's swish it around XX make sure that it's nice XXX.
N: Sean put one O three point nine for after.
15 S: Okay. Is it done though?
P: Pretty much, should be.
S: What is it again?
N: One O three- point nine.
S: Okay. Conclusio:n, Did the- what was the prediction
20 that gas [did have weight?]
N: [We didn't do that.]
P: I predicted that it would weigh less.
S: Right.

Philip is running the lab activity here, manipulating the apparatus and reading the results. Sean and Natalie not only do not object, but they also look to Philip for the right answers. Starting on February 13, then, for at least a month, Natalie and Sean often treat Philip as academically competent and look to him for the right answers. Before the grab incident on February 27, Gloria also sometimes treated Philip this way.

There are also events, however, in which Gloria, Natalie and Sean treat Philip as academically incompetent. On February 14, for instance, at the very beginning of Philip's time in the new group, Gloria and Natalie disagree with Philip.

- G: Oh, so that is what it's doing, it's evaporating.
P: Not really.
G: Yes it is.
P: I don't think it's- it's separating.
5 N: That's what it's called.
G: That's what she just said. Yeah, is we're sending some of this stuff up to the air so it's evaporating stupid.
P: But water evaporates, it's still water. It separates. It's separating into hydrogen and oxygen.
10 G: No:, they're separating and some of stuff is just-
N: Even Ms. Teacher says evaporating.
G: X God, he's a dumbass.

Gloria and Natalie disagree with Philip over the appropriate terminology here. Instead of offering further arguments for her position, however, Gloria simply calls Philip "stupid" and a "dumbass." On February 27, as we have seen above, Gloria and Sean let Philip control the apparatus and run the lab, but they also insult his intelligence several times, calling him a "stupid retard" (Gloria, line 26), a "dumbass" (Sean, line 65), "stupid" (Gloria, line 77), "pendejo" (Gloria, line 115), "dummy" (Gloria, line 135) and "retarded" (Gloria, line 145).

During his first month with the new lab group, then, Philip's identity as a student is contested. Philip himself consistently acts as if he is in charge of the lab apparatus, as if he cares about school, as if he understands science and as if he is likely to get the right

answers. Some of the time, the other students treat him this way too. Natalie, Sean and (in the first two weeks) Gloria sometimes turn to Philip for guidance or answers, as well as engaging in productive academic conversation with him. At other times, however, Gloria regularly and the other students occasionally call Philip stupid and treat his answers as mistaken and his actions as inept.

Although this conflict over Philip's identity persists to some extent through March, the teacher also throws her support behind Philip as a good student. Everyone acts as if the teacher knows the answers and can identify good students. On several occasions, the teacher speaks to the lab group in ways that acknowledge Philip as an unusually successful student. Gloria, in particular, does not like this. But she does not have the institutional standing to do more than snipe at Philip once the teacher has anointed him as academically successful. The following interaction, from February 14, shows this dynamic.

- T: What's going to happen eventually if we leave the pencils in there hooked up to this electricity?
P: It'll just dissolve the water
N: There won't be any more water.
5 T: Where would it all go?
N: XXX.
P: [Air.]
G: [The air.]
N: [The air.]
10 T: It will all evaporate as what?
N: [Air.]
P: [Hydrogen and oxygen.]
T: What specifically?
G: [Vapor, water.]
15 N: Air.
P: Gases.
T: What two gases?
P: Hydrogen and oxygen, I just said that.
T: Okay I am glad you know. I am asking Gloria [and Natalie
20 too], I want to make sure everyone knows, okay?
P: [Oh, sorry.]

The teacher makes clear here that Philip had the right answer, but that she does not think the girls understand. She goes on to extract the answer from the girls. Then Gloria speaks to Natalie about Philip, in Spanish.

T: Okay we need to clean up. [I want you to dump the water out.]
N: [Medio lacro, no se quiere callar]
[Kind of annoying, he does not want to shut up.]

Gloria and Natalie cannot change the teacher's relative evaluation of them and Philip, but they can characterize Philip as an obnoxious know-it-all.

As we have seen, Gloria struggles physically and verbally on February 27 to take control of the lab activities. When that fails, she resorts to calling Philip "stupid" and to treating him like a low status peer. She also takes any opportunity to remind the teacher that Philip is not always right, as in the following segment from March 6.

T: Okay. I don't wanna be harsh at all because- did your guess make sense?
A solid would weigh more than a liquid. But does a solid weigh more than a liquid?
S: No.
T: No. How many of you were wrong? How many of you were right?
5 G: Put your hand down you wrote more.
P: I wrote same but it was too late.

At line 5 Gloria points out Philip's error, to the teacher and others in the group, and Philip has to acknowledge that at line 6. In this case, Gloria scores over Philip by identifying him as not academically perfect.

In general, however, everyone except Gloria accepts that Philip is a good student. The teacher continues to treat Philip this way, in public, as in the following segment from March 31.

T: I'm looking for the answer. Yep, because you already did your water.
P: [I think that, yeah I think they meant-]
T: [So that that is just a typo.]
5 P: I think they [meant to do on-]
T: [Yeah. Just a typo.]
P: [meant to say a molecule there and-]

T: [Yep.]
G: [XXX]
10 P: Like there's another spot-
T: Yep.
G: XXX. Ah ha ha.
T: I'm glad we got that straightened out.

Here Philip not only gets the right answer, but he also helps the teacher identify an error in the text. The teacher acknowledges his contribution at lines 8 and 11. Gloria cannot do much to interfere with Philip's identification as a good student in this and other cases. Over his two months with the new lab group, Philip most often gets treated as he does here—with the teacher identifying him as academically competent—and as he does on March 12—when Natalie and Sean expect him to understand the subject matter and turn to him for help in getting the answers.

So Philip's social identification as a good student is contested, especially by Gloria, but nonetheless solidifies as it gets presupposed by both teacher and students. Something else happens in April, however, that challenges this aspect of Philip's local identity: Sean begins to assert himself. During February and March Sean often seemed interested in getting the right answers, and he participated in many lab group discussions, but he did not contest Philip's position as the one controlling the apparatus or the one most likely to have the answer. On April 7, however, Philip makes a mistake that angers Sean and prods him into a more active role.

G: Randall come here. I need help.
R: Hm?
G: I need help. What'd you guys get? We wondered
how'd you guys get it? Or like whatever you did.
5 R: You only need one of these, one of each. So, it's just this plus this.
P: It doesn't work.
R: Yeah it does.
P: You have five A's.
R: Because you have enough stuff here to make all three of these.
10 P: It doesn't- it's not balanced.
R: Yeah it is.

P: How's five equal four?
 R: You can't count.
 N: @@@.
 15 G: XXX.
 S: X we had a counting error. Because this only- there's three O's,
 XX five O's, how many do we need?
 P: XXX H's.
 S: One two three four five. You drew an extra O over here.
 20 P: Where? Where did I draw an extra O?
 G: Ya le dijo.
 [Already told him.]
 P: Water.
 S: H two one O.
 25 P: Oh I got it backwards.
 S: @@ ah.
 P: Okay.
 S: If it wasn't for that we would have had it done like an hour
 ago. Okay, we're done.
 30 P: Didn't take an hour, but this class isn't- I don't think is-
 is even an hour long.
 S: We just spent like half an hour it.
 G: I know, right.
 S: For a written error.
 35 G: Oh my god this pissed me off.

At line 16 Sean realizes that the group has made an error, which Randall's explanation has made clear. He initially says that "we" made the error, but he quickly switches to "you" at line 19 and attributes the error to Philip. Sean goes on at lines 28-34 to accuse Philip of costing the group lots of time, and Gloria piles on at line 35.

A few seconds later Sean intervenes more forcefully than he has done in the past, correcting another mistake by Philip.

S: Huh?
 P: Vinegar doesn't make sense. C H C O O H?
 45 S: There were- that's the way that it's like written.
 See like, [there's C] there and then O O H.
 P: [That's screwed up.] You pull
 them together. There's two. It's O two.
 S: No it's not! [It's not O two.]
 50 P: [Yeah, that's how-] that's how it always goes.
 S: No it's not O two, because there are two O's, and
 O- two O's is not the same as O two.
 P: Sure they are.
 S: No they're not.
 55 P: Well hey, there's two O's here, so that would be O two. It's the

same thing with H. H two O. They're not attached to each other,
they're attached to the O.
S: You want to see what this thing says?
P: That thing's screwed up.
60 S: No it's not. [Idiot.]
P: [It's messed up]. How come the rest of the time when
you had two of the same thing you put them together? Fe three O two.
S: If you would have read it, it tells you why.
P: Why? Why does- where does it say so?
65 S: Right on the first page.
S: No, it's not on the- it's on the second.
P: That's the first. Oh. Where?
S: It's written that way-
P: It doesn't even make sense.
70 G: You don't make sense.
P: No, that doesn't make sense.

At line 60, Sean calls Philip an "idiot," which echoes earlier comments that Gloria has made in contesting Philip's identity as a good student. But Sean relies more on reason and evidence than on insults here. He explains at line 52 that "two O's is not the same as O two," and at lines 58-68 he refers to the text in order to support his point.

On April 7, in these segments, Sean challenges Philip's position as the lead student in the group. Sean acts as if he understands the material better than Philip, and he expresses anger and outrage that Philip's error has cost the group half an hour of effort and frustration. This could have been just a passing burst of activity on Sean's part, but in fact he went on to adopt a more active position in the group on April 8 as well.

P: Okay, I think we're done.
S: No, I'll make the picture.
P: I'm good at that.
S: I'm the one that figured out how to draw this picture.
5 P: Well I've seen it. [I know how to draw it.]
G: [I'm going to steal Randall's pick.]
N: Huh?
G: I'm going to steal Randall's pick, but I'm going to
have to find a way how to.
10 G: Mm:, mm:: mm[::]
P: [Your tip is dull that's why.] Oh.
N: [Don't do that please.]
P: Borrow my pencil, I'll sharpen yours.
S: Okay.

Here Sean asserts that he has been the one to figure out the topic (at line 4) and that he should be the one to draw the picture. Philip objects at lines 3 and 5, but Sean proceeds to draw the picture himself. Philip acquiesces, and he even offers Sean his pencil to do the task (at line 13).

Unlike Gloria, who did not succeed in challenging Philip's position as the one in charge of the group's activities, Sean has taken control here. Perhaps he managed to do this because he was male, or because Philip had in fact made a serious mistake on April 7, or because Philip cared more about Sean's opinion than he did about Gloria's. Whatever the reason, this shift might have had implications for Philip's identity as a good student. If Sean had continued to take control of the lab group in subsequent days, Philip might have become a more passive observer instead of the group's conduit to the teacher. If Natalie, Gloria and even Philip himself had started to ask Sean for the right answers, and/or if the teacher had begun to look to Sean as the group's most academically promising member, perhaps Philip would have lost his identity as a particularly good student.

In other words, Philip's trajectory might have shifted in early April, with respect to his local social identity as an academically strong student in charge of the lab group. Over his first month and a half with the new lab group there was some contestation over Philip's identity as a student, especially between Philip and Gloria. Most of the time Philip was recognized by teacher and students as an academically successful student, despite Gloria's challenges to this. Philip's identity as a good student solidified over time as the teacher, Natalie and Sean treated him this way consistently during March. But Philip's public mistake on April 7, and Sean's new, active role in noting this mistake and

taking control of the group on April 7 and 8, might have altered Philip's identity as a student. In fact, however, we do not know whether Philip's trajectory of identification shifted in this way, because the curriculum unit ended shortly after April 8. He might have lost his position as the alpha student to Sean, he might have fought off Sean's challenge, Sean might have gone back to his former position, or Philip and Sean might have developed a new relationship and new identities as they jointly ran the lab activities. Thus Philip's identity as a student was contested, solidified and then may have changed at the end of the curriculum unit. Only by examining trajectories of identification across events, in addition to the objectification that occurs within events, can we study the identities that students like Philip come to occupy in classrooms.

Philip Identified as a Peer

The same process occurred with respect to Philip's identity as a peer. We have seen how Oliver and Quintin treated Philip as a low status peer, insulting him to his face in public. We have also seen how Gloria treated Philip in a similar way on February 27. But Philip's move to the new lab group on February 13 opened up other possibilities for his peer identity. Gloria, Natalie and Sean cared more about academic success than Oliver and Quintin, so perhaps they would appreciate Philip for his academic strengths and not ostracize him in the same way. Or perhaps Sean would befriend Philip, and the group would divide into the two girls and the two boys, with each pair having some sort of friendly bond. Gloria's harsh treatment of Philip on February 27 does not suffice to determine which of the various possible trajectories Philip actually traveled with respect to his peer identity in the new lab group.

Even before "the grab" on February 27 Gloria occasionally treated Philip as low status, making brief insulting comments or refusing to engage with him. On February 14, for instance, after Philip gets up and moves away from the table, Gloria gestures toward his empty seat and tells Natalie that "he stinks." She also made clear with her body language that she did not consider him a peer worth interacting with. When she had to sit in the empty seat beside Philip on February 25, for instance, she rolled her eyes and oriented her entire body away from him. Before February 27, then, Gloria treated Philip as low status, but she was not as explicit or as public as Oliver and Quintin had been in identifying Philip this way.

On February 27, as we have seen, Gloria responded to the grab by identifying Philip as a low status peer more explicitly and more vehemently. At this point Philip had to contend with her explicitly face-threatening acts, whereas Gloria's earlier insults had been less public, shorter and more easily ignored. The analysis above showed how Philip tried to defend himself against Gloria's explicit and extended insults on February 27. Right after the grab (at line 35) he claimed that she was the one holding his hand, but Gloria silenced him with "shut the fuck up." At the end of the incident (at line 143), in response to Gloria's claim that he had no control over his fingers, Philip demonstrated his manual dexterity by twirling a pencil, but Gloria silenced him with "you're retarded." So Philip tried to respond to Gloria's insults, which identified him as pathetic and as low status, but she overwhelmed him with further insults.

Gloria acted in similar ways for the rest of the curriculum unit. On March 3, for instance, Gloria asks Natalie a question but Philip answers instead.

G: When?

P: Last class.

G: Shut up, nobody was talking to you. Thinks someone

was talking to him. [Who was saying your name? Nobody.]
5 P: [That damn noise you X babbling.]

Here Gloria both addresses Philip directly with "shut up," in an insulting way, and then excludes him from the conversation by talking about him as a third-person object of discussion. On March 6, Philip addresses Gloria without using her name, and she responds:

G: Oh. Don't you know my name?
P: I- I forget names and faces.
G: Oh. I wish I could forget yours.
P: What?
5 G: I wish I could forget yours.

Here Gloria insults Philip again, in public. Higher status peers would not be addressed this way, or would not tolerate it if they were, but Gloria feels free to talk like this to Philip. He either does not respond, or she overrides his responses with more insults.

Gloria continues to act this way toward Philip. On March 13, for instance, they are reading the law of conservation of matter.

T: What are the three states of matter.
G: Liquid, gas and solid.
T: Solid, liquid, gas. In this space below you should have your copied definition. ...

T: ... I want you to say the law of conservation of matter
in its full form. You can read it right of the sheet if you
15 need to right now. Say it to the person next to you and
then have them say it back to you.
G: X.
P: Matter can neither be lost nor gained.
G: Shut up.
20 P: It can only be changed from one form to another. OK I'm done.
G: What are we supposed to say?
N: Say it.
G: That thing?
P: Yeah.
25 G: [I was talking to you?]
P: [I already said it.]
G: Shut up.
P: X.
G: Anyways.

30 P: You asked [a question and I answered it, you should be thankful]
 N: [Can never be lost or gained,] it can only be changed
 from one form to another.
 ?: Sh:
 G: Matter can neither be lost or gained it can only be changed from
 35 one form to another.

Here again Philip acts as if he is academically advanced or in charge, moving quickly to read the law himself first. Gloria is not pleased. She makes clear at line 25 that she does not want to interact with him, and at line 27 and she tells him to shut up.

In mid-March the teacher noticed Gloria's harsh treatment of Philip and she intervened. At the beginning of class on March 14 she came over to the group and asked what the problem was.

P: It's like she sits- come down,
 [I'm talking to him and she says shut up.]
 G: [Keep quiet XX I wasn't even talking to you]
 P: Oh it's like I wasn't even talking to her.
 5 G: Right, okay.
 P: I wasn't.
 G: Unh unh.
 T: Gloria.
 ...
 G: No, he had already finished and then I asked a question,
 15 but I was actually like not talking to them, and then he
 answered my question, I said no [don't talk to me.]
 P: [I did not answer] your question.
 G: Yes you did.
 P: I did not, I was still talking to him.
 20 G: Unh unh.
 T: So you asked him a question?
 G: No I didn't ask him a question. I asked a question out loud,
 but I wasn't expecting an answer.

After Gloria and Philip give conflicting accounts of what happened, the teacher sides with Philip.

P: Because she- she just said shut up out of nowhere. It's like-
 [she should just ignore me].
 T: [Okay so you have some] anger towards Philip. Yes? Gloria.
 G: No:..
 35 T: No. Should you just stop talking to him then?
 G: [I did stop] talking to him.

T: [In general?] You said shut up to him.
 G: Yeah so he wouldn't talk to me, because he then kept talking to me.
 P: Because you talked to me. If I- if you
 40 [just ignored me I wouldn't have said anything.]
 G: [I wasn't talking to you.]
 T: Hey Gloria if you ask a question, out to the whole table he can
 [answer you, but he can answer you. He can answer you.]
 G: [But- but I was barely coming to the table. I was barely] coming
 45 to the table.
 T: And that's okay if he answers you.
 G: No it isn't.
 T: He's not allowed to talk to you?
 G: No it's not.
 50 T: That doesn't make any sense to me. Why can't he talk to you?
 G: Because I don't want to hear him.
 T: That is so rude.
 G: I know, but I don't like the way he talks and I don't like
 [the way he talks to me.]
 55 T: [Okay, so if it's rude] you can't do it. It's not okay. You have to
 deal. Gloria I don't expect you to like everyone, but there- you have
 to tolerate everyone, [whether you like it or not.]
 G: [But I don't know why he's sitting here.] Why
 can't he go sit somewhere else?

Gloria's statements are remarkable, given normal classroom expectations. She does not
 have a case, because students are not allowed to blatantly disrespect others in class. But
 she says explicitly that she does not like Philip and that she does not even want him to
 talk to her. Then she goes on to confront the teacher, directly and explicitly, at lines 47,
 53 and 58. Gloria will not back down in this discussion on March 14, and in subsequent
 classes she continued her insulting behavior toward Philip.

We can see this in one last example, from March 31. The group is working in
 pairs, girls and boys, using kits to construct molecules. Gloria refuses to give the boys
 what they need.

S: Try making a water molecule.
 P: Okay I get it.
 N: X X Gloria
 S: We need one of those reds.
 5 N: Gloria
 G: Too bad huh?
 N: Mira

[Look]
P: At least one. Well, we can't make a molecule without the-
10 G: Oo.
P: Plea:se give us- the rest of the reds.
G: Oxygen is red.
P: So it'd be nice to have the red so- [we can finish D.]
G: [Yes. That's right.] Hey
15 give me that. X X X X. X X That's cool.
N: Esperate. Ya le voy a pegar.
[Wait. I'm gonna hit him now]
N: Psst. X X
S: How are we supposed to do it if we only have one stick?
20 P: Two.
G: Oh-
N: @ @ @.
G: Ha ha. Ha ha. Ha ha.
P: I think we need the other stick to [X X X.]
25 G: [Too bad.]
P: Be nice if I can get [a little cooperation.]
G: [Shut up.]

In this segment Gloria feels free to deny the boys what they need to complete the assignment. At lines 6 and 25 she responds to Sean and Philip's requests with "too bad," and at line 27 she tells Philip to "shut up." By treating Philip again in this insulting way, Gloria continues to identify him as low status. Whatever status Philip may have gained with his local identity as a good student, Gloria makes him pay for it by consistently identifying him as a low status peer.

This last segment also gives evidence about the other students' roles in identifying Philip as a peer. Despite her volubility, Gloria cannot by herself identify Philip as low status. We have seen that Philip himself tries to fight back against her but gives up. There are other students and the teacher in the classroom, however, and their reactions also influence Philip's peer identity. As she does in the last segment, at line 16, Natalie generally goes along with Gloria's treatment of Philip. She certainly does not object, and she sometimes speaks to Gloria in Spanish about Philip, insulting him behind his back. On February 27, for instance, in response to Gloria's insulting comments about Philip,

Natalie says "y segun él nos chupamos el dedo. [And according to him we are sucking our thumb; i.e., we are the stupid ones.]" On March 13, Natalie responds to one of Philip's comments with "Quien le pregunta a este menso [Who's asking this stupid person]." So Natalie does not publicly insult Philip, but she supports Gloria in private and acts as if Gloria's comments are justified.

Sean, however, is a more complex case. Sean and Philip are both boys, and they are both non-Spanish-speakers, so they are potentially allied against Gloria and Natalie. Philip's peer identity could be very different, depending on Sean's position. Philip could have a conflict with Gloria, but have other friends like Sean whom he could rely on for support and some peer status. He would not be a member of the high status group, but he could nonetheless have a marginally respectable identity. If Sean were to join Gloria's side, against Philip, however, Philip would be both derided and alone. This would give him even lower status. On February 27, as we have seen, Sean does join some of Gloria's complaints against Philip and calls him a "dumbass." But Sean did not talk like this very much. He wanted to get the labs done, but he did not take a lead role and he did not interact much with Philip, Gloria and Natalie outside of the practical lab activities.

In the segment above, from March 31, however, we see Sean and Philip working together on the lab task and we see them both being tortured by Gloria. Both Philip and Sean refer to the two of them as "we" in this segment, which may indicate some amount of solidarity between the boys. Philip did, in fact, try to build on this potential solidarity and create a friendlier peer relationship with Sean in late March and early April. On March 18, for instance, during a lull when Natalie and Gloria were speaking Spanish to each other, Philip tried to involve Sean in a conversation about ninja comic books.

P: You know, at least we're not in X ninja school from one-

from one of my comic books. Because they have to beat up their team- they [have to beat up their X X X X.]

N: [Gloria que escribiste tu?]

5 [Gloria what did you write?]

P: So they can get lunch.

G: What are you writing?

N: Escribí con la- what she said about it, but I guess it's not right. [I wrote with the-]

10 P: [There's three kids and X X X X]. One of them does- one of them is going o be Tiger- Tiger Woods. [X X X X X X X X X.]

N: [Pero de todas maneras que escribiste tu?]

[But anyway what did you write?]

G: [The balloon was sucked into the flask because the steel kind

15 of sucked most of the oxygen in the flask so then it created X X]

P: X X have to watch him X. Yeah, you see. If you beat one of them, you have to beat one of them up X X X X X. So that he's sitting there reading a book, like X X. If a kid tries to hit him, he'll block him- block him. He doesn't even have to attack him. That would be X X X.

Although Sean is sitting there apparently listening to what Philip says, he does not respond to Philip's comments. Philip is trying to establish a peer relationship based on shared interest in comic books. Sean does not reject him explicitly, but his failure to respond may nonetheless be a rejection of Philip's bid.

On other occasions, however, Sean did respond more positively to similar overtures by Philip. On April 4 Philip tries to start a conversation about aliens.

P: I wonder if real aliens really exist anyways. And if they do why haven't we found them? Or the other way around.

S: I think they have a better chance at finding us.

P: Who knows they could- who knows maybe- maybe aliens

5 really are like- have technology [X X]

T: [You don't have to wait for me after you've made for me account for atoms and balance your equation.]

S: Oh.

At line 3 Sean responds briefly to Philip's comment. They might have had a more extended conversation and established rapport as peers who are interested in aliens, but the teacher interrupts and they go back to lab activities. On April 9 Philip does something similar, and this time they have a more extended conversation.

P: If you were in a video game would you want to use magic or- or- X X X?
 S: Magic.
 P: Personally I'd want to be able to do both.
 5 S: Yeah, they should put a game that has both. Like X X X.
 P: Yeah. Plenty of games they hav- like you hav- you have to be ab- be able to- you have to have both fight and magic. So you may have like- thr- you may have like four to six
 10 peop- four to six people and you want to have something you can run up and beat on people and something you can sit back and heal or conjure up spells. Or you can conjure up some demon and that would be alright.
 S: Yeah but there's this one X, everyone has both.
 N: [Ms. Teacher].
 15 P: [I've seen plenty] of games like that, that's like X X,
 S: [The magic has-]
 P: like they're penalized for using magic because they're not good at it.
 S: the magic has to build up and the magic like- like all of
 20 them have- like some magic is used to heal themselves and some is to kill people.
 P: Yeah there's various different kinds of magic. Like earth, earth- and water are ususally for healing, fire and dark usually hurt. Light often heals- But all of them can hurt too- almost all
 25 of them hurt but usually- usually it's like X. Dark, fire, wind, and some other things that actually hurt that are- that are- are geared toward doing X X.
 TA: You guys have a question?
 P: Hm?
 30 TA: You have a question?
 P: No.
 S: No we-
 P: We're getting her to look at it.

Philip initiates and dominates this conversation, but Sean contributes as well. The boys have found a topic that they both care about, and they have a pleasant conversation.

Despite his treating Philip as a respectable peer on April 9, however, Sean did not really become Philip's friend. His friends seemed to be other boys who were interested in sports. Sean sometimes talked about sports with boys from other lab groups. The following segment is from March 31.

X: [Are the X in the playoffs?]
 S: [Yeah.]
 P: [Yeah.]
 X: When do the playoffs start?

- 5 S: I think next week.
 X: Who are they playing?
 S: Um:: I don't know.
 X: Are you going to any games?
 S: I don't know.
- 10 P: That's wh-
 S: I think I'm going to one on Thursday but it's not the playoffs.
 X: You are though?
 S: Yeah.

Despite Philip's attempts to break in, Sean and his friend do not include him in the conversation. Philip was someone who could talk about aliens and video games, and sometimes Sean talked with him about such topics. But when it came to sports, Philip apparently did not have the peer status to join the conversation. So Philip's bid to change his peer identity by making friends with Sean was only partly successful. We do not know how much he succeeded in the end, because the curriculum unit and the data collection ended shortly after April 9.

Philip's trajectory as a peer, then, began with extremely harsh treatment from Oliver and Quintin—who identified him as smart but a "loser" whom nobody likes—and then with the move to the new lab group. In his first two weeks in the new lab group, Philip did not confront many face-threatening attacks, even though Gloria did insult him in small ways. His identity as a peer was thus somewhat indeterminate, although the residue of Oliver and Quintin's treatment remained and it would have taken work to extricate him from his identity as a low status peer. Starting with "the grab" on February 27, and going throughout the rest of the curriculum unit, Gloria more aggressively identified Philip as low status by insulting him in public. Natalie accepted this identification of Philip, although she did not join Gloria in making public comments. Philip tried and failed to fight back against Gloria, who overwhelmed him with insults. Sean initially played a small role in supporting Gloria, but for the first month he did not

say much to or about Philip. Beginning in mid-March, Philip tried to be friendly with Sean, talking to him about aliens and video games. Sean ignored him for a while, but at the very end of the unit he sometimes acted in a more friendly way toward Philip.

Philip's emerging relationship with Sean did not overcome his identity as a low status peer, but it had the potential to make him a more respectable low-to-middle status person who had his place among male friends, instead his being a "loser" without any friends.

I have discussed Philip's identity as a student and his identity as a peer separately, because this makes the analysis clearer. Student and peer identities are somewhat separable in practice, and they do sometimes vary independently. The metapragmatic models that circulate most widely in American schools, however, connect these two aspects of a student's identity. "Nerds," for instance, are both good students and low status peers, and their academic skill contributes to their low peer status. Gloria, Oliver and Quintin positioned Philip with respect to a metapragmatic model like this, one that evaluates a student both academically and as a peer. In the concluding section below, I will discuss implications of these interconnections between academic and peer domains.

Objectification across Timescales

The class on February 27 was representative of Philip's social identity in his new lab group, in several respects. Gloria struggled but failed to wrest control of the lab group from Philip, Gloria and Sean characterized Philip as not really that smart and Gloria identified Philip as a low status peer by insulting him in public. Furthermore, this class session was not only representative, but it was also a turning point in some ways. With his "grab" Philip physically defended his role as in charge of the lab apparatus, a

position that he occupied for the rest of the unit. Before February 27, Philip's low status peer identity had also been muted in his new lab group. Starting on that day, however, Gloria began a vocal campaign to insult Philip and remind everyone of his low status. The analysis of the February 27 class given above shows how these various aspects of Philip's identity were entextualized or objectified at the timescale of events. Central aspects of Philip's local social identity emerged over the course of this interaction, and these aspects of his identity could have emerged differently on that day.

The subsequent analyses of the trajectories across which various aspects of Philip's identity emerged, however, show that the event on February 27 did not by itself establish Philip's social identity in this classroom. Philip's identity as a good student was contested on February 27, and it took many subsequent events for this aspect of his identity to solidify. If the teacher had not treated Philip as an academically successful student across several classes in March, and if Natalie and Sean had not also treated him this way by looking to him for answers, Philip's identity as a good student would not have become as solid as it did. His trajectory of identification as a good student became more rigid, as the teacher and the other students treated him in this way across events. Such a trajectory need not involve only signs and events that characterize a person in one way. We have seen that Gloria kept trying to identify Philip as stupid, and sometimes she successfully pointed out mistakes he had made. But the overall direction of the trajectory was toward Philip being identified as a good student, both because of the large number of signs across events that characterized him this way and because of the institutionalized position of the teacher whose positive evaluations of him held more weight.

This case has also shown how different trajectories of identification have different shapes. Philip was identified as in charge of the lab group by February 27, when he physically blocked Gloria from touching the scale, after two weeks in which this aspect of his local identity was still somewhat indeterminate. After February 27, the issue was settled. Philip's peer identity was also somewhat indeterminate from his move to the new lab group until February 27, then it was publicly settled for a few weeks, and then Philip may have made friends with Sean. Philip's academic identity was more consistent across the unit, with some short periods of indeterminacy as Gloria and others challenged him, and increasingly solid as the teacher treated Philip as a successful student. Both Philip's identity as a good student and his identity as a low status peer show how trajectories of identification can turn in new directions, as subsequent events allow individuals to be positioned differently. Sean might have eclipsed Philip as the smartest student in the group, and Philip might have established himself as a friend of Sean and not merely a lone loser, if the events of early April were followed with similar ones.

Objectification, then, occurs both within events and across them. If there can be more than one type of objectification occurring simultaneously, however, further questions arise. How do these two sorts of identification relate? Are there other sorts of objectification, at different timescales? If so, how can analysts know which sorts of objectification are relevant in any given case?

The existence of both event-level and intertextual objectification shows that phenomena like social identification are more complex than some have imagined. In order to understand social identification in cases like Philip's, we must explore the interplay between Philip's solidifying identity both within and across events. Because of

the indeterminacy of event-level entextualization, we need to know how Philip's identity was established on February 27 and within other events, whether it was consistent with emerging expectations, whether it was normative, and so on. But we must also examine how the identities that emerged on particular days continued or shifted trajectories that were solidifying or shifting direction across events. A trajectory of identification cannot occur without entextualization within events, but identities entextualized within events have no bite over time unless they are incorporated into trajectories. We must examine empirically the different ways in which trajectories are formed out of events, attending to predictable and unexpected events and to how events come together over time to establish recognizable identities for individuals.

The situation becomes more complicated when we realize that minutes-long events and weeks-long units are not the only timescales across which potentially relevant objectification can happen. Philip was engaged in a process of ontogenetic development, across a timescale of years and decades. At some points in that development, his trajectory of identification would become relatively solid and he would think about and display himself to others as one type of person—perhaps as a "future scientist," or perhaps as a "burnout"—while at other times his sense of self would be more in flux. Philip's family was engaged in a process of upward mobility, starting generations back with the new opportunities his ancestors seized as African Americans emerging from slavery and Jim Crow segregation, through his parents' careers as highly educated professional scientists, and continuing through him as he chooses a career and raises his own children. Philip was operating in a school institution that involved models of personhood and practices that have developed over centuries, like the expectation that

teachers know the right answers and the organization of classrooms with dozens of students working on the same curriculum at the same time. Philip was also identified using models of identity—like "nerd" and "loser"—that have developed sociohistorically and that will also change. I could list other potentially relevant processes that may be relevant to the social identification of Philip in this one science classroom, but these four suffice to make the point. There are many such processes, and no analyst can consider them all. (If the analyst tried, the resulting conference paper would be extremely long and tedious).

Following Lemke (2000), I have argued that analysts must do two things in response to this multiplicity of potentially relevant timescales (Wortham, 2006). First, we must not reduce the phenomenon to one or two relevant timescales. Most interesting human phenomena will be constrained and facilitated by processes at several relevant timescales. Some potentially relevant timescales will not be of interest for understanding the phenomenon of interest. The fact that English is also developing, over centuries, and has certain grammatical categories and phonological registers of potential interest, does not seem to be important to understanding Philip's social identification in this case. Such timescales should be excluded, in order to make the analysis tractable. But rarely does a phenomenon like Philip's social identification take place through the exclusive influence of one or two timescales—only those having to do with Philip's gender, or with his race, or with the details of what happened to him on February 27. An adequate analysis must consider several processes and their interrelations, instead of focusing on "macro," or "micro," or a simple relation between the two.

Another way of making this point is to say that social identification in this case depends on heterogeneous resources, drawn from across several relevant timescales. I will close by pointing out that, in this case and many others involving the emergence of classroom identities (cf. Wortham, 2001; 2006), both academic and apparently non-academic resources play an important role. Philip's local identities depended on the affordances of the lab environment (the fact that only one student could control the apparatus at a time) and the expectations of the curriculum (that there was a right answer and that successful students would figure it out), as well as on widely circulating conceptions of "nerds" and "losers." Even though our habitual models of knowledge and schooling try to purify the academic by separating off the non-academic (Latour, 1993), in real life these domains are interwoven. In order to understand most interesting things that happen in school, whether they involve academic learning or social identification, we will have to examine both academic and non-academic resources.

References

Agha, Asif

2003 The Social Life of Cultural Value. *Language and Communication*, 23: 231-274.

Agha, Asif

in press *Language and Social Relations*. New York: Cambridge University Press.

Agha, Asif, and Stanton Wortham

2005 Discourse across Speech-Events: Intertextuality and Interdiscursivity in Social Life. A Special Issue of *Journal of Linguistic Anthropology*, 15(1).

Bickhard, Mark H.

1994 Rocks, Frogs, and the Cartesian Gulf: Toward a Naturalism of Persons. *New Ideas in Psychology*, 12: 267-276.

Csordas, Thomas

1994 *The sacred self*. Berkeley: University of California.

Dreier, Ole

2000 Psychotherapy in Clients' Trajectories across Contexts. In *Narrative and the Cultural Construction of Illness and Healing*. Cheryl Mattingly and Linda Garro, eds. Pp. 237-258. Berkeley: University of California Press.

Garfinkel, H.

1967 *Studies in Ethnomethodology*. New York: Prentice Hall.

Goffman, Erving

1981 *Forms of Talk*. Philadelphia: University of Pennsylvania Press.

Horkheimer, M. and T. Adorno

1947 Dialectic of Enlightenment. E. Jephcott, trans. G. Noerr, ed. Stanford, CA: Stanford University Press.

Jakobson, Roman

1960 Closing Statement: Linguistics and Poetics. In *Style in Language*. T. Sebeok, ed. Pp. 350-377. Cambridge: MIT.

Latour, Bruno

1993 *We Have Never Been Modern*. Cambridge: Harvard University Press.

Liechty, Mark

2005 Carnal Economies: The Commodification of Food and Sex in Kathmandu, *Cultural Anthropology*, 20: 1-38.

Lemke, Jay

2000 Across the Scales of Time. *Mind, Culture, and Activity*, 7: 273-290.

Lukács, Georg

1922 *History and Class Consciousness*. Rodney Livingstone, trans. Cambridge, MA: MIT Press.

Sapir, Edward

1921 *Language: An introduction to the study of speech*. New York: Harcourt, Brace and Company.

Silverstein, Michael

1992 The Indeterminacy of Contextualization: When Is Enough Enough? In *The Contextualization of Language*. A. DiLuzio and P. Auer, eds. Pp. 55-75. Amsterdam: John Benjamins.

Silverstein, Michael

1993 Metapragmatic Discourse and Metapragmatic Function. In *Reflexive Language*. John Lucy, ed. New York: Cambridge University.

Silverstein, Michael and Greg Urban, eds.

1996 *Natural Histories of Discourse*. Chicago, IL: University of Chicago Press.

Wortham, Stanton E.F.

2001b Interactionally Situated Cognition: A Classroom Example. *Cognitive Science*, 25: 37-66.

Wortham, Stanton E.F.

2005 Socialization beyond the speech event. *Journal of Linguistic Anthropology*, 15, 95-112.

Wortham, Stanton E.F.

2006 *Learning Identity*. New York: Cambridge University Press.