

Narratives of the Science Classroom: An Approach to Dialogic/Performance Analysis.

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Abstract

The focus of this paper is a discussion of methodological dilemmas arising from the application of a dialogic/performative approach to narrative analysis in a study of student identity and agency in science classrooms. There has been a call for a focus on student identity within science education research to address a widespread and persistent trend of student disengagement with science in the middle years of schooling. Responding to this call, the study has used a poststructuralist theoretical framework to investigate the fluid and multiple identities students occupied in two different science classrooms, and provided insight into student learning and meaning making within 'pipeline' (Aikenhead 2005) science curricula. The study utilised rich classroom video data filmed with the support of the International Centre for Classroom Research at The University of Melbourne. Focusing on lived narratives within science classrooms, the study is differentiated from traditional approaches to narrative research that focus on narratives told. This paper contributes to contemporary discussions about research conducted within the borderland between narrative and poststructuralist approaches to educational research.

Reissman (2008) describes dialogic/performance analysis as a broad and varied interpretive approach to oral narrative that makes selective use of elements of both thematic and structural analysis to interrogate how talk among speakers is dialogically produced and performed as narrative. Like the examples provided by Reissman, this study is concerned with the way identities are dialogically enacted in social contexts. However, rather than narratives told, the study focussed on narratives enacted. This difference follows a shift from representational narrativity to ontological narrativity, in recognition that narrative is an ontological condition for social life (Somers 1994). As Reissman points out, the dialogic/performance approach pushes the boundaries of what is and is not considered to be narrative analysis. The approach utilised in this classroom study sits within Rosiek and Clandinin's (Rosiek and Clandinin 2007) mapping of the territory of narrative research in the borderland between narrative and poststructuralist approaches. The paper

is concerned specifically with the challenges and dilemmas faced by the researcher in employing a narrative approach within a poststructuralist interpretive framework in classroom settings.

Unlike previous studies in science education that have utilised structuralist lenses to investigate possible identity-types available in science classrooms, this study has incorporated into the core conception of identity the categorically destabilizing dimensions of time, space and relationality (Somers 1995, p606). Using the post-structuralist lens of identity as performative (Butler 1990) to investigate the fluid and multiple identities students occupied within a science classroom, the study aims to shed light into the processes through which students constantly enact and become socially recognisable as participants in science classroom practices. The focus on ontological narratives made it possible in this study to consider the way in which power installed itself within these practices.

Two science classrooms in different schools in Melbourne were chosen as sites for the study. The author and the research team observed and digitally recorded nine lessons in each classroom, corresponding to complete units of work in each case. Four video cameras were used to capture each of the science lessons with a focus on the teacher, two focus student groups and a wider view of the whole classroom. Following each lesson the teacher and two focus students were interviewed using video-stimulated recall (Clarke 2006) wherein the student interviewee was given the play/pause/fast-forward control of the video of themselves in a play-back view concurrently with the whole class video and asked to pause at moments in the lesson significant to them and to explain their choice. These interviews and the author's observations were used as adjuncts to the analysis of the classroom videos. Ontological narratives situated in the site of the classroom, or storylines, and the students' positioning within these were the focus of the analysis.

The study was concerned with student positioning in science classrooms within ongoing lived narratives. The complex narrative environment of the classroom called for a dynamic framing of what is and is not a narrative. To this end the researcher adopted Harré and van Langenhove's (1999) notion of 'storyline'. A storyline refers to a mutually enacted narrative within which actors position themselves as recognisable persons in the social setting. Storylines can unfold as well-oiled repertoires, with actors taking up positions in relation to each other and contributing to the unfolding storyline, or can be contested as actors reposition themselves in relation to one another. Storylines can be interwoven and can often compete, as positions are negotiated. The analysis of the classroom videos concentrated upon the identification and interpretation of storylines from within the science classrooms. Findings from the study include the identification of normative practices within the science classrooms and the documentation of the way in which student identity was performatively accomplished within and through these practices.

The paper provides an explanation of the way the author as researcher approached the identification, interpretation and representation of storylines.

An episode from lesson transcripts is used to illustrate choices made to maintain a sense of the situated and dialogical qualities of ontological narratives. The paper concludes with some observations about the need for greater attention to methodological issues related to research intended to integrate narrative and poststructuralist approaches to educational research in classroom settings.

Introduction

The approach to researching student identity and agency in this study is in response to a call for research and practice in science education that moves beyond cognitive psychology (Roth and McGinn 1997; Brickhouse 2001; Lemke 2001; Kozoll and Osborne 2004; Zembylas 2005; Aikenhead 2005.) Researchers such as Lemke (2001) have suggested that the separation of cognition and emotion is unhelpful in the endeavour to understand how active and meaningful student participation in science educational practices can be achieved, and emphasize issues of identity development as central to learning. Zembylas (2005) argued that a fruitful, contemporary direction in researching science learning would be to take a poststructuralist lens to science educational practices. Central to the approach suggested by Zembylas was a holistic view of the learner and learning whereby emotion and cognition are constituted through discursive practices in which students are positioned. The aim of this study was to explore Zembylas' suggestion that poststructural analysis "has the potential of providing interesting insights in our efforts to understand the contemporary disillusionment of young people with science" (p106).

This study draws upon recent poststructural insights with an emphasis on the constitutive role played by language, the body and discursive practices in the construction and experience of learning. Poststructuralist thinking opens the door to considering how student identity, concurrently with learning, evolves largely out of the history of the way in which emotions, bodily sensations, thoughts, judgements and beliefs are constituted in the classroom (Zembylas 2005, p103). In a complementary manner practice theory (Wenger 1998; Schatzki 2003) informed the way in which the study was designed and positioning theory (Harré and Langenhove 1999; Bamberg 2004) was employed as a tool for data analysis.

The challenge inherent in this approach has been to articulate a notion of identity grounded in the enactment of practice, and to develop a methodology for its study. Extending the methodology used in Arnold's (2004) interpretive study of primary teacher agency and identity using positioning analysis (Harré and Langenhove 1999; Bamberg 2004), this study draws upon the notion of "ontological narratives" (Somers 1995) and develops a performative approach to narrative analysis that foregrounds enacted stories. Somers defines ontological narratives as "the stories that social actors use to make sense of - indeed to act in - their lives", and stresses that "ontological narrative like the self is neither apriori nor fixed. Ontological narratives make identity and the self something that one becomes" (p618). This is a departure from the

traditional focus of narrative analysis on stories told, or “biographical particulars as narrated by the one who lives them” (Chase 2005). Like any disruption of normative modes, the potential for dialogic interaction is heightened (Parr 2007). And this is the mode within which I intend the reader to engage with this paper.

Theoretical Framework

Butler’s (1990) poststructural notion of identity as performative underpins the notion of student identity used here in the study of student identity and agency in science classrooms. Rather than taking identity as a personal attribute and the way a person acts as a result of being a particular type of person, identity has been conceptualised as “performatively constituted by the very expressions that are said to be its results” (p53). Identity cannot be realised apart from the conditions within which it achieves intelligibility, as simultaneously the conditions are reiterated and confirmed upon its realisation.

The definition of identity adopted here lies neither within the realms of individualism, nor within societist ontologies such as wholism, Durkheimian sociology and structuralism. It disrupts normative ways of thinking about and researching identity and learning. Firstly, it recognises any expression of identity as necessarily social in that it draws upon historically intelligible practices, including discourses. It takes into consideration the insight that becoming recognisable as a person in any social setting, one must develop capacities to act within locally intelligible modes, including displays that lie within the bounds of local moral orders. Butler describes this as a process of subjectification: the simultaneous submission to and mastery of intelligible practices. And secondly, identity like the conditions under which it achieves intelligibility is never pre-existent but at the self-other or self-societal dialectic.

The appropriate ontology for the study of identity as performative is therefore site ontology (Schatzki 2003) that maintains, “social phenomena can only be analysed by examining the sites where human coexistence transpires” (p176). A site is conceived of here as a matrix of practices; open-ended sets of actions intelligible within locally normative modes. Importantly, to the extent that people become identifiable as participants within practices, “it is the actions of other participants, not the practices themselves, that accomplish this” (Schatzki 2003, p193). Therefore the “social act” has been taken as the smallest possible unit of analysis in this study. A social act is differentiated from an action, because it takes social meaning into account by the way in which an action is taken up at the site. In the specific example of a speech-act, the words comprising the utterance form the action. It is only when the response of the hearer(s) has been signed in some way that the speech-act is complete.

Harré and van Langenhove identify three mutually determining features of social interactions through which social meaning can be made relatively determinate (1999, p6):

1. Positioning: the moral positions of the participants and the rights and duties they have to say certain things.
2. Storyline: site-specific “ontological narratives” (Somers 1995), and the sequence of things already being said and done.
3. Act/Action: actual sayings and doings with their power to shape certain aspects of the social world.

The mutually shaping nature of these three features of social interaction is articulated by Somers below as “who we are” or “narrative identity” (position), “ontological narratives” (storyline) and “what to do” or what is done (action):

“Ontological narratives are used to define who we are; this in turn can be a precondition for knowing what to do... Narrative location endows social actors with identities, narrative identities” (1995, p 618).

Any social act is taken in this study as an expression of identity that adheres to a storyline. It is therefore student positioning within lived storylines that is of interest here. Any story told is taken as an act of positioning within a lived storyline, and interrogated not only in terms of what is said, but the social meaning of the story in the lived context.

Traditional approaches to narrative research in the social sciences focus on stories told (Reissman 2008, Chase 2004) using either structural or linguistic analyses or a combination of both. But in each case, the focus has been on storytelling as an action. Even when traditional approaches acknowledge that the telling of a story can be achieved in and through social interaction, for example research accounts that take the social force of an interview situation into consideration, it is the story told that is considered to be the object of research. Under traditional research schemes, the interview has dominated as the method of research, the object of an interview being to either elicit or co-create stories. Critiques of this approach include McLeod and Yates’ (2003) reflection of their positioning in interviews with youth and Fawn’s (2000) argument that biographies cannot entirely account for social acts.

In this study, any story told is considered to be an occasion of positioning within and through ongoing storylines. Harré and van Langenhove’s (1999) description of first and second order positioning differentiate between positioning within storylines at the site at which human interaction transpires (first order positioning) and positioning within biographical recounts (second order positioning). Since it is the way in which students become identifiable as participants in science classrooms that is of interest here, methods have focussed upon the site of the classroom through video and audio recording students participating in their usual science lessons; the site and practices of interest in the study being the science classroom rather than the interview scenario.

The author sought an approach to researching lived, rather than told stories that went beyond linguistic and structural approaches. Reissman’s (2008) conception of a dialogic/performance approach broadly situates the approach

taken here. However the point of departure from her open definition is a poststructural leaning towards the way in which subjectivity is developed in and through discourses and practices within local moral orders. The interpretive methodology developed by the author utilising poststructural conceptual tools such the performativity of identity (Butler 1990) and Positioning Theory (Harré & van Langenhove 1999, Davies & Harré 1999) is illustrated below.

Storylines from the Science Classroom

The methodology developed for the study of student identity within and through the site of the science classroom involved videorecording middle years science lessons at two different secondary schools in Melbourne, Australia. The example of analysis presented here is from a case study of one science classroom. The classroom was studied over nine lessons using four cameras and seven audio tracks. Video-stimulated post-lesson interviews (Clarke 2006) with focus students and the teacher, and the author's field notes from lesson observation supplemented the digital record. The fine-grained analysis of classroom transcripts is illustrated below. Episodes in which the two groups of focus students engaged with science classroom practices were chosen for fine-grained analysis. Prominent storylines emerged during an initial coding of classroom transcripts according to coherent conversations and student positioning.

The episode presented below involves one group of focus students, who were working together during a practical activity. Their instructions were to place a tissue in the bottom of a cup and observe what happened when the cup was placed upside down in a tub of water (Appendix). The purpose of this experiment was to illustrate that air, a gas, takes up space and prevents water from entering into the cup. The tissue remaining dry even though the cup was submerged in water provided an observable phenomenon, which the students were required to explain. Within this episode, one of the students attempts to position herself alongside the others in the group as a collaborator in knowledge production and capable of putting forward a theory for further testing or discussion. However, she was unable to develop an identity as a creator of knowledge in the episode due to the actions of others including the teacher and her co-students. The way the episode unfolds as the interplay of competing storylines is highlighted in the analysis.

Three storylines were identified in the episode.

Staying on Track

Interlocutors intuitively and explicitly value and promote efficiency and task completion. Social acts are orientated towards an agenda that was either explicitly set by the teacher or implicitly acted upon through a sense of the teacher's responsibility for the agenda.

Students as Creators of Knowledge: Students show a sense of personal agency and actions are orientated towards developing an understanding of their observations, for example through problem solving or discussion.

Carnival: Actions are orientated towards a sense of solidarity between interlocutors, often through humour. This storyline could be seen as subversive to normative storylines such as 'Staying on Track'. Tobin (2008), after Bhaktin, has used the term 'carnival' in this sense in his study of science classrooms in the USA.

The transcript has been divided into rows separating individual speakers. The sections of transcript are sequential but do not necessarily follow immediately after one another and the episode transpires within a fifteen-minute time frame. The students' names are pseudonyms. Additional comments in the analysis column are a positioning analysis (Harré & van Langenhove 1995, Arnold 2004) using pronominal coding (Muhlhaüsler and Harré 1990) to help gauge speakers' psychological locations within storylines.

Tasha and the Magic Tissue

Tasha, Kesar, Gloria and Angie are working together on the first of three practical activities (Activity A, [Appendix](#)). They are standing around a workbench in their science classroom as Kesar begins to read the instructions from a worksheet aloud. The equipment they need for the activity is on the bench in front of them.

SPEAKER	TRANSCRIPT	ANALYSIS
Kesar	[Reading]: <i>Crumple a tissue and. Which one would you like to do?</i>	
Tasha	A	Referring to Part A on the Worksheet (Appendix).
Kesar	A, ok. [Reading]: <i>Crumple a tissue and fit it tightly into the bottom of a glass.</i>	Tasha's suggestion is taken up. Beginning at Part A is established as the group purpose.
Gloria	I'll do the air compressing one [playing with syringe, she gestures with the syringe towards the other group members].	Invites others to engage in play with the syringe. Gloria had been playing with the syringe prior to Kesar taking up the worksheet and reading. She firstly fitted the plunger into the syringe and adjusted the seal on the plunger. Once the plunger was inserted and able to be moved, she held her finger over the opening and attempted to compress the syringe (Part B on the worksheet). Her use

		of the first person could index a personal desire to continue with her play.
Kesar	[Reading]: <i>Push the glass mouth down into a large container of water until most of the glass is under water.</i> Ohhh, I see.	Kesar continues reading Part A, as decided, while Angie and Tasha look on. Gloria's offer to do Part B or to play with the syringe is ignored for the moment. Use of the first person indexes a sense of personal understanding.
Gloria	Yeah, no, I'll do it. You got to crump like squeeze it in there.	Here Gloria abandons the syringe, takes up the group's purpose and enacts instructions as Kesar reads. Her use of 'you' indexes what she believes is expected of 'one carrying out the instructions correctly'.
Tasha	Yeah you can do that.	Sanctions Gloria's role
Angie	Ahhhh [playing with the magnets]	Invites others to engage in play with the magnets.
Gloria	Alright, we need the water.	Invitation not taken up. Her use of the collective first person indexes responsibility to the group. Here Gloria maintains 'Staying on Track' storyline.
Kesar	[Reading]: <i>pull the glass out of the water and check if the tissue is wet.</i>	
Gloria	It's all in the name of Science [laughs]	Repositions herself using humour. Carnival storyline.
Angie	How much water do we need?	Here Angie abandons the magnets and takes up the groups' purpose in response to Gloria's suggestion above "we need water" and locates herself as responsible as a member of the group.
Gloria	I have no idea.	Repositions herself outside of the 'Staying on Track' storyline by relinquishing personal responsibility.

Here the students established a shared purpose for the activity. The 'Staying on Track' storyline was maintained variously by different students.

Prior to the next section of transcript below, the students carry out the following actions: Gloria reads the instructions on the worksheet. Angie fills a tub with water from the tap at their workbench. Angie places the tub of water on the bench and Gloria puts the cup into the water upside down.

SPEAKER	TRANSCRIPT	ANALYSIS
Angie	You have to do it upside down?	Use of second person indicating what is expected of them in the

		public persona of 'student following instructions'.
Gloria	Yep. Won't even get wet	In her second utterance here, Gloria positions herself as a person with the capacity to predict and not as a student following instructions. This is a new storyline.
Kesar	I think, doesn't it determine on how	Takes up new storyline and positions herself alongside Gloria as someone capable of expressing a personal opinion. Her use of 'determine' here is like 'depend'. By beginning to express her opinion, she opens a speculative discussion on the conditions under which the tissue would remain dry or get wet.
Tasha	Yeah	
Gloria	Because the air	
Kesar	Doesn't it determine	
Gloria	See the air gets [continues 'dunking' the cup]	
Kesar	Yeah, but um	
Gloria	the air pushes it out	
Tasha	Yeah, but it needs to be higher [referring to water level in tub]	Contributes to speculative discussion by questioning the conditions under which their observations hold.
Kesar	Yeah but um [sighs]	
Angie	There's no water in there!	Expresses surprise and at the same time contributes to the storyline by offering her observation to the group.
Gloria	Exactly!	
Kesar	But um, yeah and	
Gloria	It's at the bottom of the thing, isn't it? [Referring to water level inside the upturned cup].	
Angie	But that's so cool! There's no water in there at all.	Repeats her expression of surprise, this time explicitly.
Gloria	Coz no ... The air pushes it out. That's why.	
Kesar	I can see	
Tasha	It has	
Gloria	[drops tissue in the water] Ah	
Kesar	O-oh	
Angie	Well done, Gloria. Another tissue?	Expresses expectation of repeating the activity.
Kesar	The tissue used... to be dry... Well, it needed a wash.	Humour.
Teacher	Now, ladies why... sorry, now,	Storyline 'Staying on Track'

	why are the magnets here, you reckon?	signalled by the teacher. He checks that students understand the purpose of a piece of equipment by positioning them to respond to his question.
Gloria	I have no idea.	Does not take up teachers positioning.
Angie	Errr...	
Teacher	Well, I've got liquid and gas. What haven't I got any of out here at the moment?	Positions himself as responsible for providing equipment (and for agenda).
Tasha	//Solid, solid	
Kesar	//Solids	
Teacher	[indicates magnets] And what are they?	
Gloria	//Solid	
Kesar	//Solids	
Teacher	Very good. So maybe make some comparisons, girls [walks away].	Restates agenda i.e. to compare properties of solids, liquids and gases.

Here, the teacher interrupted the exchange between the students, and in doing so repositioned the students as responsible for following instructions. The speculative discussion between the students was not resumed.

Following is a later point in the activity where Tasha attempts to reopen the speculative discussion by addressing the group.

SPEAKER	TRANSCRIPT	ANALYSIS
Tasha	Is it because the air goes in the cup and the tissue somehow brings it, the air, out again... so... um?	Reopens the speculative discussion on the scientific explanation of their observations by tentatively putting forward her reasoning. Positions others to comment on her theory.
Angie	No, it's because of the gas ...// its Tasha's gas	Makes a joke
Tasha	//But how was the tissue?	Tasha persists, this time using a question directed at the group
Kesar	[laughs] that's funny but wrong	Takes up Carnival storyline
Tasha	Oh, shut up.	Contributes to carnival storyline by good naturedly saying what would be expected of her in this storyline.
Tasha	Yes, so how do you do it?	Tasha repositions herself within 'Staying on Track'. Her use of the second person indicates what she sees as expected of her in the public persona of 'student following instructions'. She is asking how one is expected to respond to the

		instructions on the worksheet: <i>“Write an inference to explain your observations”</i> .
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Here, Tasha attempted to reopen a speculative discussion by addressing the group and positioning herself and the group within the ‘Students as Creators of Knowledge’ storyline. The group did not take up this positioning. Tasha participates in the Carnival storyline for a moment by good-naturedly telling Angie to ‘shut-up’ (an expected response to Angie’s good-natured teasing). Tasha’s question “so how do **you** do it?” can be seen to fall within the storyline of ‘Staying on Track’ because it designates recourse to the expectation that an explanation is required of them. However, the group did not take this up. They were at this point in time carrying out the instructions for Part B of the activity ([Appendix](#)).

Below, Tasha makes another attempt to reopen the discussion by addressing Kesar directly and rephrasing her tentative explanation. Kesar takes up the positioning and the group becomes involved in redoing Part A momentarily, even though they had already moved on to Part B.

SPEAKER	TRANSCRIPT	ANALYSIS
Tasha	Yeah, so how does the... Why? The air goes into the cup and what?	Addresses Kesar, positioning Kesar to explain
Kesar	Um	
Tasha	And the tissue somehow stops it [laughs]	Puts forward a tentative explanation.
Kesar	And let's - I want to do that again just to observe it.	Expresses desire to redo experiment. Use of first person represents an expression of personal agency.
Tasha	[to the group] Can we do that again, please?	Takes up Kesar’s suggestion and locates responsibility for practical activity with the group.
Kesar	[pushes a beaker upside down in a container of water without the tissue] Do we need... Okay... we probably didn't	Kesar experiments without the tissue, questioning the need for the tissue
Angie	Does it work with that container?	Angie engages with what Kesar is doing with the beaker i.e. putting it upside into the water without the tissue.
Tasha	I'm going to get tissue	Tasha leaves the group to get a tissue, understanding that their purpose was to carry out the experiment again as described on the worksheet.
Angie	Or does it have to be with a tissue.	Angie, Kesar and Gloria engage in investigating the new question of

Kesar	It's hard to see coz of the water.	whether a tissue is necessary to keep the water from entering the upturned beaker.
Angie	Oh yeah, there's no water in there.	
Kesar	There's no water in there!	
Angie	No	
Gloria	Right, right, lift it up slowly. Let go, let go.	
Angie	Yeah, there wasn't any water.	
Kesar	Ok	
Gloria	you can see if it's not because then there's air bubbles.	
Kesar	I think. Yeah, I don't think it	
Angie	Tasha got another tissue.	Angie signals Tasha's return with the tissue. However whilst Tasha was away, the group purpose changed. There was no longer a need to experiment with the tissue.
Angie	If we stop playing with the beaker.	Angie signals the group's purpose to stay on track and continue with Part B.
Kesar	Okay	

Here, Tasha returned with the tissue to find that her group had already resumed Part B of the activity, which involved trying to compress air and water using a syringe. The students did not return to the discussion about why the tissue stayed dry. Tasha participated in carrying out Part B and did not attempt to resume the speculative discussion again.

In her workbook, Tasha wrote her explanation for the observation that the water did not get into the cup to wet the tissue as: *"Because the air goes in the cup and then rebounds off the tissue"*.

Discussion

The episode illustrated the fluid and multiple identities students enact within science classrooms. In the analysis, pronoun use was taken to reflect the speakers' psychological locations within storylines. Within the storyline 'Students as Creators of Knowledge', students positioned themselves as capable of putting forward theories for speculative discussion and as potential collaborators in knowledge creation. A student's sense of personal agency was evidenced in the way that the first person pronoun was used, for example in statements beginning with "I think..." they positioned themselves as morally capable of expressing a personal opinion. Student positioning in this storyline can be contrasted with their positioning as students following instructions in 'Staying on Track'. Within this storyline students did not use the first person pronoun. Instead their sense of personal responsibility was diffused in deference to the group (through the use of the collective first person) and deflected to a public persona (in their use of the second person).

In the episode above, the 'Staying on Track' storyline is shown to hold normative value over the other storylines identified. The positioning of students within this storyline is re-established by the teacher and the students. This occurred despite Tasha's repeated efforts to reposition herself as a collaborator in the creation of knowledge. Tasha's repositioning is not taken up as relevant or viable in the shared endeavour to complete the practical tasks within the period of time allocated by the teacher.

Implications of the analysis for science educational practices are discussed in the research report (Arnold forthcoming). By highlighting the way in which normative practices are played out, the study contributes to opportunities for reflection upon science educational practices. In particular, the study highlights the assumption that science educational practices can be emulative of scientific practices as simplistic. Power was installed at the site of the classroom through the actions of the teacher and the students, maintaining student positioning within normative practices. In the episode presented here, this positioning impeded student capacity to forge identities as collaborators in the creation of knowledge.

Conclusion

This study contributes to the body of research in science education that is concerned with student identity and agency and to a reconceptualisation and broadening of narrative research.

Illustrated in this report is the fluid and tacit nature of ontological narratives. These are narratives that frame social behaviour, yet in practice they can be contested and incomplete. For example, Tasha positions herself as a person capable of producing a theory for discussion, like a scientist at the forefront of knowledge creation. In order for the storyline to continue, others would need to have recognised her moral right to this position and take up complementary positioning. That this did not occur highlights storylines as potential framings for interaction rather than complete narratives that adhere to a narrative structure. Likewise storylines are not readily susceptible to purely linguistic analyses. Within the theoretical framing of the study, the meaning of any linguistic device can only become relatively determinate in the way it is used and responded to at the site.

Storylines are not narrative representations of experience; they are potential framings of experience. Storylines may be drawn from heterogeneous resources (O'Connor 2001) and have the potential to disrupt normative practices. However, the episode presented here reveals the way in which a focus student can be repositioned within the local moral order of the classroom as 'a student following instructions'. This subjectification occurs through the nonreflexive enactment of a normative storyline. Davies (2007), drawing on Deleuze (2004) and Butler (1997), has cautioned, "unreflected ordinariness can deprive some of a reasonable or viable existence" and has

argued for “the ethical necessity of disruptions to the ongoing repetitive citations of the known order”.

The episode chosen for analysis here by the researcher was not recognised as salient by the focus students or the teacher in the video-stimulated interviews conducted after the lesson. It was chosen after analysis of nine lessons from each of two different science classrooms. The ‘Staying on Track’ storyline held normative value in both of these classrooms. The episode presented here illustrated the way in which ordinary practices in science classrooms can work against students developing the kinds of identities that the curriculum is designed to promote.

The analysis has been achieved in this study using positioning theory (Davies and Harré 1990; Harré and Langenhove 1999; Davies 2008) in which the storyline, positions and ‘what is said or done’ are seen as interdependent concepts with which social meaning is made relatively determinate. These three concepts are known as “the positioning triad” (Harré & van Langenhove 1999). Not only has this insight informed the analysis but also the author has represented the episode in a way that maintains the reader’s ability to dialogically engage with the analysis. The actual sayings and doings are represented in the transcript in way that gives the reader a sense of the storylines and positionings as they are enacted at the site of interest, rather than a narrative redescription of events.

Appendix

QuickTime™ and a
H.264 video codec
are needed to see this picture.

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