The reproduction of social class differences through pedagogy: A model for the investigation of pedagogic variation

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Introduction

An enduring concern in the sociology of education is the persistent achievement gap between working class and middle class students. We have known for a long time, especially since Coleman (1966), that schooling reproduces social class differences. Working class and middle class children come into school differentially positioned for success, and the school fails on average to give working class learners a leg up.

This article attempts to address this problematic, by specifically focusing on how it is that *pedagogy* reproduces social class differences. In doing so *orientation to meaning* is taken to be the crucial background variable associated with social class which makes a difference to children's schooling experience. Orientation to meaning refers to the transmission and acquisition of more context-independent meanings (elaborated codes or a 'school code') and more context-dependent meanings (restricted codes). The main purpose of the article is to present a theoretical model for the consideration of the reproduction of social class differences through pedagogy. It integrates analytic tools from the sociology of education in order to achieve a specificity of description of the process whereby different orders of meaning and knowledge are transmitted. Setting up two starkly contrasting social contexts in which pedagogy unfolds, the model highlights a broad range of pedagogic forms that may potentially be encountered.

The article is located within a broader study addressing the reproduction of social class differences through pedagogy (Hoadley, 2005). The broader research study was conducted in South African primary schools in 2004. Drawing on a range of data, including classroom observation, interview and student task data, the study sought to develop a framework for the analysis of pedagogic variation across social class school settings, and to show how inequalities are potentially amplified through the pedagogic practices found in classrooms. In

the transition from apartheid to a democratic dispensation in South Africa, class inequalities (which are largely aligned with race) have persisted, and a highly stratified system of education in terms of social class has become entrenched (Hoadley, 1999; Soudien, 2004, Chisholm, 2005). Schooling in South Africa fails the vast majority of students in enhancing their life chances. The article attempts to make a contribution towards understanding how it is that this happens.

There have been a number of studies in the sociology of education that deal with the relationship between social class and student performance and how inequalities are sustained. These include the broader social reproduction studies of Bowles & Gintis, 1976, who focus on the implications for economic relations, and Bourdieu and Passeron who focus on cultural reproduction. Gerwitz & Cribb (2003) and Morrow & Torres (1994) offer useful overviews of the shifts in the ways in which social reproduction has been theorized more recently. Gerwitz & Cribb (2003) show how new theorizations of the earlier radical left theories have taken a number of criticisms and issues seriously. These new theorizations consider the 'context specificity' of social reproduction, the complex interactions between various axes of social division, the fluid and hybrid nature of identity formation, those aspects of schooling which are unconnected to or 'interrupt reproduction', and non-deterministic modes of explanation (Gerwitz & Cribb, 2003:257-8).

More interpretive studies concern the differential distribution of knowledge (Keddie, 1971; Walkerdine, 1988) and texts (Dowling, 1998) to students of different social classes. There are those which frame the question in relation to teacher labelling (Labov, 1972, Cicourel & Kitsuse, 1963); tracking (Oakes, 1985), or teachers and students of different social classes' access to different 'ways with words' and ways of interacting. (Heath, 1985). Some studies also address issues of pedagogy (such as Gwimbi & Monk, 2003), and the nature of mathematical problem setting (Dunne & Cooper, 2000).

The studies cited above provide analyses of how it is that social class differences are filtered through schools and classrooms, and how school and classroom processes potentially amplify differences between students, disadvantaging the working class. What is less developed in these accounts are sufficient means for examining how it is that social class differences are reproduced through *pedagogy*. How precisely do we describe pedagogic processes so that the mechanisms of social class differentiation are made explicit?

Bernstein, the key theorist informing this study, makes the point that there is a differential distribution of power and control relations across different social classes, and these produce different practices and forms of consciousness. It is through Bernstein's 'codes' that we see the differential positioning of subjects of different social class groupings, dominant and dominated. Bernstein poses the question in this way:

> What we are asking here is how the distribution of power and the principles of control are transformed, at the level of the subject, into different, invidiously related, organizing principles, in such a way as to create the possibility of change in such positioning (1990:13).

And he answers his own question like this:

> The broad answer given by this thesis is that class relations generate, distribute, reproduce, and legitimate distinctive forms of communication, which transmit dominant and dominated codes, and that the subjects are differently positioned by these codes in the process of acquiring them (ibid).

Code theory examines the relationships between social class, family, schooling processes and the reproduction of meaning systems. Code refers to the principles that regulate meaning systems; it is concerned with the transmission of meaning, in the family and school, and how this relates to social class reproduction. Work in this tradition shows how working class students enter the school with a 'community code' and do not have ready access to the school code. The school code is not developed in the family prior to encountering formal pedagogy. Middle class students, whose processes of primary socialisation are regulated by pedagogic codes similar to school codes, acquire the school code more efficiently. However, in the social reproduction script, working-class children will never make it. Bernstein's code theory opens up the possibility for talking about reproduction and its interruption. This is explained further below.

The article begins with further elaboration of Bernstein's theory. Two other key theorists informing the model presented in the article are discussed: Dowling (1998) and Pedro (1981). Their recruitment in relation to Bernstein's theory is also discussed. Two exemplary data texts are then presented which show how the model was derived through interaction between theory and data. The article concludes with a discussion of the pedagogic modalities derived

from the research, the recruitment of the theoretical resources for the study, and some of the implications of the theorized description of pedagogy are drawn out.

Pedagogy and the specialization of voice

The meaning orientations referred to earlier - more context-independent meanings (elaborated codes) and more context-dependent meanings (restricted codes) - are identified in the analysis of the transmission practices later in the article. They have implications for the way in which the student's voice is specialized, or the extent to which the student's educational identity and specific school-related skills are clearly marked and bounded.

Specialization of voice refers to the way in which 'subjectivity is created through the socialization of individuals into categories of agents, knowledge and contexts that are distinguished by the particularity of their voice' (Dooley, 2001:77). 'Specialization' then 'reveals differences from, rather than commonality. It means that your educational identity and specific skills are clearly marked and bounded' (Bernstein, 1975:81).

The purpose of schooling then is to specialize learners' voice with respect to the school code. Put another way, pedagogy in this view inducts learners into a 'school' way of organizing experience and making meaning, in short hand, into the elaborated code of schooling or the 'school code' (which entails the transmission and acquisition of context independent meanings). Middle class and working class learners are differently positioned to acquire this code. This is because their primary socializing in the home provides more or less ready access to school ways of making menaing and organizing experience (Holland, 1981; Forntinhas et al, 1995).

How do we identify the specialization of voice, or more precisely, whether the transmission is doing the work of specializing? Conventionally, in the Bernsteinian literature, specialization of voice is adumbrated in terms of classification and framing values. The theoretical model presented here comprises three dimensions. The classification and framing of the pedagogic discourse, the instructional strategies deployed by the teacher in the pedagogy, and the instructional form that the pedagogy takes. Each of these three aspects of the theoretical frame are discussed below.

Classification and framing

To summarize the above, for Bernstein, education specializes consciousness. In order to describe how this happens, the code theory was developed, and the realizations of the elaborated code in institutionalized form were further conceptualized (Christie, 1999:3). The specializing of consciousness happens through two key mechanisms which are at the heart of Bernstein's theory: classification and framing, which refer, respectively, to power and control.

The specialized form of communication whereby differential transmission and acquisition is effected is the pedagogic discourse (Bernstein, 1990:182). Pedagogic discourse describes the *relay* of pedagogy. It consists of an instructional discourse embedded in a regulative discourse, where 'instructional discourse is concerned with the transmission/acquisition of specific competences, and regulative discourse is concerned with the transmission of principles of order, relation and identity' (Bernstein, 1990:211).

The fact that the instructional is *embedded* in the regulative means that the hierarchical relation between transmitter and acquirer regulates the selection, sequencing, pace and evaluative criteria of the instructional knowledge. Pedagogic discourse is defined as the rule which embeds a discourse of competence (the instructional, including specific skills) into a regulatory discourse (regulatory of character, conduct and manner, and of theories of pedagogy).

Bernstein provides a language for the description of pedagogic discourse through the concepts of classification and framing. Classification refers to the social division of labour. At the macro level classification generates categories of agents and discourses: the categories or insulations are instantiations of power. At the micro level, classification is about the organizational or structural aspects of pedagogic practice. Classification is about *relations between,* and the degree of maintenance between categories, and these include the boundaries between agents, spaces and discourses.

Classification is expressed as being strong (where boundaries are explicit and categories are insulated from one another), or weak, where there is integration, or where the boundary is weak or blurred. These are expressed in terms of a continuum, from C^{++} through to C^{--}. In terms of discourses, the relations between different subject areas (inter-disciplinary relations), and between school knowledge and everyday knowledge (inter-discursive relations) are considered, as well as the relation between knowledge within a particular subject area (intra-discursive). With respect to the classification of agents, the theory identifies how teachers and learners' pedagogic identities are demarcated.

Where classification at the macro level is related to the social division of labour, framing refers to social relations within this social division. That is, specific social relations in production/reproduction generate particular practices which we can talk about in terms of framing, or control relations. Framing, therefore, refers to *relations within* (within boundaries). Framing, in a sense, supports classification, it produces 'the animation of the power grid' (Hasan, 2002), but it also opens up the potential for the change of boundaries, the contesting of power relations. It is through interaction (framing) that boundaries between discourses, spaces and subjects are defined, maintained and changed.

At the micro level of pedagogic practice, framing refers to the location of control over the rules of communication. 'Framing refers to the degree of control teacher and pupil possess over the selection, sequencing, pacing and evaluation of the knowledge transmitted and received in the pedagogical relationship' (Bernstein 1975:88). Conventionally, framing has to do with the way in which the relationship between the teacher and the learner is set up, where strong framing refers to a limited degree of options for students, and weak framing implies more 'apparent'[1] control by learners. Again, framing is expressed in terms of its strength or degree of control. Strong framing would imply that students have limited control over the 'relations within' and a limited degree of control over the sequencing, pacing, selection and evaluation of the knowledge transmitted.

There is a crucial relation between classification and framing. It is framing (control) which contains within it the making and the unmaking of the classification (power). It is in the

[1] Because Bernstein privileges a particular definition of pedagogy which is hierarchical, and where the transmitter is in possession of the rules for evaluation, learner control over the discursive rules of pedagogic practice must be 'apparent'. This would also explain why the rule for regulating the conduct of transmitters and acquirers is the 'hierarchical' rule (Dooley, 2001:61).

distinction between power and control that Bernstein allows the intentional and structural aspects of power (Atkinson, 1985) of conventional sociological theories to co-exist, and operate dialectically. In relation to framing Bernstein asserts that 'control is double faced for it carries both the power of reproduction and the potential for its change' (Bernstein, 1996:19). The distinction between power and control, unique in the discipline of sociology, thus allows for the description of the making and potential unmaking of the social reproduction of inequality.

Bernstein (2000:100) provides a taut formula for classifying codes in terms of the different dimensions and values outlined above:

$$\frac{E}{+\text{-}C^{ie}/+\text{-}F^{ie}}$$

Here E stands for orientation to meaning – elaborated, and the line stands for the embedding of the orientation in classification and framing values. Variation in these classification and framing values gives rise to different *modalities of pedagogic practice* (ibid)[2].

Classification and framing describe the structural and interactional aspects of pedagogic practice, exposing the power and control relations that inhere in pedagogic practice. These concepts are connected at both macro and micro levels to a set of related concepts which allow for the analysis of the workings of power and control. The related concepts are summarized in diagrammatic form below.

Figure 3.1 Classification and framing and related concepts (adapted from Dowling, 1999:9; Bernstein, 1990:31 and Bernstein 1990:38)

Power	Control
Social division of labour (structural)	Social relations (interactional)
Classification	**Framing**
Relations between	Relations within

[2] A problem in working with classification and framing in the South African context is raised in the expression of elaborated codes. They assume a certain verticality – the code for schooling is generally regarded as necessarily elaborated. However, the empirical texts generated in the study present that which may fall out of this categorization. An example

The point is that there is a differential distribution of power and control relations across different social classes, and these produce different practices and forms of consciousness. It is through the codes that we see the differential positioning of subjects of different social class groupings, dominant and dominated.

Bernstein specifies the *rules* whereby differential transmission/acquisition is effected (Bernstein, 1990:183). He poses the question as to whether there are any 'general principles underlying the transformation of knowledge into pedagogic communication' (Bernstein, 2000:25). He goes on to state that, whereas most studies of the pedagogizing of knowledge, and what makes pedagogic communication possible, have focused on what is carried or *relayed,* he is interested in the *relay*. To clarify the distinction, Bernstein invokes the analogy of a hi-fi:

> When the tuner is activated what is heard is a function of the system carrying the signal. What of pedagogic communication? We know that it relays, but what is the relay? We know what it carries, but what is the structure that allows, enables it to be carried? (1990:169).

For Bernstein the relay of pedagogic communication is pedagogic discourse. Pedagogic discourse is not a 'thing' or a 'content' but a 'rule' or principle that embeds one discourse in another. An *instructional discourse*, referring to *what* is transmitted (i.e. skills and knowledge of various kinds) is embedded in a moral discourse, the *regulative discourse*, which translates the social order relations and identities and regulates the form of *how* knowledge is transmitted.

Dowling's domains and strategies

Dowling (1998), too, is concerned with the operation of the relay, but in the course of deriving his categories of strategies and domains he also enables an analysis of the relayed. Dowling (1999) dispenses with framing. He does this because he does not operate with a notion of boundary. Classification for him refers to degrees of specialization rather than strength of insularities. Further, his project is different – he wants to analyze the contents of the classification as well as elucidate its structure. He presents a set of dichotomous concepts at a somewhat lower level of abstraction than classification and framing. Bernstein describes the forms of consciousness (essentially elaborated and restricted), and Dowling translates

these as forms of knowledge. Forms of consciousness can only be seen in the materiality of what teachers and learners do at the level of the classroom. Dowling is interested in how knowledge types are distributed. These types are contained in domains and distributed through strategies, and it is through the differential distribution of these knowledge forms that social inequalities are reproduced.

Drawing on Dowling (1998), the model considers the strategies deployed by the teacher as evident in tasks set, and the relation of these strategies to literacy as a field of knowledge, and the consequent positioning of the teacher in relation to the specialized discourse of literacy. I elaborate the concepts drawn from Dowling below.

For Dowling (1998) activity (by which he means ideology) is regulated by domains, and Dowling identifies four domains: the esoteric domain, the public domain, the expressive and the descriptive domains. Two of these domains are of concern in this study: the esoteric domain and the public domain. The esoteric domain is that domain of specialized denotations and connotations (Dowling, 1998:136); it is the domain most strongly classified with respect to other activities, and the domain within which the regulating principles of the activity reside. Dowling, with an interest in mathematics as an activity, gives, as an example of an esoteric domain practice, a standard algebra exercise such as '18x + 92 = 137'. In this example there is no reference to everyday knowledge, or the public domain.

The public domain is the domain which has the 'appearance of non-specialized practices' (ibid), or of the everyday. Dowling stresses, that in relation to mathematics, for example, it is through this domain that apprentices may enter an activity. As an example, a public domain practice is instantiated in a mathematical exercise which is expressed entirely in everyday terms, such as totalling a shopping list[3].

In Dowling's theory, it is the strategies which reproduce features of the activity, and we can say that strategies refer to different domains. Dowling distinguishes between expanding and limiting strategies. Expanding strategies broaden the message in terms of esoteric domain topics, and limiting strategies exclude messages relating to the esoteric domain. Within the

[3] With the expressive and descriptive domains, which are not of concern in this study, Dowling constructs the relation between non-specialized and specialized forms of content and expression, and how these may relate. For example, in the descriptive domain, non-specialized content may be expressed in mathematical form – a café ordering list expressed as 'a café orders p brown loaves and q white loaves of bread […]'(Dowling, 1998:136).

expanding strategies, Dowling distinguishes between principling and proceduralizing discourses:

> The general quality which distinguishes principled from procedural discourse is that the former exhibits connective complexity, whereas the latter tends to impoverish this complexity, minimizing rather than maximizing connections and exchanging instructions for definitions (Dowling, 1998:146).

Proceduralizing strategies 'exchange instructions for definitions' (ibid) and reduce the level of abstraction of knowledge. Proceduralizing strategies particularize the message. Principling, on the other hand, is an abstracting strategy, where definitions and taxonomic classifications reduce the context dependency of the message. Within these broad distinctions Dowling identifies four strategies associated with abstracting and particularizing discourses. Generalizing strategies are both expanding and abstracting. 'Specializing is the construction of abstract message with respect to a specific topic or setting' (Dowling, 1998:147). Generalizing and specializing strategies entail an esoteric domain message. Fragmenting strategies realize the esoteric domain as segmental, rather than articulated. 'The public domain is constituted as an incoherent collection of settings, or alternatively, as constituted by public domain rather than esoteric domain principles' (p. 149). Localizing elaborates an instance (esoteric or public domain) rather than generating segments or collections (ibid).

It becomes clear how Dowling provides a language to speak about the relation between the general and the particular, the concrete and the abstract, by relating particular strategies to domains. My own use of domains and strategies, which derives from Dowling's model, differs in significant ways from Dowling's use. I have simplified the concepts and delocated them from Dowling's more general activity theory. The concepts were also disaggregated in relation to the study's data.

In the analysis specializing and localizing strategies were used to categorize individual discrete tasks, and generalizing and fragmenting were deployed in order to characterize the connections between tasks over a period of time – i.e. to characterize 'pedagogic assemblies'.

Instructional form

Finally, the model also considers the instructional form. Instructional and regulative discourse are two of the structural components of pedagogy. The third element is the organizational form (which I term instructional form), which is theorized by Pedro (1981). Here the way in which learners are grouped within the classroom for pedagogic purposes is specified, and, in particular, the question of whether students are individualized or communalized in the pedagogy is analyzed. Because Bernstein's theory of pedagogic discourse does not consider *what* is classified, instructional form cannot be expressed in terms of classification and framing.

So for the model for analysis we have the following dimensions to consider the reproduction of difference through pedagogy, in relation to the specialization of student voice with respect to the school code:

Table 1: Model for the consideration of pedagogic variation

1. Classification and framing of pedagogic discourse	Sequence & selection		$F^{+/-}$
	Pacing		$F^{+/-}$
	Evaluative rules		$F^{+/-}$
	Hierarchical rules		$F^{+/-}$
	Discourses	Inter-disc (subjects)	$C^{+/-}$
		Inter-disc (school/everyday)	$C^{+/-}$
	Spaces	Internal	$C^{+/-}$
		External	$C^{+/-}$
	Agents		$C^{+/-}$
2. Instructional form	Content		Undifferentiated/uniform
	Classroom organization		Communalized -homogenous individualized- specialized
3. Instructional strategies	Individual tasks		Localizing/ Specializing
	Pedagogic assemblies		Fragmenting/ Generalizing

Methodology

Eight Grade 3 teachers comprised the sample for this study. Four of the teachers were in two working class school settings, where the students came from very poor homes, and the teachers themselves came from working class backgrounds. The two schools were located in working class communities where levels of unemployment were high, and where housing comprised a combination of small brick dwellings and shack housing. The other four teachers taught in middle class schools located in upper middle class suburban areas. The learners came from affluent homes, and the teachers had middle class backgrounds and livelihoods.

Each teacher was observed and video-taped for three consecutive days. Literacy lessons were extracted from the data, and a total of 60 lessons in literacy across the eight teachers comprised the data set for the analysis of classification and framing and instructional form. The lessons were subsequently broken down into tasks, which became the unit of analysis for the instructional strategies. A task is defined as an activity with a single goal or theme that the learner is required to do (Ensor, 1999). In total the lessons were broken down into 103 literacy tasks which.

An 'external language of description' (Bernstein, 2000) consisting of a set of coding schemes, networks and categories, was developed through interaction between the theory and the data. Dowling and Bernstein provided the initial categories, and the data suggested more delicate and specific categories for analysis[4]. This external language of description was then used to code the lessons and tasks as shown below.

Analysing the data – the working class context

Two examples are given to illustrate the analytic procedure, and also to signal some of the difficulties that arise when the theory is brought near to the data in order to read and categorize that data. Because of the limitations of space the classification of spaces and

[4] The general methodology for operationalizing the concepts of classification and framing broadly follows the work of Morais and Pires (2002) and Morais and Neves (2001), and more generally the work of the Sociological Studies of the Classroom project at the University of Lisbon. However, the original theory of classification and framing was developed in contexts of schooling that were possibly far more functional, in conventional notions of the working of schools, than many schools found in South Africa. Further, the theory and its application to classroom observation data was extended and developed largely in Portugal with respect to science, two contexts which are in all probability far more strongly classified than phenomena that arise in other contexts (for example, literacy learning in South Africa, shown in the example below).

students is not shown here. The first example is taken from a working class teacher, who I will refer to here as Teacher A.

The teacher stands at the front of the class and pages through the textbook. All the learners have a copy of the textbook in front of them. She says, 'Here people, I like this section on leaves. We were learning about trees, neh? And then went on to leaves.' The teacher goes on to explain what the book says about colours, that there are shades of colours, for example, blue-green. She copies a set of leaves, which shows these colour variations, from the textbook onto the board. However, she copies only the set of leaves, not the colours. What the teacher has encountered in the textbook is the end of a previous section on colours, which precedes a section on trees. The iconographic indicator – leaves – has led her to select this page as leaves relate to the more general theme in use, trees. But the topic of trees is only addressed halfway down the page. The lesson continues.

The teacher numbers the leaves she has drawn on the board and the learners shout out the numbers as she writes them. The teacher then moves directly onto the next section in the book on trees. She says, 'He says here there are parts of the tree, that's what I like, but then he says we don't tell colours as they are. So here are the parts of the tree. He says write them in their order from the biggest to the smallest. Read these as I write them on the board.' The teacher writes on the board: tree, leaf, branch, bush, and asks learners which are found at the bottom of a tree. A learner says that roots are found at the bottom of the tree. The teacher replies:

Teacher: No no. Don't tell me things you haven't seen. I'm not asking for what you've thought about, I'm asking for what you've seen. Okay, from the tree, bush, leaf and branch, which one do you get from the bottom of the tree? Things that you get at the bottom. Bottom, bottom.'

She underlines 'bottom' on the board. Another learner says roots. After a while the teacher looks back at the text book and realises that she has made a mistake, reading 'tree, bush, branches, leaf', instead of 'stem, roots, branches, leaves'. She moves directly on to the next question, which requires writing from biggest to smallest, tree, branch, leaf, bush. Learners respond and the teacher writes each word on the board. She then returns to the question of what is found at the bottom of the tree. As she writes, learners repeat the words over and over again. The following exchange occurs as she moves onto the next section in the book:

Learners: Leaves, leaves, leaves, leaves, leaves, leaves leaves, leaves, leaves leaves, leaves, leaves leaves, leaves, leaves

Teacher: Hey stop. The reason why we are repeating this is because you do your own thing when I turn my back on you. Now the writer says the same words rhyme at the end. Now we've done a tree. Haven't we done a tree?

Learners: Yes Miss. Yes we've done it.

Teacher: Now we know how a tree is formed. Now the writer says there are certain words that rhyme at the end. This is what I like. And he also says write those that rhyme in the box. [Teacher looks at the book for a while] Ja, here's work. Close your books. I'll give you work on the board. Don't talk Grade 3. Don't talk, don't talk. Sleep on your desks. Lower your heads.

The teacher writes 6 words on the board: tree, fruits, home, flowers, smoke, bushes, roots.

Teacher: Listen, listen. I did not say shout on the top of the roof. Now write the rhyming words. He says some words are rhyming at the end so he wants you to write those that rhyme at the end. Here's the correct date, the thirty-first. Let's write. Let's work. No talking. I want rhyming words. I want rhyming words. I want rhyming words.

Later the teacher bangs on her table with a ruler and shouts at the learners to be quiet.

Teacher: Write, write, even though you don't know.

The teacher sits at her desk for the remaining 23 minutes of the lesson. At no point does she see what learners are writing. The bell rings for break and learners close their books and go out.

The coding of this lesson with respect to classification and framing, instructional strategies and instructional form is presented below. This will be illustrative of the coding procedure in general.

Classification and framing[5]

Selection and sequence in the extract above would both be coded F^{++}. The reason for this is that the teacher decides what knowledge will be transmitted and in what order transmission will take place. Learners are not given opportunities to alter the selection and the sequence of the knowledge, even where, at one point their interjections potentially are a corrective to the teacher's misreading of the text[6]. Likewise, it is the teacher who asserts the pacing or expected rate of transmission. She decides that the lesson will continue until the bell rings, and learners do not have control over the stipulated pacing. Pacing is therefore also coded F^{++}.

The coding of the evaluative rules is more complex. The required performance of learners ultimately is to copy down words that rhyme, but no concept of rhyming is transmitted, and its recognition is potentially opaque to the learners. Because the evaluative criteria have not been transmitted, the teacher can only elicit the legitimate text from the learners on the basis of assertion: 'Write, write, even though you don't know.', and that legitimate text appears devoid of instructional content. The learners are required to write; *what* they write does not seem to matter.

The framing of the evaluative criteria is difficult to categorise as either weak or strong. Thus the category F^{0} in the coding scheme was developed in order to capture such instances of transmission, which appear devoid of evaluative criteria relating to the instructional

[5] In the theory Bernstein (1996) makes the distinction between internal and external classification and framing. In this model it is internal classification and framing that is dealt with only.

[6] However, it could be argued that, in this case, the teacher in fact substitutes the textbook for herself; or she recruits a proxy voice – the sequence and selection of the textbook – because her voice isn't able to do the pedagogic work. Neither student nor teacher here appears to be controlling the knowledge but rather the textbook is followed to the word, strongly dictating the sequence and selection. So an initial (iconic) selection in terms of the theme 'trees' is made, but from there the sequencing follows that of the textbook from the top of the page to the bottom.

discourse, or where these are obscured by regulative criteria[7]. All is about comportment, form, or behaviour. Here, again, the legitimate text is extracted on the basis of assertion:

Teacher: … Now we've done a tree. Haven't we done a tree?
Learners: Yes Miss. Yes we've done it.
Teacher: Now we know how a tree is formed.

The learners had merely named parts of a tree up to this point; they had not addressed 'how a tree is formed'. It is also evident from the example concerning rhyme that the coding of the data can at times be derived only in conjunction with an assessment of what learners recognize and realize in their performances. This is because there must be certainty (using this instance as an example) that the learners have not spent several prior lessons focusing on rhyme, and that the absence of an explicit articulation of the evaluative rules could therefore be considered redundant. In such cases reference was made to learner productions and learner notebooks, or to observation of learners carrying out the tasks.

In terms of the regulative discourse, the hierarchical rules in this lesson would be coded F^{++}. The control relation is generally about constraint and is based on the teacher/pupil hierarchy, rather than an explication of rules or principles underlying the control. In this imperative form (F^{++}) the acquirer is given no options in responding to the control of the teacher, apart from an explicit challenge to authority. This is seen in particular in line x, where the teacher responds to learners' correct response with an assertion:

Teacher: No no. Don't tell me things you haven't seen. I'm not asking for what you've thought about, I'm asking for what you've seen.

Three tasks were identified in this lesson for the coding of the instructional form and the instructional strategies. One was the discussion of colours and the drawing of ten leaves on the board. The second was the discussion of the parts of a tree, and the third was the writing down of rhyming words.

Instructional form

[7] I have indicated how a possibility exists for an F^0 coding with respect to the evaluative rules. F^0 represents an inability to observe the code. It may also point to a breakdown in pedagogic discourse, the absence of (a particular dimension of) pedagogy, or a collapse of the instructional into the regulative. F0 and its implications are elaborated in Hoadley (2005) and Hoadley (in press).

For the coding of the instructional form three options regarding the classroom organization were identified: *homogenous,* where the teacher worked with the class as a whole; *integrated,* where students worked with each other in groups; and *specialized,* where the teacher worked with groups of students or individual students. In this instance the interest was in the grouping of agents in the instructional form.

In relation to the treatment of content, each task was also coded as to whether it differentiated or not between different members of the class or groups – and was coded *uniform* or *differentiated.* In all cases where a task was coded 'differentiated' there was differentiation on the basis of ability, (although the category potentially could also refer to sex, language, religion).

In the given lesson, all three tasks were coded homogenous (the teacher worked with the whole class, not with individuals or groups) and uniform (all learners were required to do the same tasks). In other words, the pedagogy was characterized as communalising.

Instructional strategies

In relation to instructional strategies, the first distinction for literacy is made between localizing and specializing strategies. In order to recognize whether a task represents a localizing or specializing strategy, the question is asked as to whether the task can be completed with or without access to specialized knowledge. In other words, does the strategy distribute a public domain, or esoteric domain message? So, localizing tasks are those which the learners are able to do without deploying the specialized knowledge of literacy. The 'literacy element' or concept is absent. These tasks incorporate knowledge that is familiar and local, and meanings that are generally particularistic, concrete and context-dependent. Specializing tasks, on the other hand, refer to a particular literacy element or concept, to an esoteric domain message. Tasks incorporating specializing strategies are rule-based or rule governed; tasks which are characterized as localizing are spontaneous or mundane.

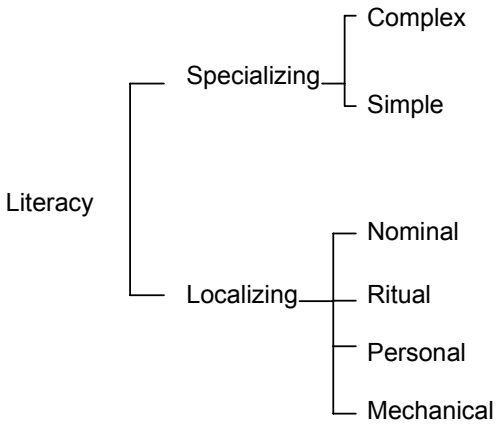
At the Grade 3 level, tasks which incorporated localizing strategies often resembled 'play' or games. They generally required learners to do things that they enjoyed, and which they knew how to do (recite a well-known verse, colour in a picture). They did not incorporate

knowledge that the learners were not familiar with, and were not designed to produce a cognitive shift (although they may indeed have produced this unintentionally). Localizing strategies are concerned with horizontal discourse rather than the vertical discourse of the subject of literacy.

Localizing strategies require the restatement or reproduction of that which is already known. Specializing strategies require that the learners apply knowledge in a novel way, practice a concept or skill in relation to particular contexts, or rehearse a new concept.

The initial categories, localizing and specializing strategies, were disaggregated to take account of different forms of these strategies. The network used in the coding is shown below. I then give examples of the different types of strategies in relation to the tasks identified from the lesson shown above.

Figure 1: Network for the analysis of literacy tasks



The first task relating to colour was coded as localizing-ritual. In this instance the exercise was mundane, not requiring the exercise of any particular rule relating to literacy. Learners listened to the teacher and then chanted numbers as she wrote them up on the board. The chanting as the teacher writes would appear to be a procedure regularly followed which appears to have communalizing purposes rather than pedagogic ones. It also entails mimicry, a common strategy deployed by the teachers in the working class classrooms, where learners repeated words and phrases after the teacher, and were not required to produce texts of their own.

The second task consists of the naming of parts of a tree, and was categorized localizing-nominal. This strategy consisted of the teacher and learners naming things – usually in relation to a theme. A clear pedagogic trajectory from these kinds of exchanges was not retrievable; rather the pedagogic process consisted of building up a series of words and images in relation to a theme.

The third task, that pertaining to rhyming words was categorized as localizing-mechanical. Localizing-mechanical strategies were apparent when learners were required to reproduce, imitate or copy the exact text of the teacher or other resource. In these instances the evaluative rules were implicit or absent, and very little or no specialized knowledge for the particular task was required. In several of the literacy lessons learners were required to copy off the board, colour in, draw or copy from the textbook without doing any kind of operation beyond this.

Overall, the localizing strategies presented here approximate what mothers do with their children in early pedagogic and socialization activities, e.g. read to the child, help the child name things, recite rhymes. They are not empty of pedagogic content or potential but, in relation to Grade 3 learning, they do not specialize voice, they do not explicitly appeal to the esoteric domain and they do not require specialized performances on the part of the learner. Rather, they represent a form of initial, segmental pedagogy, aspects of which one may find in the home.

Analysing the data – the middle class context

A second extract is given from the middle class context. Small groups of learners in turn sit with the teacher on a mat in the front of the class with a box of words and some readers. The learners read out their words, and provide some definitions, and then take turns reading from the reader.

1 Teacher: I want the Joeys on the mat
A group of learners come to the mat and start unpacking sets of cards from small Tupperware containers in their book bags
2 Teacher: Quickly.
3 Teacher: Brandon, let's see if you can be first for a change, not last. Well done Candi, you can begin as
4 soon as you've finished putting them out.

Learner: Start, market, startle, spark, chart, sharpener, sparkle
Teacher: Sorry, I need a sentence for startle.
Learner: Brandon startled me, like scared, surprised or scared.
Teacher: 'Brandon startled me' doesn't actually tell me what it means. I walked down the passage and Brandon came into the room and startled me. Something you weren't expecting. That's what startled means. Read.
Learner: Crown, drown, flower, power, powder, shower, trowel, tr
Teacher: Trowel yes
Learner: Trowel, vowel, towel
Teacher: I need a sentence for trowel.
Learner: Trowel
Teacher: We spoke a lot about it at the beginning of the year. We even watched the builders with their trowels
Learner: Oh. They use trowels to put the cement on the walls.
Teacher: A trowel is a tool. Um, tie your shoelaces please Brandon. Other Brandon.
Learner: Short, porter, reporter, order, report, perform, shorten
Teacher: Shorten. I need a sentence for shorten.
Learner: Last night we had to shorten my tracksuit pants
Teacher: Because
Learner: Because it was too long
Teacher: They were too long. Yes.
Learner: Mouth, Loud, about, trout, south, ground.
Teacher: Well done. Shoo. Give me a sentence for trout.
Learner: Me and my brother went trout fishing at the river.
Teacher: Mmm. Why didn't you go to the sea for trout fishing?
Learner: Because trout don't swim in the sea.
Teacher: You say my brother and I went trout fishing at the river. Well done
Learner: Purchase, curtain, disturb, survive, sur*face*
Teacher: *Sur*face. Did you practice these words?
Learner: Yes
Teacher: But with whom? Mmm? Alone?
Learner: No with my big brother.
Teacher: With your big brother, with your mother or father next time, hey. Read this one again.
Learner: Sur*face*
Teacher: *Sur*face. Purpose. Now give me a sentence for surface
Learner: I surf in the sea
Teacher: You surf in the sea. Okay. You surf in the sea. That's good. That means you ride along the waves. Do you swim right under the sea or do you swim on top of the water?
Learner: On top
Teacher: You swim on the …
Learners: Surface
Teacher: Okay. You swim on the *sur*face, on the top. *Sur*face. You must do homework with your mom or your dad please.
Teacher: Good. Put your cards away.
Teacher: And what are we reading?
Learner: Atlantis' race
Teacher: Okay. Move into me. Right in. So what was the story about yesterday?
Learner: The day they found out that the worm is used for cloth.
Teacher: Yes, and what's it called? What kind of cloth do they make from those worms? It starts with a 'ssss'.
Learner: Silk
Teacher: Silk. Absolutely. Silk. Atlanta's Race. Atalanta's Race. Page 42. Candi do you want to begin?
Learner: Atalanta was the swi
Teacher: Swiftest
Learner: Swiftest runner in the world.

In a similar fashion each of the learners takes a turn to read from the reader, with comments, corrections and questions from the teacher interspersed. The next group is then called, and a similar process is followed.

Classification and framing

Framing of sequencing and selection in this lesson was characterized as strong. The teacher decides what will comprise the lesson and the ordering of the transmission. Framing over pacing is weakened through the teachers responses to the students' productions. At times the pace of transmission is relaxed in order to address learner productions, or give learners the opportunity to respond to questions. Although generally weaker in the middle class settings, pace is coded F^+ in this instance. Classification of discourses is strong – literacy as a subject is strongly bounded from other activities through the emphasis on particular phonemes, reading and definition and interpretation activities. Framing over the evaluative rules is also strong. The evaluative rules are explicitly transmitted by the teacher, in particular in her responses to student productions.

The hierarchical rules in this lesson are coded F^+ (a positional form of control). Positional control is realized when control actions/utterances are based on simple rules. These rules may be grounded, or announced, as in lines x - x:

Teacher:	/…/ Did you practice these words?
Leaner:	Yes
Teacher:	But with whom? Mmm? Alone?
Leaner:	No with my big brother.
Teacher:	With your big brother, with your mother or father next time, hey /…/

Instructional form

Two tasks were identified in the lesson. The first required that learners read out a list of words containing a particular phonic and provide definitions for some of those words. The second entailed learners reading from a prescribed reader. Both tasks were coded as specialized (learners were organized into graded groups according to reading ability) and in terms of content, differentiated (readers and spelling lists were ability graded for different groups). The instructional form thus individualized learners through allocating them to different groups, and distributing different content to different learners.

Instructional strategies

Both tasks were also coded as specializing complex. Specializing-complex requires that learners engage in the novel applications of rules, or that learners display their reasoning, synthesis and/or evaluation of knowledge. In specializing strategies the knowledge distributed to learners refers to the esoteric domain of the subject. In the lesson extract we see that the tasks refer to the phonological, semantic and syntactic aspects of literacy. The sounds of words is emphsized, as in

T: Read this one again.
L: Sur*face*
T: *Sur*face. Purpose. Now give me a sentence for surface

The meanings of words and passages are emphasised, as in

T: I need a sentence for trowel.
L: Trowel
T: We spoke a lot about it at the beginning of the year. We even watched the builders with their trowels
L: Oh. They use trowels to put the cement on the walls.
T: A trowel is a tool.

And the teacher asking learners, 'So what was the story about yesterday?'. And the correct grammatical ordering of words in order to make sentences is addressed:

T: Shorten. I need a sentence for shorten.
L: Last night we had to shorten my tracksuit pants
T: Because
L: Because it was too long
T: They were too long. Yes.

Pedagogic assemblies: rules for combination

In categorizing the classification and framing of lessons, individual lessons were considered. In categorizing the instructional form and localizing and specializing strategies, I looked at each of the 103 individual tasks as discrete units. The final stage of the analysis of instructional strategies involves analyzing the tasks *across* the three days of observation, and considering the relations between these tasks. The interest is in whether the pedagogic assemblies of the teachers (a series of tasks across a number of days) represented generalizing

or fragmenting strategies. Thus, what *connected* the tasks to each other, and what was foregrounded in the pedagogy, is considered. The question posed to the data is whether the pedagogic assembly was generated by an esoteric domain message (generalizing), or a public domain message (fragmenting). The unit of analysis here, then, is the pedagogic assembly.

In general the analysis showed that in the middle-class context activities and concepts were carried from one day to the next. Either activities were completed from previous days, or the teaching of a particular concept or operation continued. In the foregrounding of the conceptual in the pedagogic assemblies of the middle-class teachers, it is possible to conclude that the pedagogic assembly was generated by esoteric domain principles. This differed from what generally happened in the working-class context. In the working class school setting the pedagogic assembly was characterized as fragmented because the series of tasks was generated by a theme rather than by programmatic conceptual learning. There was very little or no reference to what was learned before, or what would be learned in future, apart from the fact that the thematic emphasis was the same. The actual learning trajectory was implicit or fragmented, and thus not retrievable from the three days of observation.

The rules for combination were accordingly very different in the two different social class contexts. In literacy, the learning tasks in the working-class context required that learners collectively reproduce a sequence of naming and labelling tasks. They did not engage in the reflexive deployment of meanings in any other way. There was little space for developing meta-awareness of how words sound, mean, and are put together, or, how rules can repeatedly produce predictable results. Learning tasks in the middle-class context required learners apply operations, procedures and concepts in a way that was highly visible to the teacher and peers, and was very repetitive. The teachers helped learners to identify patterns, 'tricks' and rules. The extent of the work covered, and the opportunity for learners to master particular parts of the curriculum, created the potential to understand the field later on.

From an examination of the pedagogic assemblies we can say that the working-class context learners were learning to name the world, and the middle-class context learners were learning to categorize the world. In the former context it is unlikely that learners acquired a way of organizing knowledge and experience. What was displayed in the pedagogy was a long process of listing words and ideas within a particular theme. It was the content that was emphasized, usually to the exclusion of conceptual learning or conceptual engagement.

Pedagogic modalities[8]

Through an analysis of the classification and framing of pedagogic discourse in the lessons of the teachers, the instructional form, and the distributing strategies, pedagogic variation is identified. Certain orientations to classifying experience and creating meaning that are privileged in the classrooms in the different social class contexts emerge from the analysis.

Two pedagogic modalities are derived from the analyses. I refer to the modality that emerges from the working-class context as a horizontal modality and that from the middle-class context as a vertical modality. The vertical modality presents greater opportunity than the horizontal modality for the transmission of context-independent meanings and the specialization of learners' voice. The three dimensions that have been addressed in the analysis are discussed for each modality.

The horizontal modality

The horizontal pedagogical modality emerges from the working-class school context. The first dimension of the pedagogic modality pertains to the classification and framing arrangements of the pedagogic discourse. This is characterized by strong framing over sequence, selection and pace, and very weak framing over the evaluative rules. The teacher generally does not draw out the knowledge principles in exposition, and very little (sometimes no) attempt is made to make the requirements for the legitimate production of a text available to learners. The hierarchical rules are strong, the teacher has control over the order, character and manner of the conduct of learners in the relation between teacher and learner. The classification of agents is weak. In the horizontal modality there is a weak potential for the specialization of learners' voice with respect to the reproduction of school knowledge.

The second dimension, instructional form, refers to the classroom organization and differentiation between agents and contents. Here the learners are communalized in the

[8] Conventionally in the Bernsteinian literature a pedagogic modality refers to a particular classification and framing set up. In the present study pedagogic modality refers to all dimensions of the model – including instructional strategies and instructional form.

instructional practice of the teacher, and instructional knowledge is undifferentiated. In other words, all pupils are treated as the same.

Thirdly, for the instructional strategies for individual tasks, each of the tasks is characterized in terms of localizing and specializing strategies. The predominant strategy in the horizontal modality is that of localizing, as the tasks refer to public domain principles and/or knowledge. The tasks incorporate knowledge that is familiar and particularistic, and meanings that are concrete and context-bound.

The tasks are also considered as pedagogic assemblies, that is, as series of tasks across the three days. The rules for combination in these pedagogic assemblies are characterized as fragmented. The rules for combination are generated by a public domain message (horizontal discourse in theme-based learning).

The vertical modality

The vertical modality emerges from the middle-class context. In the vertical modality, oriented more towards an elaborated code, strong framing over sequence and selection is found. Framing over pacing is weaker, and there is strong framing over the evaluative rules. The hierarchical rules are weaker, and the classification of agents is strong.

In the instructional form, learners are individualized in the instructional practice of the teacher, and instructional knowledge is differentiated. Learners are treated as different, with different learning competences and requirements.

In the instructional strategies for individual tasks the predominant strategy is that of specializing, where the tasks are generated by esoteric domain principles and/or knowledge. The rules for combination of the 'pedagogic assemblies' are characterized as generalizing: the assembly is constituted by the elaboration of a particular concept or procedure.

The codes are aggregates across teachers in the middle class and working class settings. The teachers, students and schools were purposively selected in order to put certain differences in expected pedagogic practices on display, and the sample represents the two ends of the social class continuum: lower working class and upper middle class. A very definite picture of the

contrasts emerges, whereas, in reality, classrooms are likely to exhibit hybrid forms of the two modalities defined, as well as more complex and nuanced interplay between social class actors.

The two modalities are summarized in the table below:

Table 2: Pedagogic modalities

			Horizontal modality	Vertical modality
1. Classification and framing of pedagogic discourse	Sequence & selection		F^{++}	F^{++}
	Pacing		F^{++}	F^{-}
	Evaluative rules		F^{--}	F^{+}
	Hierarchical rules		F^{+}	F^{-}
	Discourses	Inter-disc (subjects)	C^{-}	C^{++}
		Inter-disc (school/everyday)	C^{--}	C^{+}
	Spaces	Internal	C^{+}	C^{--}
		External	C^{--}	C^{++}
	Agents		C^{--}	C^{++}
2. Instructional form	Content		Undifferentiated (uniform)	Differentiated & uniform
	Classroom organization		Communalized / homogenous	Communalized / homogenous & individualized/specialized
3. Instructional strategies	Individual tasks		Localizing	Specializing
	Pedagogic assemblies		Fragmenting	Generalizing
	Selection		Public domain (C^{--})	Esoteric domain (C^{++})

The analysis shows that, in the working-class context, through the horizontal modality, there is a weak potential for the specialization of learners' voice with respect to the reproduction of school knowledge. The knowledge introduced is local and familiar, and the evaluative rules are weak or absent. In the middle-class context the potential for the specializing of voice with respect to the reproduction of knowledge is facilitated largely through the extensive rehearsal of procedures and operations which refer to the esoteric domain, or specialized knowledge of literacy.

Discussion

To return to the theory, there is a limit with respect to classification and framing in its potential to address the question of pedagogic variation and the reproduction of difference. As argued above, Bernstein is concerned with the *relay*: showing the reproduction of the specialized knowledge of schooling I am also concerned with the *relayed*. In other words, I want to show, not only the structure of the specializing of voice, but also the semantic content of what is classified. In the present model, specialization of voice is an outcome of the entire pedagogy, not only the classification and framing relations.

Bernstein does not focus on interaction in the classroom, i.e. what people do. He is not concerned with the 'arabesques of classroom interaction' (1977:7). Dowling allows for a focus on the dynamic of pedagogy whereby the concrete flow of communication is analyzed. Thus, through Bernstein and Dowling, we have a means for talking about the relay and a means for analyzing what is relayed.

Finally, through instructional form it is possible to describe the organization of the classroom independently of its semantic focus. The distinction between individualizing and collectivising pedagogies enables further consideration of the regulative features of the classroom, and their social class base. This is particularly relevant in the light of the dominance of progressive discourses of pedagogy, which assert the importance of individualizing, privileging a pedagogic form not unlike how middle class mothers interact with their children. The possibilities of this discourse being a reality in working class classrooms, where students are treated as the same, is thus questioned. Further, the potential for considering the social bases from which individualizing and collectivising organizational forms emerge becomes possible.

Conclusion

In this study orientations to meaning were taken as the crucial variable associated with social class in considering the reproduction of inequality through pedagogy. This work is based on over thirty years of empirical and theoretical work in the Bersteinian frame that shows how working class and middle class students enter the school more or less predisposed to acquiring the specialized knowledge of schooling, and recognizing and realizing the 'school

code' (Adlam et al, 1977; Cook-Gumperz, 1973; Holland, 1981; 1980; Fontinhas et al, 1995). For middle class learners the home is a second site of acquisition; middle class family socialization is a hidden subsidy (Bernstein, 1977:133) in that it facilitates school learning. So when middle class and working class children get to school they experience the form of communication in the school differently.

The study reported on here shows how these different meanings are reproduced through pedagogies found in different social class school settings. It offers a model for the consideration of pedagogic variation, which relates this variation to social class differences[9].

There has been a significant amount of work, also in the Bernsteinian tradition, around identifying specific aspects of pedagogic practice favourable to the development of the elaborated coding orientation required by the school, especially for working class learners, (Fontinhas *et al* (1995:445), and the ESSA group at the University of Lisbon - Morais & Miranda (1996), Morais & Neves (2001), and Morais *et al* (2004)). The work of ESSA comprises action research, and more effective pedagogic modalities, derived from the research, are designed and tested with learners from different social class backgrounds. Teachers are thus explicitly trained to teach particular modalities of elaborated code.

Morais (2002) summarizes some of the results of the empirical work of the ESSA, explicitly defining what values of classification and framing, along which dimensions, proved optimal for the achievements of working-class students. Consistent with all of the ESSA work, Morais (2002) again stresses 'explicating the evaluative criteria as the most crucial aspect of a pedagogic practice to promote higher levels of learning of all students' (p. 568). Making the evaluative criteria explicit consists of 'clearly telling children what is expected of them, of identifying what is missing from their textual production, of clarifying the concepts, of leading them to make synthesis and broaden concepts and considering the importance attributed to language as a mediator of the development of higher mental processes' (Morais & Pires, 2002:8). Their work, through action research, shows how the situation for working class children, whose primary socialisation is regulated by pedagogic codes different to

[9] In the broader study (Hoadley, 2005) the social class positioning of the teacher is also considered. There, a tentative relation between the teachers' own social class backgrounds (which vary between the different social class schooling contexts), their strategic dispositions and forms of solidarity in the schools is suggested, which may offer some insight into how the different pedagogic modalities come to predominate in certain schools and have particular outcomes for the specialization of student voice in those schools.

school codes can be "altered by school pedagogic practices whose characteristics permit access to the school coding orientation" (Morais & Neves, 2001: 214).

Similarly, Rose (2004), in his research into literacy pedagogy for 'indigenous learners', specifies precisely the dimensions facilitating a weakening of the negative relation between social class and educational achievement: a weakening of the framing of pacing and sequencing rules, and a weakening of 'the framing regulating the flow of communication between the school classroom and the community the school draws on' (p. 106). Arnot and Reay (2004) further show how pacing, speed in pedagogical practice, plays the most crucial part in reinforcing social inequalities. This occurs through working class disengagement from learning that entails strong framing over pacing: the "schools' expectations as to the rate of learning privileged those, predominantly middle-class, students who are able to work with rather than against them" (p. 147).

This study focuses on how these dimensions vary in naturalistic settings, rather than experimental ones. In order to bring greater specificity to the description, theoretical concepts were drawn from Dowling (1998) and Pedro (1981). With Bernstein's analysis of pedagogic discourse this allowed for an analysis that considered the relay of social class differences, what was relayed, and the organizational form that the process of reproducing inequality with respect to the school code took.

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