

Reading Bernstein, Researching Bernstein

Basil Bernstein is arguably one of the most important educational theorists of the late twentieth century. While most academics and students in sociology of education know of Bernstein, few can claim to understand fully the scope and power of his work, which simply cannot be matched by any of his contemporaries.

This book, written by a team of international contributors, offers an insight into the richness and depth of his theories. It demonstrates the growing recognition of the value of Bernstein's work to understanding unfolding developments in education systems around the world today.

The volume is divided into four sections:

- Section 1 considers the work of the theorists that Bernstein worked 'through' and 'with', from Durkheim and Marx to Bourdieu and Foucault;
- Section 2 focuses on teaching and learning in school contexts and draw on current issues such as boys' underachievement, citizenship, system reform and language learning in varied cultural contexts;
- Section 3 applies Bernstein's theories to teacher education;
- Section 4 focuses on international and higher education.

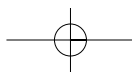
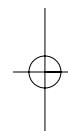
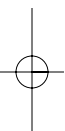
This comprehensive text will show the international academic community in education and sociology – as well as students on education, sociology, sociolinguistic and social psychology degrees – how to read and use Bernstein.

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Sociology of Education



Reading Bernstein, Researching Bernstein

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First published 2004
by RoutledgeFalmer
11 New Fetter Lane, London EC4P 4EE

Simultaneously published in the USA and Canada
by RoutledgeFalmer
29 West 35th Street, New York, NY 10001

RoutledgeFalmer is an imprint of the Taylor & Francis Group

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Typeset in Sabon by
Keystroke, Jacaranda Lodge, Wolverhampton
Printed and bound in Great Britain by
TO FOLLOW

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

ISBN 0-415-33982-0

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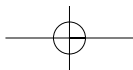
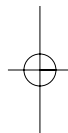
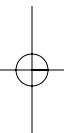
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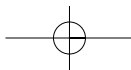
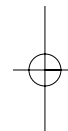
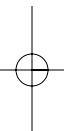
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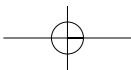
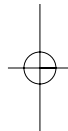
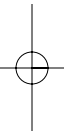
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Acknowledgements

The papers published here were commissioned, in all but one case, from the papers submitted to the Second International Basil Bernstein Symposium, *Knowledges, Pedagogy and Society*, held at the University of Cape Town, Cape Town, 17 to 19 July 2002.



1 Introduction

The possibilities of Basil Bernstein

Johan Muller

The irony of all theorizing is its propensity to generate, not an understanding, but a not-yet-understood.

(Michael Oakshott)

The provision of a general education to all has never been a satisfactory business. On the one hand, it has expanded ‘meteorically’ (Maton, Chapter 15, this volume) to the furthestmost reaches of the world, so that there are virtually no communities left which it does not touch in one way or another. But the touch of the education machine is inexorably uneven. This continues to be the case within and between communities, and between countries. Saying so was not popular in Basil Bernstein’s time, and Brian Davies (2001: 3) records Bernstein’s irritation at the way his particular account of this educational imponderable was ‘steadfastly misread’ over at least a decade, probably longer. Not much has changed and the messenger is still regularly blamed for somehow becoming an obstacle to egalitarian reform by pointing out the persistence of structural educational inequality. However unjust, one upshot of this misunderstanding is a standing challenge to educators in general, including Bernsteinians, to display good faith by moving beyond an analytic of inequality to what Philip Wexler (1984: 406) once called (somewhat derisively, let it be said), a ‘put-up or shut-up sociology’.

The response has predictably been ambiguous. To begin with, Bernstein’s own inclinations in this regard are a matter of interpretation. For a large group of sympathetic readers of his work, perhaps for the majority, Bernstein was ‘an analyst of power rather than a prescriber of policy’ (Davies 2001: 1) and saying so was the end of it. That is surely right, but it begs a following question: Does this mean that Bernsteinian sociology has no politics? This is a preposterous question, perhaps, for those who see Bernstein’s work as driven by a sense of social justice and outrage at the continuing deformation of life chances by the pedagogic device. But where precisely lies the politics, non-believers recurrently ask? There are three kinds of answer to the question, at least, in Bernstein’s late work.

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The most explicit, and probably the least satisfactory, is provided in the Introduction to Bernstein (1996), where he lays down an educational programme for effective democracy: 'we will need to ensure', he says in unaccustomed prescriptive mode, 'that we have institutionalized three interrelated rights' (Bernstein 1996: 6), or pedagogic democratic rights. These are the right to enhancement (which includes crucially the 'right to the means of critical understanding and to new possibilities' *ibid.*), to inclusion, and to participation. These rights, he goes on to say, are regularly limited and democracy as we know it will depend upon good reasons, or some compensation, if the victims are not to lose confidence in it. This is a sombre thought, but while it does speak to Bernstein's deep sense of social justice, it does not provide anything that could be called a path forward. Part of the difficulty is that those most in need of redress will be those whose right to enhancement has been curtailed and who will, by definition, have been deprived of access to 'critical understanding' and, more crucially, to a means for generating 'new possibilities'.

The second sense of politics in Bernstein's work is politics as a motor that propels his own analytical enterprise. No matter how justified the political impulse may be, though, this propulsion must soon submit to the priority of the work itself, if that work is to have any force. Bernstein says as much in his interview with Joseph Solomon (Bernstein 2000: 210): 'For me the political implications, although the initial motivation, are secondary to the long process of understanding and describing.' With this formulation, Bernstein not so much debunks politics as cuts pious good intentions down to size. Political impulse is important, then, but it cannot match the work in providing grounds for action. Indeed, on its own, it can be positively – that is, ideologically and rhetorically – misleading. Here is the third sense of politics in Bernstein. The real potency of the analytical enterprise resides, for him, with the analytical or descriptive power of the theory, because from this power emerges possibilities for political choice and action. This is a strong and important claim and it deserves close attention. Here is how Bernstein continues in the interview with Joseph Solomon (*ibid.*):

The theory attempts to show both the limiting power of forms of regulation *and their possibilities*, so that we are better able to choose the forms we create rather than the forms to be created for us. Effective choice, effective challenge requires this understanding and failure is often the result of rhetorical solution or ideologically driven aspiration [emphasis added].

What we have here is the makings of a political theory of action based on theory. Its principal features are threefold. First, there is the imperative to understand the wellsprings of social order. Second, and arising from the first, the capacity to understand features of a possible social reality or arrangement that transcends the present arrangement; that is, an arrangement that is both

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virtual and exists in a (more desirable) possible future. Third, it is only from this means of generating possible futures that a sure basis can be provided for arriving at 'effective choice, effective challenge'; that is, propitious political action. It is worth commenting that it is just this 'idealizing' feature of the sacred which Durkheim identified in *The Elementary Forms of the Religious Life* (Durkheim 1915: 133) as the 'motor force for cultural change' (Muller 2000: 78). In this, as in most things, Bernstein remains the exemplary Durkheimian.

It is worth pausing here. Theory, for Bernstein, has at least a two-pronged role. The first is to grasp the real, as it *is*, so to speak, an already formidable task due to the inescapability of the discursive gap at the heart of pedagogic discourse, a theme explored by Davis in Chapter 4 of this volume. But the real itself is to be understood not in a static sense but in a dynamic one; every actually existing real nurtures within it a series of logical alternative possible futures. This second, pre-eminent role of theory is to grasp the real as the realization of only one of a series of logical possibilities. That is, the task is always not only to map an existing state of affairs, but to understand that state as an actualized possibility, with determinate features of variation, alongside other virtual possible worlds with equally determinate features of variation. It is these possible worlds, when delineated, which offer themselves up for political choice and action.

There are two points to note about the theoretical generation of possible worlds. The first is that, as a fact of their virtual existence, they are empirically blank. Their place in the matrix is an empty set. We cannot know what they look like, by definition, although we can make guesses, by extrapolation from the predictable regularities of the already provisionally confirmed parts of the theory. Some researchers are bolder in their guesses than others, as we will see below. The cautious ones have a point. Not only do we not know what a future pedagogic regime might actually look like or produce, we have to expect that its outcomes are at least as likely to be malign as they are to be benign. Not all parts of the theoretical matrix may yet be visible and we may not have at our conceptual disposal the entire array of levers of the regulatory apparatus. But that is just to confirm that in analytical work, as in politics, there are no absolute guarantees, and to stress, as Bernstein did constantly, that theory without empirical illustration or confirmation is but half the job done (Moore and Muller 2002). Much of the best work in the Bernsteinian tradition involves either constructing analytical projections or assessing them empirically and confirming or modifying the theory. In the most general sense, one could say that this is what this volume and the chapters it contains are all about: the principled and systematic investigation of educational possibilities. Insofar as they place themselves somehow in the tracks of Bernstein, they display, collectively, an investigation, modification and augmentation of Bernstein's possibilities.

A more overt political stance is discernible in some of Bernstein's later work, where he worries in a more explicit way about the intensification of

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state control, as well as about 'the fundamental changes in the management of order in contemporary societies' (Bernstein 2001a: 31). By this he means that the state increasingly inserts economic managerial agents and their criteria into the symbolic field. This leads to the 'economizing' or 'technologizing' of the culture of education, as well as to the rise in prominence of the 'socially empty' notion of 'trainability' and its principal carrier, a generic sub-mode of performance pedagogy. Left to itself, Bernstein foresees the increasing state supervision of the distribution of knowledge via the imprimatur of the economic field, leading to the second 'totally pedagogised society', the first having been mediaeval Christendom. In the opening chapter to this volume, Bill Tyler fleshes out some dystopian features of the 'totally pedagogised society' mark II.

Is the advent of the second 'totally pedagogised society' necessarily grounds for pessimism? The answer depends on which Bernstein one favours. It is certainly hard to avoid noticing the shift in Bernstein's language, from a formal lexicon, to the incorporation of terms like 'economic' and 'market' into his typological characterizations of pedagogic models and identities in his later work (see e.g. Bernstein 2000: 56, 67). When questioned on this in the video conference at the first Basil Bernstein Symposium, Bernstein makes clear his objection to the contemporary dominance of a regionalized, market-based, performance pedagogy 'my opposition to what is going on, it's because pedagogy is simply seen as a technology' (Morais *et al.* 2001: 380). And why is that a problem? Because by submerging the regulative discourse ('technologising of the pedagogic' (*ibid.*)), the pedagogy loses any sense of a moral trajectory, of any grounding in a social base and becomes, hence, 'socially empty' (Bernstein 2001b: 366).

Much depends on what one takes this to imply. Should we take it to mean that the 'totally pedagogised society' will brainwash us all into morally bereft instrumental robots? Does Bernstein presage a new totalitarian dystopia? There are three sets of grounds for doubting this. First, recall that the first totally pedagogized society ruled by the Catholic Church marked the triumph of the *Trivium*, the production of introjected identities, of similar-to relations of mechanical solidarity, of the regulative. If anything, here was a pedagogic regime that overdosed on the inner, so to speak, so the totalling threat lies not solely with the form or mode, but with its *reach*. Does this mean then that the threat lies with a new, insidious form of state control which snuffs out all bases for resistance? On this point Bernstein follows Castells (1997) in predicting that, on the contrary, we will see a 'cultural resurgence of the rituals of inwardness in new social forms' (Bernstein 2000: 77), a 'revival of forms of the sacred' (*ibid.*: 78), that is, a set of new local identities external to the market-driven official pedagogic discourse. These new forms are not, of course, all benign, but the point remains; the Orwellian blight is not imminent: 'There appears to be a reversal of the Durkheimian sites of the sacred and the profane, and a rusting of Weber's iron cage of dismal prophecy' (*ibid.*).

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The third ground for doubting the imminent robotification of society is perhaps the most compelling. Bernstein has often urged educators to turn their analytical gaze away from ideological critique of the external lineaments of pedagogy to the conditions for its effectiveness: 'we have to ask ourselves when it is effective, what are the conditions that have made it effective' (in Morais *et al.* 2001: 380). On this Bernstein is clear. The condition of success of 'trainability', of constant, flexible retraining, is *the prior acquisition of a specialized identity*, of a prior grounding in a social base, of a prior regulative and discursive introjection resting on a particular social order (Bernstein 2000: 59; Bernstein 2001a: 366). The insidious effect of 'trainability' is that it renders invisible (or inaudible) the requirement of prior identity induction into a moral and discursive order that is overwhelmingly still provided at home and school for the middle class and almost solely at school for the old and new poor. We may say that the perniciousness of 'trainability' lies in its camouflage of the renewed importance of the school for the production of specialized identities and in the false, because unattainable, allure that attaches itself to the promise of 'trainability' as a consequence. Breier (Chapter 14, this volume) provides a telling case study of a 'trainability' initiative in Labour Law, and the incomprehension and bitterness produced by its inevitable failure to redeem its promise to underqualified trade unionists.

Two kinds of political concern emerge from this analysis. The first is a concern with the depredations of the new market-oriented 'performance culture' (Bernstein 2000: 62, fn.2); the second is a concern with producing specialized identities for disadvantaged learners. These concerns are, of course, not mutually exclusive, as a number of contributions to this volume demonstrate. Nevertheless, they do push in different directions, and the form of combination of concerns is consequently interestingly different. This can best be seen by considering Bernstein's macro-distinction between the two pedagogic types of invisible/competence and visible/performance pedagogy, each with two subtypes (Bernstein 1990: 72, 213. The grid is reproduced by Bourne (Chapter 5, this volume). See also Tyler (Chapter 2) for a modified version of the grid). For those leaning towards the first concern, the performance type and its attendant emphases (visible pedagogy, transmission, instructional discourse) is to be resisted in favour, usually, of what Bernstein called 'the liberal/progressive position' (Bernstein 2000: 62, fn.2), which is a competence type and its attendant emphases (invisible pedagogy, acquisition and the acquirer, regulative discourse). A mainstay of this position is Vygotsky, as Bernstein points out: 'The shift to Vygotskyism enabled the survival of the liberal/progressive position in the new performance culture' (*ibid.*). It is no accident therefore that Vygotsky is referenced by almost half of the contributions to this volume (Hasan, Bourne, Morais *et al.*, Rose, Daniels *et al.*, and Neves *et al.*).

For those interested primarily in the production of specialized identities, the issue is to adumbrate the lineaments of a 'radical visible pedagogy'

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(Bourne), or at least a pedagogy with 'more *visible* elements' (Lubienski). In this sense then, the first concern pushes towards a solution leaning towards the invisible end of the spectrum; the second towards the visible end.

It will come as no surprise that researchers attempting to balance the two sets of concerns, often from different viewpoints, are constructing, imagining, theorizing and empirically validating a new, possibly pedagogic object, a form of *mixed pedagogy* that can, in Morais, Neves and Pires' confident prediction, 'overcome the effect of children's social background'. This mixed form will have crucial dimensions that must be visible; that is, strongly classified or framed (the foremost contender currently being the explicitness of evaluation criteria), as well as crucial ones that are most effective when weakly classified and framed. That there is already a great deal of convergence, though far from perfect, across the continents (Portugal, South Africa, the UK, Australia and the USA in work represented here) is testimony to the robustness of the theory and the empirical work increasingly backing it up.

New empirical challenges are likely to emerge as the mixed model takes shape with greater detail and nuance. One is how best to capture what Morais and Pires call the 'what' of learning, and not just the 'how' of the pedagogy, since evidence of its importance is now hard to ignore. Another is how best to study and code pedagogical dynamics, particularly the framing relations which establish the temporality of the pedagogy; how, for example, can we capture variable pacing, which may at times be strictly policed and then relaxed, with no guarantee that the policing/relaxing cycle will be fully visible in any one or a sample of lessons. Such challenges are best faced by a community of scholars rather than singly, and the strong focus in this volume on reporting not only substantive results but also methodology should provide the impetus for far greater cross-national collaboration and learning than has been the case up until now.

As Davies (2001: 7) remarked in the Introduction to the previous volume, there is very little homogeneity in the productive range of enquiries pursued loosely in the emerging Bernsteinian tradition. While it is true that all the contributions to this volume focus in different ways on pedagogic discourse, not all of them focus on classroom pedagogy. Two deal with teacher education pedagogic discourse, opening up a hitherto under-researched area; one deals with craft pedagogy; and two deal with higher education, particularly with non-traditional students and their travails in the academy.

We have chosen to divide the volume into four sections. *Section 1* comprises three chapters that approach Bernstein in relation to other theoretical traditions. These traditions are quite different: while Hasan adapts Vygotsky to Bernstein, and Davis Lacan to Bernstein, Tyler claims the later Bernstein for poststructuralism. Despite this diversity, however, all three chapters in this section attend closely to the matter of meaning, semiosis and language; that is, to the problematic nature of pedagogic communication.

Tyler's is the chapter that deals most explicitly with the threat from the market, which, in poststructuralist fashion, he discerns to have had a major

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hand in producing 'a semiotic environment characterized by dislocated subjectivities enmeshed in indeterminate chains of signification'. In other words, Tyler would argue that with the advent of the market and network society more generally, pedagogic communicative relations have become severed from their social base, partaking now in a new regime of state control, operating in a far more individualizing and unpredictable manner. Tyler then proceeds to model the new, market-oriented pedagogy, adapting the original visible/invisible matrix to incorporate a new, 'information-centred' market pedagogy, which now occupies the quadrant formerly occupied by radical, invisible pedagogy of the Freireian type.

Hasan returns to a theme upon which she and other linguists (e.g. Williams 2001; papers in Christie 1999) have already shed considerable light, namely the fact that home life in different classes socializes children into different orientations to meaning. The pedagogic significance of these different orientations is that they have varying potential for mediating induction into 'context independent meanings', which here Hasan seeks to link with what Bernstein called vertical discourse. Hasan approaches the issue from the frame of Vygotsky's concept of 'semiotic mediation', which, she goes on to show, is equivalent to Bernstein's pedagogic discourse. By juxtaposing the two concepts, Hasan is able to show that semiotic mediation is not a singular concept and that there are different kinds of mediation depending on what kind of knowledge is being mediated. The upshot of the analysis is that only what she calls 'visible semiotic mediation' is appropriate for mediating vertical knowledge, a factor unrecognized thus far in Vygotskian scholarship, but echoing in an interesting way the imaginative drive to a new form of visible pedagogy discussed below.

Like Tyler and Hasan, Davis draws attention to the seemingly under-developed aspect of the pedagogic 'subject' in Bernstein (Diaz 2001), the acquirer who 'does not know' – the ignorant subject, from a Lacanian perspective. This point of departure allows him to recognize the indeterminacy at the heart of all pedagogic communication but to avoid lapsing into either what Bernstein called the 'spurious differentiation' of postmodernism (in Morais *et al.* 2001: 375) or progressive pedagogic privileging of the acquiring subject. By drawing rigorous parallels between Lacan's 'four discourses' which model the four possible permutations between the poles of teacher, student, knowledge and ignorance, and Bernstein's visible/invisible matrix, Davis sheds light on why it is that neither a thoroughgoing invisible nor an authoritarian visible pedagogy can logically succeed. In so doing, he marks out the logical space for a reconsideration of an alternative visible pedagogic form, to be sought first of all, concludes Davis, in a focus on the evaluative rules. This theme resonates throughout the rest of the volume.

The first four chapters of *Section 2*, on pedagogy at school, take up the challenge of trying to stipulate the optimal mix of visible with invisible pedagogic features for teaching disadvantaged children successfully. Bourne

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begins by recalling the quadrimodal matrix discussed above and reminds us that the bottom right quadrant (of a radical visible pedagogy) remains historically empty in Bernstein's account. She might also have reminded us, as Rose does, of Bernstein's view that 'It is certainly possible to create a visible pedagogy that would weaken the relation between social class and educational achievement' (Bernstein 1990: 79), entailing relaxed framing on pacing and sequencing, and weakened classification between school and community. What might this look like in practice? Bourne presents a case of an academically successful teacher teaching literature to disadvantaged children. She displays a highly regulated pedagogy which alternates between strong classification of space and discourse, and strong framing over teacher/pupil relations, to weakened classification over discourses and weakened framing over pacing, coinciding with a change in discourse genres. Bourne concludes by suggesting, echoing Hasan, that poor learners will only gain induction into high-status 'vertical discourse' by means of this variable radical visible pedagogy.

Morais, Neves and Pires switch focus to primary school science learning but continue and augment the analysis above in two key ways. First, they show that when it comes to science, teachers' competence is the first necessary condition for successful science teaching, accounting for about a quarter of the variation in pupil outcomes. Pedagogy, however, is also key, with the following the most important: strong framing of evaluation criteria; which is aided in turn by weakened framing of the hierarchical rules; and weakened classification of spaces and inter-discursive relations but strong intra-disciplinary relations. They conclude that weakened pacing is probably one of the keys to effective explication of evaluation criteria. The strength of their chapter lies in being able to model the features of pedagogy in a rigorous way and to correlate these features with pupil learning outcomes, providing a methodological model which young researchers would do well to follow.

Rose strengthens the argument for a necessary link between what he calls 'explicit instruction' and weakened framing over pacing and sequencing for disadvantaged pupils. Disadvantaged learners are disadvantaged, says Rose, because the school curriculum is paced to the level of middle-class learners who have learned to read at home, not to disadvantaged ones who have not. The result is that the requirement to absorb curricular content proceeds in advance of the reading levels of non-middle-class pupils. The solution, for Rose, is to relax the pacing and sequencing of the formal curriculum, and to teach reading 'explicitly' by means of 'scaffolding'. This Vygotskian notion might, from a Bernsteinian perspective, be regarded as a form of invisible pedagogy, where the framing over teacher/pupil relations is relaxed and sometimes where the criteria are not made explicit at the outset, but where the learner is led, via what Rose calls 'meaning', 'position' and 'preparation' cues, to discover them. Clearly a master teacher like Rose is able to achieve impressive results, not least because the cues are all derived systematically

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from a systemic functional linguistic understanding of pedagogic language. The net gain is, however, not in doubt: Rose makes plain that only if we explicitly and systematically teach disadvantaged pupils to read will they be able to learn from text. It seems obvious, but the formal curriculum everywhere is, as Rose convincingly shows, paced so as to ignore the obvious.

By comparing the differential responses of working- and middle-class seventh-grade pupils to the same invisible pedagogy, Lubienski makes evident how diverse the learning experiences of these children are on account of their differential socialization and consequently the different orientations to meaning they bring to school. Middle-class children all felt comfortable with the open engagement encouraged by the invisible pedagogy, felt more confident and were able to 'read' the hints and cues of the weakly framed scaffolding provided by the teacher. Working-class children missed the evaluative cues, misread classmate disagreements as negative evaluations, and generally displayed a lack of recognition and realization rules for effective participation within an invisible pedagogy. This was the case with high achievers as well as low. It seems highly likely that these pupils would have felt more comfortable with a greater explication of evaluative criteria.

Daniels and his co-workers continue this theme by contrasting the responses of boys and girls to visible and invisible pedagogy in two high-achieving classrooms. They confirm that social competences are more equitably distributed in the 'facilitative' classroom, so that boys and girls learned to collaborate better in the invisible regulative regime than they did in the visible, where the gender roles were more marked. Whether working-class boys and girls actually achieved more in the invisible classroom is a matter for further investigation, though the authors appear to suggest not. The implication of this study seems to support Lubienski's point that middle class children feel more comfortable with weaker classification and framing than do working-class pupils, but the interaction between class and gender deserves closer scrutiny.

Finally, by approaching the matter of framing through the perceptions of year eight English pupils, Arnot and Reay display a more differentiated and ambiguous picture. Running focus groups from mixed class and gender classes in two schools, they portray perceived control as varying principally by achievement which seems to be linked to class: generally the high-achieving pupils, especially the girls, felt more in control of their learning than did their low-achieving coevals. Should we interpret this to mean that the lower achieving pupils would have welcomed a slackening of framing? It is by no means clear, since these pupils also expressed the discomfort, reported above with Lubienski, about approaching the teacher for help for fear of embarrassment. Since we do not know what the framing relations in these classrooms actually were, it is hard to recognize whether these views reflect the reality of the classroom, or whether they reflect class, achievement or gender subcultures, as the authors admit. Muslim girls are reported to express distinct control preferences. How such preferences and their social

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base interact with pedagogical framing to produce determinate achievements would seem to be a fruitful avenue for further research.

The two chapters in *Section 3* grapple with the induction of novices into the teaching profession. Although there is very little work extant in this area, the chapters display a remarkable concordance, albeit approaching the matter from different directions. Ensor discusses the nested nature of teacher education involving the employment of a pedagogic form in one site (teacher training) for the induction into a pedagogic practice at another (the classroom). She goes on to model three modalities of teacher education discourse: a strong performance/visible mode with strong classification and framing; a competence/invisible mode with far weaker framing over location, selection and evaluation; and a mixed or modified visible mode with strong classification, strong framing over selection and evaluation but weak framing over location. Ensor concludes that the latter mode is the one most likely to provide access to realization as well as recognition rules among novices. Morais and her team extend their detailed technical coding of classroom pedagogy to teacher training, implementing a mixed pedagogic modality, characterized by weak classification and framing except for strong framing over selection, sequence and evaluation. While this differs somewhat from Ensor's mix, the difference may be attributable to the varying classrooms the teachers were destined for: junior in the Morais, Neves and Afonso case, senior in Ensor's case.

In *Section 4* we see Bernstein taken out of school. Since the sites are closer to the marketplace, we might expect to discern the heavy hand of the new performance culture, its expectations and effects and, indeed, all three chapters deal in different ways with the travails and unexpected costs of new educational thinking associated with this culture. Gamble puts Bernstein to work in a craft workshop where, by modelling the structure of craft knowledge as a horizontal knowledge structure, she is able to isolate and illuminate what it has in common with all other knowledge structures, namely a set of embedded principles which enable elaboration in the knowledge structure. These principles are conveyed tacitly in craft pedagogy. The worldwide restructuring of apprenticeship stands every likelihood, Gamble implies, of losing the principles from craft, proceduralizing its base and reducing it to a caricature of the commonsense view of manual practice.

Breier shows that an analogous price is to be paid by non-standard learners in the new courses in tertiary education that aim to draw closer, via a proliferation of trainability bridges, the worlds of home and work and the induction into a principled knowledge structure, here, Labour Law. The 'trainability' allure must seem all the more fatal in this case because Labour Law does not only seem, but is, a 'worldly' practice. Nevertheless, as Breier shows, no matter that it displays itself primarily through particular instances, it is the general principles that must be grasped for the law to be learned. What 'trainability' courses such as these mask is both the particularistic coding orientations brought to the lecture room by these non-standard

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students and the special difficulty they must experience when the weakly classified nature of the pedagogy blurs the distinction between experiential and principled knowledge. It masks not only the principles to be learned but also the very fact that they must be learned, until it is too late.

In the final chapter of this volume, Maton trains his gaze squarely on the very idea of the non-standard learner, this time in English higher education, exposing its mythical foundations. Nevertheless, Maton shows, entire institutions were recrafted as technologically oriented, the better to accommodate the 'new student'. Not only did the new students not arrive as foreseen but, as Gamble and Breier might suggest to Maton, they would have found principled induction put even further out of reach by the newly proceduralized institutions than they were in the elite institutions, which continued as before.

Taken together, these chapters provide a powerful chorus of critique and possibility for and of our contemporary educational dispensation.

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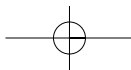
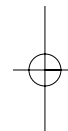
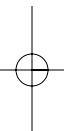
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Section 1

Bernstein's relations



2 Silent, invisible, total

Pedagogic discourse and the age of information

William Tyler

One of Bernstein's last papers (2001a), a short, reflective piece prepared for the Lisbon Symposium, outlined a vision of a society emerging under the New Labour government of the United Kingdom in the late 1990s, a social order shaped, animated and maintained through the discursive principles of pedagogy, as embodied in new educational technologies, lifelong learning policies and a fluid, highly credentialized workforce. Bernstein christened this emergent form the 'totally pedagogised society' (TPS), a term which resonates with Castells' (1996–98) version of the networked structures of the information age. It has many superficial parallels with the so-called 'new economy' of the late 1990s, though it differs radically from the views of those of its proponents who focus narrowly on skills formation and technological innovation.

Bernstein's model may be seen as a culmination of a less conventional view of the role played by pedagogic discourse in restructuring the major institutions of developed societies, from family life and early socialization, through educational stratification processes, new ordering of social identities, cognitive and moral formation and, ultimately, to the bases of social inequality. One might point here also to trends in popular culture (the Harry Potter phenomenon), media styles ('infotainment', 'edutainment') and penology (family-group conferencing) as instances of the centrality of pedagogic relations in communicative and governmental processes. Since, as Bernstein had for many years asserted that pedagogy has 'no voice of its own' (Davies 2001: 6), it is perhaps not surprising that its reconstitutive transformation of other discourses has not received the recognition it deserves.

Given its potential importance, it is unfortunate that Bernstein's reading of a society constituted by pedagogic processes lacks a well-articulated socio-semiotic framework on which such a radical vision could be based and its implications explored. While his assertion that the underlying principle of social reproduction is one of the delocation and relocation of **know-**ledge, it has not been presented in a form from which researchable questions could be derived. If pedagogic principles are so ubiquitous and pervasive (though invisible and voiceless) in defining many of the processes of contemporary culture, then what are conventionally accepted to be the social

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and communicative relations between school and society are inverted. No longer do educational processes merely reproduce society but, in some sense, they constitute and legitimate that society.

In a world where the boundaries of educational institutions are continually eroded through the applications of technology-driven and neo-liberal reform (Peters 1998; Peters and Roberts 2000), the foundational claims of the socially reproductive functions of schooling, on which the sociology of education has been hitherto based, must become increasingly destabilized and problematic. Without a firmer understanding of just how the articulation of the 'relations within' these pedagogic processes works, there is every danger, as Bernstein feared (1990: 177–9; Davies 2001: 4), that 'relations to' (i.e. of education to other relationships based on gender, class, race and ethnicity) would come to be seen as the main engines of educational and societal change.

This chapter takes up this uncompleted aspect of Bernstein's project in exploring the unique social semiotic properties of pedagogic discourse in a society that has become increasingly 'pedagogized'. How can these new kinds of internal relationships within education, evidenced in the fluidities and indeterminacies of structural reform, the technicization of teaching and learning and the global dissemination of Western cognitive and educational styles be positioned within Bernstein's neo-Durkheimian model of the socially reproductive role of the educational institution in modern societies? Is it possible to capture these within a comparative model of discourse defined in terms of the social and the semiotic dimensions of teaching and learning practices? The development of Bernstein's theories of pedagogic discourse over the past two decades therefore holds great, though largely unrealized, potential for an understanding of contemporary issues such as market-oriented educational reform, National Curriculum movements and online or e-learning. The relations between these later writings and his earlier phases which privilege class formation and class reproduction deserve closer attention in the development of a unifying theory of pedagogic policies and practices in an increasingly turbulent and politicized environment.

In this exercise, it is necessary first to expose some of the ironies and contradictions in Bernstein's *oeuvre*, by contrasting his later writings on pedagogic discourse with the basic tenets of his earlier contributions to the sociology of education. These contrasts become more evident when one compares what Atkinson *et al.* (1995: xi) identify as the first and the third phases of his project (i.e. between his early Durkheimian writings on language and class and his later poststructuralist attention to text, voice and discourse). The model of the TPS could, in fact, be termed 'postmodernist', since it might well illustrate Jensen's (1995: 5) definition of this term as based on 'an assumption that the relationships between signs, self, and society have been radically reshaped in advanced industrial societies during the past few decades, resulting in a culture of disintegration and recombination'. In exploring the social and semiotic dimensions of this 'poststructuralist turn',

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I shall argue that, although Bernstein's terminology (e.g. recontextualization) shares some important features with the social semiotics of contemporary exponents of the American philosophical tradition of pragmatism, such as Rorty (1991) and Jensen (1995), the direction taken in these latter writings is radically different and much closer to those of poststructuralism.

The ruptures between the TPS and the concerns of Bernstein's earlier writings with processes of social reproduction may be thematized along their two constitutive axes, the social and the semiotic:

- 1 *Social*. Such a society as the TPS, formed through pedagogic rather than productive processes, loses its clear basis in the familiar divisions of class and of socio-economic status. At best, one could only claim that the class categories of industrial society have been absorbed into a totalizing 'interrupter matrix' (Bernstein 1977: 149), somewhat similar to that which advantages the new middle class. The power of this code, as I shall argue, would be nevertheless destabilizing to the foundational basis of Bernstein's early and middle writings, to his language and cultural transmission theories. As Bernstein puts it, 'socialization into the Totally Pedagogised Society erodes commitment, dedication and coherent time, and is therefore socially empty' (2001a: 366).
- 2 *Semiotic*. If the basis of pedagogic discourse is 'a *recontextualizing* principle which selectively appropriates, relocates, refocuses, and relates other discourses to constitute its own order, and orderings' (Bernstein 1990:184), then the communicative order or the pedagogized society would be one of perpetual instability.

In many respects, the pervasiveness of the recontextualizing principle in social reproduction marks a radical shift in Bernstein's thinking about the relationship between education and society. Not only is its social base absorbed by semiotically driven processes but the very nature of that process would be one of perpetual, discursive *bricolage*, decentred, asocial, virtual. By another route, Bernstein's analysis of the dominance of the cultural dynamic of the pedagogic principle re-creates in many respects the simulated, socially dead, semiurgic world of Baudrillard (1983) and other postmodern and post-foundationalist theorists (Jameson 1984; Kroker and Cook 1984; Lyotard 1984). This marginalization of class analysis in his latter writing, in other words, appears to be radically incongruent with the reconstructive, even emancipatory, goals that informed Bernstein's most well-known work.

How, then, did Bernstein come to what resembles an impasse in his project and what implications does it have for the future development of his theories of educational reproduction, pedagogic discourse and symbolic control in schools and classrooms? Specifically, we may ask what theoretical framework might prove to be most promising for providing a baseline for a social semiotic of pedagogic discourse as defined in Bernstein's later writings. In so doing, we might attempt to develop a general model of social semiotics

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of pedagogic discourse which distinguishes Bernstein's theoretical design from others with which it may appear, superficially, to be in competition. In this enquiry social semiotics takes on the wider definition of Kress and van Leeuwen as 'an attempt to describe and understand how people produce and communicate meaning in specific social settings in society' (1996: 264).

This chapter will therefore attempt to define and locate a space for Bernstein's 'new' social semiotics in a society where pedagogic discourse has been more centrally positioned as an agency of cultural and social production in its own right. This exercise will be taken in four stages, through:

- 1 an exploration of the model of the TPS and its points of comparison and contrast with postmodernist and poststructuralist theories of communication and signification;
- 2 an examination of the discontinuities that the TPS model implies within Bernstein's corpus of writings in sociology of education, which touches on some of the landmark stages in Bernstein's thinking;
- 3 a review of the elements of a semiotics of pedagogic discourse in Bernstein's project, notably in the interplay between sign, self and society as they are worked out in pedagogic contexts; and
- 4 the development of a formal framework of the socio-semiotic dimensions of the field of pedagogic discourse. This model positions Bernstein's model of the TPS within his previous writings on the place of education within late capitalist societies, and attempts to capture both the continuities and the discontinuities in the development of his project.

From class reproduction to the totally pedagogized society

Bernstein's short article outlines a model of a society that is emergent in the United Kingdom, spurred on by the policies of the New Labour government but indeed generalizable to most developed nations. The rhetoric of these policies celebrates the so-called Knowledge Society, whose main base of social discourse is the pedagogic relation expressed in terms of lifelong learning, trainability and ready and pervasive access to the information economy. The sociological model for the TPS has its roots in a mainstream sociological tradition, in which Bell's (1974) model of the post-industrial society is its best-known exposition. Bernstein however identifies the main force of the pedagogic relation in more critical terms, particularly in its invisible normalizing effects through an apparatus of symbolic control which valorizes trainability, a capacity for endless forming and reforming of individual desire. This society depends on the worker's capacity to find meaning not in coherent or stable social relations, commitments or careers but, rather, in the gratifications of consumerism. In this world 'the products of the market relay the signifier whereby temporary stabilities, orientations, and evaluations are constructed' (Bernstein 2001a: 366). Pedagogic discourse is uniquely suited to the socialization of workers to this knowledge-based society, through the

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inculcation of these capacities and orientations. However, it is 'the pedagogy of the short-term', rather than of unified and graduated careers, which the counselling profession promises its clients.

Bernstein sees this pedagogic relationship as 'socially empty', a mere shell for the expansion of consumption, electronic communications and the circulation of the images of global capitalist culture. Bernstein's originality, however, is to reverse the order of dependence between consumption and pedagogy. Pedagogy assumes a new centrality in this society, all the more powerful for its invisibility, its silence within the debates surrounding the policies and reforms of the New Right and their left-liberal critics. It is the absence of debates about the pedagogic relationship which Bernstein uniquely finds so interesting and disturbing, and which is missed completely by the critics of the more visible effects of privatization, disinvestment and mercerization. Contrary, then, to critics who see the public school in danger of absorption by the behemoths of a corporate commercial culture, pedagogy is the constitutive discourse of flexible capitalism, a semiotic process which depends on its continuous creation and reproduction.

Such a relationship needs to be managed, not by the 'weak state' of the political economists of global capitalism but by a 'strong state' of educational reform, standardization and surveillance. This strategic twist is characterized by a decentralizing strategy whereby 'a new cadre of pedagogues, with their research projects, recommendations, new discourses and legitimations are being constructed' (ibid.: 367) in the educational marketplace. The mercerization and technicization of schooling, far from weakening the power of the state, is seen as a covert strategy for the management and repackaging of the pedagogic relationship outside of its conventional boundaries of centralized bureaucratic control. Pedagogy, through the alliance of technology, mercerization and a recentring state, has produced levels of symbolic cohesion which have not been seen since the medieval period. The lack of recognition of this hidden process of the pedagogization of society through the guise of neo-liberal principles appears, however, to be neglected or else sidelined in public debate. This 'triumphant' silence no doubt prompted Bernstein to adopt such a provocative and, perhaps, ironic, term, as the TPS.

At first blush, the framework of the theory of pedagogic discourse which pervades the last two volumes of Bernstein's writings (1990, 1996) seems to share a great deal of affinity with the earlier volumes of *Class, Codes and Control*. There are constant references to Durkheim and the types of solidarity, to cultural reproduction in capitalist societies, to the coding of educational transmissions, and to social class and to social control. However, this emergence of pedagogic discourse as the primary site for the production of social power and for an understanding of a new relationship between education and society has not been sufficiently recognized until now. This rupture in Bernstein's thinking, which might be traced to a Foucauldian influence through his collaboration with Diaz in the early 1980s (Bernstein and Diaz 1984), introduced a pronounced post-foundational turn which was

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to persist. In the writings of the past two decades, however subtly, the foundational themes of class reproduction were to be displaced by an entirely different dynamic of stratification based around pedagogy. Although I have explored some of the specific implications of this poststructuralist and postmodern 'turn' in previous papers (Tyler 1995, 1999, 2001), the socio-semiotic dimensions of this development have yet to receive adequate attention.

A poststructuralist turn? Semiotics, discourse and education

Bernstein's poststructuralist turn charted the move away from a society in which education reproduces class structures to one where education constitutes the social order through a state-managed process of symbolic control, suggesting a deeper problematic which is heavily implicated in the production and interpretation of signs. How might the process of recontextualization be understood and described? How are educational organizations to be constituted in a world where knowledge is money? How do the 'virtual/imaginary' subjects of pedagogy migrate to virtual classrooms and subjects of the Internet? How are we to make sense of an 'empire of signs' which has been infiltrated or subverted by the agents of an invisible pedagogic discourse? How is the chain of signification constituted in the recontextualizing process? What is the place for the interpreting subject in all of this? As Diaz (2001) points out, the absence of a theory of the subject is an enduring problem in Bernstein's discourse theory.

As a result of this absence, Bernstein's models of symbolic control (a term grounded in social conflict theory), though well articulated in his early writings on the sociolinguistic practices, are weakest in this third, poststructuralist phase. The frequent references in these writings to 'signifiers', 'identities', 'relays' and the odd structuralist neologism, such as 'pedagogeme' (1990: 194), are at no point articulated into a formal model of semiosis, although there is no lack of many other models of cultural transmission and pedagogic discourse sprinkled through his work. These allusions to the practices of semiotics, if not to an explicit tradition, raise questions which go beyond the transmission and acquisition of privileged modes of communication of the early writings and, in light of the new status of pedagogic discourse, to the nature of communication itself.

Self, society and meaning: pedagogy as social semiosis

The influence of the pragmatist tradition is a strong undercurrent in Bernstein's development of the sociolinguistic theories. It emerges explicitly in the acknowledgement Bernstein gives to the symbolic interactionism of G.H. Mead (1934), whose philosophical roots were in American pragmatism of the Chicago School of the 1920s, in the development of the sociolinguistic codes. Mead, he claims, is of central importance in solving the puzzle of the

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'HOW' in explaining the 'fundamental linkage of symbolic systems, social structure and the shaping of experience' (1971: 170–2). Although Mead is placed alongside Durkheim and Marx as a formative influence, the Durkheimian heritage is most salient in his later writings. Dewey's pragmatist models of progressive education do not rate a mention in the *Class and Pedagogies* paper (1977: Chapter 6), even though they were perhaps one of the most important historical instances of the development of the progressive educational practices. The pragmatist influence may be found more readily in the applications and commentaries in the various edited *fest-skriften* to Bernstein which emerged in the 1990s (Atkinson *et al.* 1995; Sadovnik 1995), for example, by Semel (1995), Young (1995) and Tyler (2001).

However, much of Bernstein's intellectual debt is to structuralism. This case was most forcefully made by Atkinson (1986: 58), whose *observation*, in connection with Bernstein's rejection of the Meadian interest in process for the Whorfian emphasis on classificatory and structural principles, was that '[S]ociologically a Durkheimian, Bernstein is temperamentally a structuralist'. Atkinson, however, sees this in broad terms of methodology and orientation – a privileging of the systematic ensembles of difference in symbolic systems over 'the speaking subject' – rather than an adherence to fashionable Parisian theories (*ibid.*: 181). As Young (1995: 281) points out, 'Bernstein's structuralism was perfectly adequate to an anticipation of the main outlines of Foucault's analysis of the modern regime of power/knowledge, pastoral (new middle-class) power, and governmentalization'. The centrality of the structuralist tradition in Bernstein's mature writings should not be surprising, given its Durkheimian and Maussian roots.

The points of structuralism's departure from the pragmatist tradition may be easily enumerated in terms of a dyadic, rather than triadic, theory of signification which tends to exclude the speaking subject and a methodology aimed at the disclosure of deep grammars based on systems of difference rather than schemes of interpretation. Above all, it seeks a descriptive rather than a normative model of the relationships between education and society. In crude terms, it could be said that while Dewey saw in the specialized field of education a vehicle for social transformation, Bernstein rather came to discern in its semiotic order an agency for the ultimate pedagogization of society.

In the post-foundationalist reading of pedagogic discourse outlined above, Bernstein's approach to the subject/knowledge relationship is therefore radically divergent from the pragmatist view of educational practice. Whereas the latter see education as the hope for an emancipatory practice, grounded in situated action and interpretation, Bernstein's pessimistic analysis of the dislocation between the knower and the known in late modernity appears to accept a Lacanian, poststructuralist view of the subject divided inexorably between an external world of signifiers and the inner world of meaning and experience (Lacan 1977). Far from liberating the subject into more

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democratic relationships, as pragmatic educational philosophy would propose, a specialized pedagogic discourse appears to be the ultimate device for the normalization of consciousness, the fabrication of social identities, a reproducer of a permanent condition of alienation of the subject. Meaning and action in the TPS are dissolved by the pedagogic relation which 'normalizes the intimacies of desire, and public aspiration, conduct and its practices, through the shaping of macro structures' (Bernstein 2001a: 364).

While the analysis of Bernstein's project has cleared the ground in delineating its intellectual heritage, the problem still remains of how to describe the structures of meaning in a semiotic environment characterized by dislocated subjectivities enmeshed in indeterminate chains of signification. Clearly the socio-semantic-based models of institutionally located socialization and code acquisition are not adequate to such destructured and fluid communicative processes of the TPS. Rather than seeing pragmatism as offering 'an alternative to the Scylla of modernism (Habermas) and the Charybdis of postmodernism (Rorty)' (Jensen 1995: 15), Bernstein's project, in its later phase, pointed in quite the other direction, towards a totalizing code of pedagogically regulated markets for knowledge, skills and social distinction. This poststructuralist turn therefore suggests the possibility for developing a space where the structures of transmission and acquisition in an increasingly indeterminate, highly mediated semiotic environment may be apprehended and constructively critiqued. The final section of this chapter will therefore attempt to take up this rather ambitious task, in melding the social and the semiotic axes of Bernstein's writing into a socio-semiotic model of pedagogic discourse.

Dimensions of discourse: a socio-semiotic framework

The task of grasping these new relations between signifier and signified, self and sign, education and social structure in the TPS would be facilitated by locating them within a generic framework which could both consolidate and illustrate some of the distinctions addressed above. Such a demonstration could be achieved by identifying the constitutive dimensions of social structure and of signification along which the construction of meaning in pedagogic contexts may be identified and investigated. The aim is to derive a model of the possible fields of socio-semiotic relations as these are realized in specific forms of pedagogic discourse. In the process one might more explicitly locate the model of the TPS within the evolution of Bernstein's own project. Such a model should recognize the relationship between knower and the known and the relationship between education and society. This model should also help to distinguish between poststructuralist and neo-pragmatist traditions of social semiotics as they are applied to the field of pedagogic practice.

Jensen's (1995: 50, Fig. 3.3) socio-semiotic typology of mass communication, though neo-pragmatist in orientation, provides an illustrative strategy

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for meeting this kind of problem. Jensen argues that 'because semiosis is complex and distributed across social structures, it is necessary to specify several models that may capture its different aspects and make them accessible for empirical research'. He then offers a generic, fourfold typology of the possible models of meaning production according to their assumptions about the properties of the semiotic field, i.e. the degree to which each model of meaning predefines its available constituent units or events and its final configuration. This schema would appear to have some affinities with the development of Bernstein's own models of communicative principles, such as collection and integrated codes, generated by the values (strong/weak) of classification of individual objects and their framing or interdependence in the educational transmission field (Bernstein 1977).

The task of developing a discourse-specific socio-semiotic schema, similar to that of Jensen's but derived more explicitly from Bernstein's particular readings of the discursive transformations in pedagogy, is therefore an attractive possibility. The aim here, however, is not to typologize theoretical positions or 'models of meaning' as Jensen does but, rather, to generate analytical categories for describing a range of socio-semiotic conditions which characterize various forms of teaching and learning. Such a schema should therefore set out a meta-theoretical space from which the developments in the socio-semiotic field of pedagogic practice might be described.

In adapting this general strategy in order to typologize these in terms of Bernstein's accounts of the discursive transformations of pedagogic discourse, one might first identify a semiotic dimension which denotes the degree of stability in the chain of signification that is seen to characterize a particular form of educational practice. In terms of Bernstein's coding categories, this dimension might also be expressed in terms of the strengths/weaknesses of the coding principles (classification and framing) that regulate the inter-relations of the structural elements of the signifying chain (signifier, signified, referent) in educational discourse. At one extreme of this axis, there are strongly classified and stable systems of interconnections between these elements, while at the other, the relationships between signs, signifiers and referents become indeterminate and volatile, as happens in the continual recontextualizing of images in advertising.

The second, sociological dimension might be expressed in terms of the relative institutional autonomy of education or as explored in the paper 'Education and production' (1977), the strength of classification between the categories of education and production. Bernstein was not happy with the term 'relative autonomy' itself, which is also discussed in the paper 'Symbolic control and social practices' (1990: 153–4), which replaces the earlier classification and framing typology by one of weak and strong 'linkages'. Along this axis one can make distinctions, for example, between premodern societies, which have weak classifications between education and production, and early twentieth-century capitalist societies characterized by a strong classification or a higher degree of insulation between the field

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of production and that of reproduction. By the end of the twentieth century, however this classificatory relationship is weakened as the 'new vocationalism' is implemented and educational systems become more directly accountable to the productive order, in a less determinate, though still relatively stable, semiotic field. In the model of the TPS, however, this process is taken to its extreme case in that education becomes deeply embedded in everyday life, just as the symbolic order becomes increasingly unstable and indeterminate.

The spaces generated by the axes of this schema (Figure 2.1) may be used to explore the social and semiotic dimensions of the discursive forces operating within different stages of development of capitalist societies. This is not meant to be a static taxonomy, however, since within and between each of the four positions identified there exists a number of discursive possibilities which may result from the tensions inherent in the structure of the total figure and in the possibilities of recombination. This interplay generates a set of combinations which locate the socio-semiotic positions embedded within Bernstein's account of the major transformations of pedagogic discourse. The four cells are therefore intended merely to give a sense of the models of socio-semiotic practices which they are likely to enclose and invoke.

In evolutionary order, the upper left-hand cell positions the stable conditions of what Bernstein typified as the first totally pedagogized society dominated by the *trivium*, whose pedagogy relied on hierarchy and closure around a revealed religion as transmitted by tradition. In its earlier, pre-bureaucratic form, this may have been the world of the guilds/apprenticeship system of late medieval society in a visible, public form. In this condition, pedagogy is constitutive of the voice of tradition and may indeed be said to have a distinctive 'voice', recognized in the pedagogic origins of the terms, for example, the *magisterium* of the Catholic Church, with its resonances in other religions 'of the book', such as mullah (learned one), rabbi (teacher)

		AUTONOMY (SOCIO-ECONOMIC)	
		Low	High
DETERMINACY (SEMIOTIC)	High	Tradition-centred (voiced/visible) TrivT	Subject-centred (silent/visible)
	Low	Information-centred (silent/invisible)	Student-centred (voiced/invisible)

Figure 2.1 A socio-semiotic typology of pedagogic discourse

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or even taliban (student). The second model, in the upper right-hand cell, marks out pedagogies based on specialized and utilitarian principles of the secular *quadrivium*, exemplified in the nineteenth- and early twentieth-century systems, whose most mature form may be found in the collection code (highly visible pedagogy) of the secondary schools of European nation states such as the grammar, the *lycee* or the *gymnasium*. The cost of this specialization, however, is the subordination of pedagogic discourse to a socialization and reproductive function rather than as a constitutive principle of social and economic relations.

The third space of this model, positioned in the lower right-hand cell, is that of progressive practice, which removes the school from the exigencies of the marketplace in the interests of growth and subjective relevance, though at the cost of increasing instabilities and discontinuities in the reproductive outcome. This movement, with its many variants of openness and informalism, introduced a new kind of instability and indeterminacy into pedagogic relationships and has been in perpetual tension with both the traditional and vocational tendencies of the present. At the brief moment of ascendancy of this modality in the mid-twentieth century, however, particularly in the 1960s, there is an arguable case that pedagogic discourse had acquired a voice of its own. Whether in its progressivist form in North America or in the informalist, democratizing movements of other systems, teachers and students appeared to have gained the autonomy (however 'relative') to experiment and to innovate, representing educational processes themselves on their own self-referential terms.

It is the last of these spaces, however, in the lower left-hand cell which is of most contemporary interest, since it positions the poststructuralist turn in Bernstein's later thinking within a larger framework. As in his model of the TPS, this category indicates a tendency to high levels of integration between pedagogy and social and cultural processes, orchestrated by national authorities, mediated by market forces and the demand for high levels of technological innovation. By the nature of its internal semiotic principles, this model of meaning marks out the emergence of a virtualizing discourse which shapes and appropriates those very legitimating frameworks (economic efficiency, equality of opportunity) which have previously sustained it. This generalization of the pedagogic relationship, implying high levels of integration between education and economy, silences its incipient voice in the din of a cacophony of managerial, economic and therapeutic-legal imperatives.

It must be emphasized in this connection that the relations of pedagogy 'to' these other influences (the market, cultural nostalgia, political ideology) are not all one way, as many left-liberal critiques of neo-liberalism would have it. Although these external pressures may be reflected in the pedagogic identities of contemporary discourse, they are not their primary location but are continually redefined, exchanged and projected in a flux of recontextualizing practices whose internal rules of combination cannot be reduced to

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distributional principles of social power. Such appropriations and incursions invite misrecognition of the deeper, though silent, processes generated within the pedagogic process itself.

This misrecognition is well illustrated in sociological responses to attempts to make compulsory the study of national histories and Shakespearean plays in the National Curriculum of the United Kingdom. Ball (1995: 100) claims, for example, that these movements 'conjure up and reproduce a fantasy of Englishness, classlessness, authority, legitimacy, moral order, and consensus'. However, in the terms of Bernstein's later thinking, these movements are perhaps better understood primarily as modalities of 'recentring' the new pedagogically constituted nation state, rather than, as Ball reads them, strategies for naturalizing oppression based on class, gender or race. In other words, these responses to 'the crisis' in education are to be recognized as stabilizing processes within a pedagogized culture rather than the ideological impositions of a threatened ruling class. A similar critique may be made of readings of a trend towards faith-based (Christian, Muslim) private schooling in terms of class or religious closure. Like National Curriculum movements, this trend may also be seen as a reflex of the intrusions of a retrospective identity grounded in pedagogic processes.

Conclusion

This generic typology of socio-semiotic models clarifies some of Bernstein's later thinking about a society constituted by pedagogic processes, and opens up lines of enquiry into the continuities and discontinuities which have been identified in the development of his project. Some directions for further research that are immediately suggested are:

- 1 A theoretical analysis of the relationship between these four socio-semiotic models of pedagogic discourse and the four stages of Baudrillard's (1981) well-known typology of the development of the sign in human culture (and, by implication, of its major source in Foucault's *The Order of Things*, (1970)). Reciprocally, Bernstein's projection of the pedagogic principles onto the contemporary cultural condition offers a unique and original insight into this field.
- 2 An investigation of Bernstein's identification of the historical moment of dislocation between the inner and the outer worlds of pedagogic practice. Since this appears to draw from Mead's model of the social self (the I and the Me) as much as from poststructuralist theories, an enquiry into its intellectual genealogy would be rewarding.
- 3 An exploration of the internal dynamics of the socio-semiotic processes of the model of the TPS, particularly the relationships between sign systems, political processes and pedagogic practices. Recognition of the centrality of pedagogy in its 'silent/invisible' modality can generate a number of hypotheses that are quite researchable, but at present have been difficult to articulate in current sociological debates.

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The task ahead for the sociology of pedagogy is, then, to trace the social and semiotic processes of the information age, where pedagogic relations assume a new and constitutive status. More important from a research perspective is the challenge of explaining how pedagogic formations exist under cultural conditions of indeterminacy, volatility and decentredness. These are the questions which have been raised by poststructuralist theorists, and their exploration has a great deal to offer the educational theorist and researcher in modelling the social and semiotic processes embedded in what has commonly been called the 'postmodern condition'. The implications of Bernstein's original insight, that these processes may themselves at heart be constituted through pedagogic principles as, at the same time, they rebound on the shaping the future of the forms and modalities of the pedagogic communication itself, are well worth pursuing.

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3 The concept of semiotic mediation

Perspectives from Bernstein's sociology

Ruqaiya Hasan

Introduction

Over the past three decades Vygotsky's work has become widely known among psychologists, social activity theorists and, above all, to an influential group of educationists. It is perhaps true to say that among the many brilliant insights provided by Vygotsky, he is best known for his richly productive concepts of *semiotic mediation* and the *zone of proximal development*. This chapter focuses on the former, for reasons that will become apparent. Simply paraphrased, semiotic mediation is concerned with the cultural mediation of mental development through acts of semiosis. The concept is set to become even more relevant to our ways of thinking about mental development as current trends in neurological research continue. Several well-known specialists have argued (e.g. Edelman 1992; Greenfield 1996; Deacon 1997) that both in the evolution of *homo sapiens* as well as in the development of any member of the species, the functioning of brain/mind cannot be dissociated from the experience of living with others. Susan Greenfield has described the mind as a 'personalized brain' which develops the forms of consciousness that it does by virtue of what it experiences from day one of its inception. Since a large part of our experience of living is fashioned by our semiotic acts (i.e. by our acts of meaning) and, because semiotic acts presuppose an 'other', both the social and the semiotic are crucially implicated in the processes of the formation of consciousness. My interest is based on the belief that the concept of consciousness is central to any code-based theory of sociology such as that of Bernstein. How consciousness is formed; how its distribution varies in form across different classes and groups in a society; what institutions contribute, and how, to such distribution; and what part variation in consciousness plays in the production and reproduction of society are all issues of importance to such a theory of sociology. In this chapter I will argue that Bernstein's 'take' on the issue of consciousness is of primary relevance to Vygotsky's concept of semiotic mediation. Not only do Bernstein's sociological insights contribute to the reach of the concept, but any application of it in official pedagogic sites that is not informed by such insights is simply likely to contribute to the reproduction of patterns of

social injustices that have been long known to inhere in our educational systems. Before turning to this task, let me first present my understanding of Vygotsky's concept.

Semiotic mediation in the development of mind

Vygotsky postulated two lines for the genesis of human mental activity: (1) the 'natural', which was rooted in human biology (i.e. it had a biogenetic foundation), and (2) the social, which was rooted in human culture, and thus had a socio-genetic foundation. Human consciousness was seen as the product of the interweaving of these two lines of development. Mental activities, with their roots in biogenetic foundation, were referred to as *elementary mental functions* and they were said not to display the qualities that are specifically human – qualities which were to be found only in socio-genetically founded *higher mental functions*. Vygotsky (1978: 39, emphasis added) maintained that: 'even at early stages of historical development, humans went beyond the psychological functions given to them by nature and *proceeded to a new culturally-elaborated organization* of their behaviour.'

In the socio-genesis of such organization of human behaviour, the intervention of some variety of tool plays a crucial part. For example, in the practical sphere of physical labour, the use of *concrete tools* changes the very nature of human performance: not only does this mediation by *technical or concrete tools* alter the structure of human labour but it also eventually affects the nature of the environment in which humans live. The same situation obtains in the sphere of mental labour (i.e. in making the human mind work). Here, too, mediation by tools changes the quality of mental functions, and this 'alters the entire flow and structure of mental functions. It does this by determining the structure of a new instrumental act just as a technical tool alters the process of a natural adaptation by determining the form of labour operation' (Vygotsky 1981: 137).

In time, the alteration in mental functions will reveal itself also as changes effected in the human social and material environment.¹ But the tool that mediates mental activity is of a different order from concrete tools: it is *abstract, psychological and semiotic*. The *higher mental functions* mediated by this abstract tool display those qualities which Vygotsky considered to belong uniquely and specifically only to human mental life, representing a break from the biologically given to the culturally mediated. Below is one account of Vygotsky's views of these qualities (translation by Wertsch 1985a: 26):

[their] basic and distinguishing features are intellectualization and mastery, that is, conscious realization and voluntariness.

At the centre of development during the school age is the transition from the lower functions of attention and memory to higher functions

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of voluntary attention and logical memory . . . the intellectualization of functions and their mastery represent two moments of one and the same process – the transition to higher psychological functions. We master a function to the extent that it is intellectualized. The voluntariness in the activity is always the other side of its conscious realization. To say that memory is intellectualized in school is exactly the same as to say that voluntary recall emerges; to say that attention becomes voluntary in school age is exactly the same as saying . . . that it depends more and more on thought, that is, on intellect.

Semiotic acts are acts of meaning, and these may be construed in any semiotic modality of which language is only one. However, although Vygotsky recognized the value of other modalities, such as gesture and image, he attached significantly greater importance to language. Thus, in the literature, by default, *semiotic mediation* has come to mean *mediation by means of the linguistic sign*. This was not because Vygotsky was bowing to the imaginary imperialism of linguistics (Bourdieu 1991); it was because he had thought deeply about language and had actually worked with language, especially in relation to its development in children (Vygotsky 1962). The study of the development of mother tongue in children provides the best opportunity to appreciate the power of language, as the process of its acquisition mediates the transformation of a biological organism into a social person. Vygotsky's main interest in young children's acquisition of language, like that of Bernstein's in the context of early acquisition of coding orientation,² was not so much in the forms that were being learned but in what the acquisition did psychically for the child:

Prior to mastering his own behaviour, the child begins to master his surroundings with the help of speech. This produces new relations with the environment in addition to the new organization of behaviour itself. The creation of these uniquely human forms of behaviour later produce the intellect and become the basis for productive work: the specifically human form of the use of tool.

(Vygotsky 1978: 25)

Semiotic mediation: an analysis of the concept

The above account offers some indication of the centrality of the concept of semiotic mediation to Vygotsky's concern with the production of higher mental functions. Discourse around the concept grows daily (Cole *et al.* 1997; Engestrom *et al.* 1999; Wells and Claxton 2002), though it has not been subjected to careful analysis. In my view this has had a deleterious effect, preventing us from appreciating the full power of the concept as well as its need to be complemented by a theoretically sound linguistic and sociological foundation. In this section I will offer such an analysis of the phrase *semiotic mediation*.

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The first point to note is that the phrase represents what Halliday would describe as a grammatical metaphor, whose non-metaphorical form would be *mediate semiotically*, where *mediate* is a process and *semiotically* refers to a quality of that process – a quality that pertains to semiosis, by means of which mediating is performed. The scenario to which the expression *semiotic mediation* refers is thus complex when both components are taken into consideration, as they should be. The point of using *semiotic* as a modifier of the nominalized process *mediation* is precisely that it is not an inherent characteristic of mediation as such: mediation by concrete tools does not have exactly the same character as that by the abstract tool of a meaning-making modality. Part of this has to do with the ubiquity of language: as a primary semiotic modality it pervades nearly all aspects of every social being. Of course, both are cultural in origin and they are often not independent of each other. None the less, mediation by acts of meaning has specific characteristics which are not shared by mediation by concrete tools (Vygotsky 1962, 1978; Hasan 1992, 2002). Acts of meaning call for someone who ‘means’ and someone to whom that meaning is meant: there is a ‘meaner’, some ‘meaning’ and a ‘meant to’; thus, underlying semiotic mediation are, in the last analysis, interactive events of meaning exchange. It follows that wherever there is discourse (i.e. verbal exchange), there is semiotic mediation; this is incontrovertible especially if the success/failure of the mediation is not at issue. Axiomatically, verbal interaction, being a variety of social practice, presupposes social context, and where there is a context for meaning, there also have to exist some relations between and within the components of the interactive events. Thus when we talk about the semiotic mediation of concepts we are actually talking about concepts growing in and through the processes of meaning exchange between persons in some relation to each other as well as to the object of the interaction. A textbook in the official pedagogic site is as much a bearer of a range of social relations as is a casual conversation, a political discourse, a newspaper editorial or a soap opera on the television screen.

So much for the term *semiotic*. I take *mediation*, on the other hand, as referring to a process that is inherently transitive (i.e. it calls for at least two participants: *something/someone mediates something*). So, summing up this brief analysis, it seems appropriate to suggest that *semiotic mediation* refers to *mediation by someone of something to someone by means of acts of meaning, typically by the modality of language, which entails a structure of socio-cultural relations*. When the phrase *semiotic mediation* is equated with *cultural mediation*, as is sometimes the case, this elides two important aspects of the process: one, its essentially interactive character and everything that inheres in that fact; and two, the constant flow of mediation that inheres in the nature of semiotic action: wherever there is language in use, there is semiotic mediation.

Supposing this analysis to be correct, the fact of interaction by the modality of language in use takes on serious significance, with two consequences which

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need to be developed briefly. First, semiotic mediation is a logically ordered process, whose course in an analytical perspective may be shown as follows:³

verbal interaction → meanings construing experience → experience
construing mind

More specifically, harking back to Greenfield, if the human mind is a personalized brain, shaped by what a person experiences then, in the above sequence, we are referring to those aspects of human mind that are shaped through semiotic mediation. Following Vygotsky, let me refer to this as constituting (some aspects of) higher mental functions. Higher mental functions are the only functions that are said to have *specifically human characteristics*, from which it follows that anyone whose mental functions do not display these characteristics is at least subhuman, if not non-human. So what are examples of such mental functions? Most instances of semiotic mediation cited in Vygotsky and pursued by other scholars who turn to the concept pertain to areas of knowledge, such as technological concepts, logical/inferential reasoning, ability to form sets (i.e. classification of objects/phenomena on some 'logical' basis), generalization and so on. It is obvious that these mental functions are the ones most valued and nurtured in official pedagogic sites in 'progressive' Western-type cultures. Now, these are precisely the mental functions that Luria's Uzbeki subjects were unable to perform successfully (Luria 1976), especially when the content of the tests was remote from the local base of their existence. It does not need to be added that these Uzbekis were not subhuman, nor was their language primitive, thus causing the mediation to be 'deficient' – in fact there are no such things as primitive languages (Hasan 1992). There can be no doubt whatever that they did engage in verbal interaction, and so they had experience of semiotic mediation. Their minds, too, were socio-genetically formed, so they presumably had some variety of higher mental functioning. We are thus driven to an inescapable conclusion: different forms of semiotic mediation entail different forms of higher mental function. True to the universal principle: because there is variation in a socially rooted phenomenon, there is variation in their valuation. Thus we know that the form of mental function cited most often in the literature on semiotic mediation has a higher value in our culture than the form that Luria found in the Uzbekis which we dubbed 'practical wisdom' and, thus, damned. Given this situation, an adequate theory of semiotic mediation must answer at least two questions:

- 1 How should we describe the qualities of the various forms of semiotic mediation, each of which mediates a distinct form of higher mental function? What does that variety of semiotic mediation have to be like to produce the best valued variety of mediation?
- 2 What explains the difference in valuation? How can the theory establish some basis for the privileged and privileging status of one as against the other(s)?

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To the best of my knowledge there are no answers in the theory as it stands today; in fact, neither of these questions has ever been raised (but see Hasan 1992, 1995).

The second conclusion that flows from the analysis of semiotic mediation concerns the nature of language in use and what this implies. As noted above, where there is verbal interaction there is some social occasion for its occurrence. Language in use is typically responsive to the nature of the occasion, both in terms of legitimate meanings and of their legitimate overall organization: there can be no semiotic mediation out of context. But even more important, participants in the interaction stand in some relation to every component of the context whereas, in the literature across the decades, they have remained faceless, *culturally non-specific* in Bernstein's terms. The upshot is that the socio-genetic process of semiotic mediation appears to occur in a social vacuum, and the overall shape of the interaction or its context is never invoked as in any way consequential to the outcome. Of course, Vygotsky often mentions 'the school' but, in an avowedly socio-cultural theory of mental development, there seems to be no concern with the social significance of this crucial site for interaction. These lacunae weaken the theory: under the label *semiotic mediation of mental life* there lurks a complex structure of relations, none of which is probed, let alone integrated into the theory. Wertsch (1985b) did point out the absence of a theory of discourse, suggesting the importation of Bakhtin's approach to speech genres and language in general. However, I suggest that this in itself will bring as many problems as it might resolve.⁴ A comprehensive and adequate theory of semiotic mediation should provide frameworks at least for:

- 1 understanding the relations of speaker and addressee to each other and to the elements of the occasion of interaction;
- 2 analysing the relation between the goal of semiotic mediation and the degree of achievement, which is particularly relevant to the evaluation of the variety;
- 3 identifying the linguistic properties of the different orders of semiotic mediation.

I suggest that such a theory of semiotic mediation does exist: it is Basil Bernstein's sociological theory, which goes a considerable distance in providing answers to many of the questions arising from a fuller understanding of the term. The rest of this chapter is devoted to an elaboration of this claim.

Basil Bernstein and the theory of semiotic mediation

Although Bernstein never used the expression *semiotic mediation* as a technical term in his own theoretical discourse, there is no question in my

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mind that he subscribed fully to the central thesis: the experience of social interaction is crucial to the formation of consciousness. Further, like Vygotsky, Bernstein, too, appears to attach a great deal of importance to language without ignoring other modalities of social practice. However, in some respects, these two seminal scholars are markedly different: for example, where Vygotsky appears to see homogeneity, Bernstein, from the very beginning, sees heterogeneity. The basic difference in their perspectives may be summed up as follows: Vygotsky was a psychologist convinced of the centrality of the social; Bernstein was a sociologist convinced that no sociological theory could account adequately for the production and reproduction of society without taking into consideration the part played in the process by the social subjects themselves, which naturally implied, on the one hand, attention to forms of consciousness and, on the other, an account of how and why these forms co-exist in most modern societies. The following extract, echoing these themes, occurred in Bernstein as early as 1965 (reprinted 1971: 144):

the particular forms of social relation act selectively upon what is said, when it is said, and how it is said . . . [they] can generate very different speech systems or codes . . . [which] create for their speakers different orders of relevance and relation. The experience of the speaker may then be transformed by what is made significant and relevant by different speech systems. As the child . . . learns specific speech codes which regulate his verbal acts, he learns the requirements of his social structure. The experience of the child is transformed by the learning generated by his own, apparently, voluntary acts of speech . . . from this point of view, every time the child speaks or listens, the social structure is reinforced in him and his social identity shaped. The social structure becomes the child's psychological reality through the shapings of his acts of speech.

This panoramic account of the mediation of consciousness through verbal interaction subsumes that particular form of mental functioning which is singled out arbitrarily in the Vygotskian discourse of semiotic mediation. To be more precise, it is provided with a cultural history: both Vygotsky and Luria do link the higher mental functions they cite so often to the experience of schooling. However, this does not answer any of the questions that the theory of semiotic mediation leaves unanswered; instead, it simply raises another question about the empirical basis of the claim. Is it, in fact, true that semiotic mediation in schooling always and invariably produces such consciousness? If not, what brings about the variation? Is the form of semiotic mediation different in those cases where such higher functions fail to be mediated? If so, why and how? This brings us back full circle to the issues raised earlier.

As the above extract makes clear, Bernstein's theory recognizes the existence of distinct forms of semiotic interaction. In describing these distinctions at

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least two levels of abstraction have been recognized: that of code and that of instance. Bernstein's theory offers an account of the system that underlies each of its instances, exhausting the entire array of interactions and their context type. The theory maintains that:

The concept of code is inseparable from the concepts of legitimate and illegitimate communication. . . . Code is the regulator of the relationships between contexts, and, through those relationships, a regulator of the relationships within contexts.

(Bernstein 1990: 15)

Thus the more abstract level is that of coding orientation. Codes have this power for regulating relations and, therefore, regulating communication because they are directly related to what might be considered 'primitives' in Bernstein's sociological theory: 'the most primitive condition for the location of coding orientations is given by the location of agents in the social division of labour' (1990: 20). I can do no better than repeat Bernstein (1990: 20, emphasis in original):

The simpler the social division of labour, and the more specific and local the relation between an agent and its material base, the more direct the relationship between meanings and a specific material base, and the greater the possibility of a restricted coding orientation. The more complex the social division of labour, [and] the less specific and local the relation between an agent and its material base, the more indirect the relation between meanings and a specific material base, and the greater the probability of an elaborated coding orientation.

Herein lie the origins of social class and it is class relations that:

generate, distribute, reproduce, and legitimate distinctive forms of communication, which transmit dominant and dominated codes . . . subjects are differentially positioned by these codes in the process of acquiring them.

(Bernstein 1990:13)

This account of what regulates interaction offers one way of distinguishing forms of semiotic mediation at an abstract level: discourse in society is not homogeneous and the most fundamental distinctions arise from subjects' positioning which is logically related to subjects' social positioning. It is here that subjects' orders of relevance are shaped, their sense of what is legitimate formed and psychic defences built and turned into second nature. This does not mean they are engraved in stone; simply that changing at this level is a major enterprise.

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When, at a lower level, we examine the actual range of types of verbal interaction, two important facts emerge. In the description of the acquisition of codes, the theory has laid down the foundation for showing, first, that subjects with different social positioning will have access to a different range of evoking contexts. One manifestation of unequal distribution of power is precisely that the range of social practices in which subjects engage is itself differently positioned and differently valued. Second, even where, from some perspective, the evoking context might be regarded as the same, the sense of its identity and value is not the same across categories of differently positioned subjects. The point I am making may perhaps be better clarified by recontextualizing terms from another but related area of Bernstein's theoretical discourse: what the theory is claiming is that the 'reservoir' of contexts in any culture is always in excess of the 'repertoire' of contexts within which subjects positioned in specific social categories will move with confidence and comfort. Ergo, not everyone engages in the same form of semiotic mediation.

Since I have already tacitly invoked Bernstein's views on vertical and horizontal discourse (1999, 2000), this may well be the place to mention yet another vector of differentiation in verbal interactions and, hence, in semiotic mediation. There are in the life of the members of any society processes shared by all that have a common history because they arise out of 'the common problems of living and dying' (Bernstein 1999: 159). The sphere of knowledge pertaining to these processes is what sociology has recognized as 'commonsense' or 'everyday' knowledge, and the discourse associated with these activity types, Bernstein refers to as *horizontal discourse*. Typically, horizontal discourse is (1) oral, (2) local, (3) context dependent, (4) specific, (5) tacit, (6) multi-layered, (7) contradictory across contexts but not within, and (8) segmentally organized. The fact that the discourse is horizontal does not mean that 'all segments have equal importance' from the point of view of the subject engaged in the discourse. By contrast, vertical discourse pertains to what Hasan (1999) has referred to as specialized processes: by their nature these processes are not common to all members of a society. In my understanding, vertical discourse has two distinct forms: (1) where it represents 'a coherent, explicit, and systematically principled structure, hierarchically organized, as in the sciences', and (2) where it represents 'a series of specialized languages with specialized modes of interrogation and specialized criteria for the production and circulation of texts, as in the social sciences and humanities' (Bernstein 1999: 159). From the point of view of language, vertical discourse represents the space where the process is entirely semiotically constituted (Hasan 1999): it is where disembedded knowledge flourishes. Thus I would expect vertical discourse to be concerned with what Bernstein referred to in the 1960s as context independent meanings. Typically, also, vertical discourse, particularly since the advent of print, would involve a visual/graphic manifestation, which is, as it were, iconic of distancing from the local base of the participants. Note in particular

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Bernstein's emphasis on constraints on the circulation of knowledge construed in vertical discourse. Space does not allow further elaboration but, clearly, we will need to refer to the socially positioned categories of subjects that are highly relevant to understanding distinct forms of semiotic mediation. As I have remarked elsewhere, language always mediates: the real issue is what and to whom.

Before leaving the discussion of codes, it should be pointed out that elaborated and restricted codes do not represent monolithic binomial categories imposing a rigid binary categorization on communication. The codes are known by the attributes of classification and framing, and the theory offers vectors of variation in coding modalities by reference to whether classification and framing are internal or external as well as by the degree of their strengths/weaknesses. Since strength and weakness are two end points of a continuum, in theory, variation can yield a large array of modes of mediation, particularly when applied to framing, which is itself a cluster of aspects of communicative practice each of which may vary independently (Bernstein 1990, 2000).

I want to insert here another vector for the differentiation of forms of semiotic mediation (Hasan 2002) which cuts across the horizontal/vertical distinction, though I think of it as code regulated. Speaking of pedagogy, Bernstein once remarked: 'All experiencing carries a pedagogic potential but not all experiences are pedagogically generated' (2000: 199). I want to suggest here that mediation is, in one sense, different from pedagogy: things get mediated whether or not they are generated with mediation in mind. To reiterate, it is in the nature of any semiotic modality, and certainly in the nature of language, to 'mean' something to someone and, in the nature of things, meanings are what you construe experience with (see Halliday and Matthiessen 1999).⁵ Using conscious awareness of what is to be mediated, I suggested two forms: one mode that mediates mental dispositions, habits of the mind or typical ways of responding to situations, and one that targets some specific concept, some element of some vertical knowledge structure. The latter I would refer to as *visible semiotic mediation*, the former as *invisible semiotic mediation*. Visible semiotic mediation is pedagogically generated, whereas invisible semiotic mediation occurs without either party's awareness of what is being or has been mediated. For example, the component of pedagogic discourse that Bernstein refers to as *regulative* is normally invisibly mediated. Hopefully, putting it this way gives some idea of its power. I suggest that the mental disposition, the form of consciousness that is mediated invisibly prior to schooling is a powerful determinant of how the pupil will respond to visible semiotic mediation of specific concepts, logical structures and elements of disembedded knowledge in official pedagogic sites. I hope this discussion shows how rich the concept of mediation of consciousness is within the framework of Bernstein's sociology; at the same time we note that those who participate in mediation are no longer faceless. Their social positioning offers some basis for understanding the nature of

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the results of Luria's research in Uzbekistan. Space does not allow me to show the relevance of Bernstein's analysis of the *pedagogic device*, where each component fills in what remains unsaid in the literature on semiotic mediation.

Moving to the question of valuation: Why do some forms of consciousness (and their associated mediating discourses) have a privileged and privileging status in societies? This issue relates very closely to the genesis of variation in semiotic mediation. In one sense, of course, valuation, like authority, is always irrational. As Marx (quoted in Bottomore and Rubel 1976: 93) pointed out, 'the ideas of the ruling class are, in every age, the ruling ideas'; and essentially, in my understanding, Bernstein's theory would explain the different valuation of various forms of consciousness and of their associated semiotic mediation by reference to dominating and dominated codes. Bernstein has argued that power and the strength of classification are proportionally related so that it would follow that the more clear-cut, the more impermeable the categories of knowledge, the higher their valuation would be. It is well to recall here Vygotsky's view that the growth of specialized knowledge represents a form of human evolution: I doubt if, seeing the results of our brilliant technological successes, we could be so very sanguine about the value of this evolution. I for one would agree with Whorf (1956: 81) that 'we do not know that civilization is synonymous with rationality'. Certainly what we call progress has not been synonymous with humanity! In Bernstein's sociology these illusions do not exist; what exists is simply a description of what makes certain structures, certain behaviours, certain beliefs legitimate for whom, and why. This is the strength of the theory.

A word should be added, also, about the analysis of social subjects' relation to contexts in Bernstein's theory. In this respect, Bernstein is very definite that code-regulated consciousness cannot be investigated piecemeal, concept by concept, word by word, fragment by fragment of activity. This element of the theory has relevance to the absence of a theory of discourse in Vygotsky. Bernstein's analysis of pedagogic discourse is a good place to ask questions about the operation of that variety of semiotic mediation which is concerned with scientific concepts, logical reasoning, inferential structures, mathematical concepts and other such phenomena. No learner comes face to face with *the* truth regarding any of these, because there is always the fact of selection, and where there is selection there is room for the play of power and ideology.

Conclusion

It would seem quite obvious that the use of the expression *semiotic mediation* is in need of further reflection. One possibility is to limit the use of this term simply to those interactions that refer to the kind of communication which is instrumental in the creation, transmission and internalization of scientific concepts, of mathematical operations and of decontextualized reflections –

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in short, to the domain of vertical knowledge whose mediation is the specific, avowed goal of official pedagogy. To me this would pose a problem: it suggests that the line between, for example, scientific and everyday concepts is easy to draw; and I am not very certain that this is a viable proposition.⁶ Besides, if this is how semiotic mediation were to be employed then why not a better theorized term from Bernstein, namely official pedagogic discourse? One last point might also deserve attention: I have been emphasizing that mediation never fails to occur where semiotic acts are at issue: the trick is to know what it is that is being mediated. If the focus is on mental operations of the type that Vygotsky and Luria often cite as examples of semiotic mediation, this much needs to be said: semiotic mediation is definitely a necessary condition for the development of such mental activities but it is not a sufficient condition. This is because, as Vygotsky himself pointed out: 'children's learning begins long before they attend school is the starting point of this discussion. Any learning a child encounters in school has a previous history' (Vygotsky 1978: 84).

Those who participate in the semiotic mediation of (components of) vertical knowledge come to the interaction with a mind – a mind that has already been socio-genetically shaped. This is not to claim that this shaped mind cannot be developed further and/or made to turn in different directions but it seems certain that this will be a difficult goal to achieve if we go on assuming homogeneity of coding orientation for all pupils and the myth of egalitarian education.

Notes

- 1 It is not fanciful to detect here the Bernsteinian theme of social subjects' internalization of the 'outside' and their modes of externalizing the 'inside'. Note also that this conceptualization of the relations between culture–mind–action–environmental change anticipate Popper's views on 'exo-somatic evolution' (Popper 1979).
- 2 Although Bernstein paid meticulous attention to this aspect because of his commitment to viable research.
- 3 The stages in this sequence are not necessarily temporally separated; however, conceptually they are distinct.
- 4 See my response (Hasan 1992) to this suggestion; see also Axel (1997) on participants.
- 5 The fact that language always mediates does not mean that it necessarily mediates what someone set out to mediate; if that were the case there would be no educational failures. What gets mediated depends a great deal on the mental disposition of the addressee. Thus something gets construed through meaning: successful mediation in pedagogic sites is that where the intended approximates the achieved.
- 6 See e.g. Lave 1988.

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4 The debt to pleasure

The subject and knowledge in pedagogic discourse

Zain Davis

Introduction

In his discussion of the pedagogic device Bernstein registers the place of indeterminacy with respect to the *production of knowledge* in the form of his notion of the discursive gap, the 'meeting point of order and disorder, of coherence and incoherence . . . the crucial site of the *yet to be thought*' (Bernstein 1996: 44, italics in original). With respect to the *reproduction of knowledge*, which is what pedagogic discourse is substantially concerned with, we can recognize another moment of indeterminacy that haunts the pedagogic relation. Simply stated, the reproduction of knowledge may be achieved only by way of negotiating the activity of pedagogic subjects, who necessarily introduce an element of indeterminacy into the pedagogic relation. Unfortunately, the activity of the human subject, as Freud and Lacan have shown, is bound up with two forms of pleasure: one form is caught up in the reproduction of social order (or the Law, as Lacan would say), desire, and the other, associated with the drive, insists on its course without any reference to social order.¹ It is specifically the latter form of pleasure, which Lacan would name *jouissance* (enjoyment), that makes of the human subject an incalculable entity, one not easily amenable to control within a rational calculus of pleasures as the utilitarian pedagogic reformers dreamed. A further blow to the idea of a rational calculus of pleasures is registered by the Freudian discovery that enjoyment (*jouissance*) is opaque to the subject itself. The best we can do is note that our theorizing of social relations, as they pertain to educating, should at least mark the place of the indeterminacy introduced by the presence of human subjects and the theory should take account of the effects of this place on pedagogy.

Bernstein does, of course, hint at this problem in various ways, even in his early work, but the idea remains implicit and underdeveloped for the most part. Consider, for example, his proposition: 'If the culture of the teacher is to become part of the consciousness of the child, then the culture of the child must first be in the consciousness of the teacher' (Bernstein 1971: 65), which we might restate in Lacanian terms: 'If the enjoyment of the teacher is to become desirable to the child, then the desire of the teacher must engage the

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enjoyment of the child.' In this translation of Bernstein into Lacanian terms we have, in capsule form, the whole of the Lacanian theory of discourse, as will be shown below. Now it may well appear as though we are turning Bernstein into a progressivist educator here, but what we shall see is that the Lacanian position on desire and enjoyment is that they are antagonistic, and also that an engagement with the enjoyment of the student takes various forms, not all of which may be aligned with progressivism.

Pedagogic communication as moral discourse

We are interested in exploiting Bernstein's reference to pedagogic communication as a hook that catches on to Lacan, drawing the latter's theory of discourse into the discussion. Pedagogic communication is approached immediately from a Lacanian perspective and, in that way, Lacan is used to modify the particularity of Bernstein's theory so that the place of the element of the pedagogic relation that is of interest here, namely enjoyment, is illuminated. To that end, we will proceed by attending to a question Bernstein himself posed as an opening to his discussion of the pedagogic device:

My question is: are there any general principles underlying the transformation of knowledge into pedagogic communication, whether the knowledge is intellectual, practical, expressive, or official knowledge or local knowledge?

(Bernstein 1996: 39)

Bernstein (1996: 40–2) starts to answer his question by way of a discussion of the *language device*. The language device is that which mediates between the meaning potential of a discursive order and the actual meanings realized. He proposes that the pedagogic device, in a manner similar to the functioning of the language device, mediates between the field of potential pedagogic meanings and what emerges as pedagogic communication. The first, obvious, point to note here is that there is no pedagogy without pedagogic communication and, second, that the pedagogic device structures pedagogic communication. So what we have is a picture of a message flowing between a sender and a receiver with the intention of achieving a specific production (see Figure 4.1) that is a meaning effect.

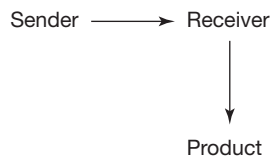


Figure 4.1 An initial representation of pedagogic communication

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Now when we attend to the structuring of curricula and pedagogic discourse, we note that the demand for curriculum and pedagogic change indicates that pedagogic communication has, for whatever reasons, come to be recognized as failing in some respect. We can proceed from such a realization in different directions. One direction we may take is that which is grounded in the belief, even if only implicitly in the form of an unstated assumption, that a form of communication approaching 'full' pedagogic communication is possible and that we have just not cracked the problem of isolating the conditions of possibility for such communication.² In other words, the perfect relation – as it pertains to pedagogic communication – between sender, receiver and product is imagined to be achievable and the circuit is theoretically complete (see Figure 4.2).

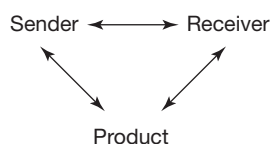


Figure 4.2 A 'complete' circuit of pedagogic communication

The result of moving in this direction appears to be a preoccupation with producing increasingly fine-grained analyses of the types of knowledge that serve as resources in apparently successful pedagogic communication, followed by attempts at translating the results of such analyses into prescriptions for curriculum and course design as well as into prescriptions for pedagogic practice.

It is worth noting that the notion of communication is necessitated by the 'problem' of the absence of a completely unified social consciousness; or, in different terms, the issue of communication arises directly from the operation of power, since power distinguishes between persons and groups of persons and establishes hierarchies of access to social goods, including forms of consciousness and practice (Bernstein 1996: 42ff.).³ Human communication is therefore one means by which an attempt is made to cover over a primordial (fundamental) discord at the heart of the social – a discord always-already indexed by the notion of power. So there necessarily always exists 'noise' interfering with the flow of a message between sender and receiver – between teacher and student in this instance – because a perfect *communio* does not and cannot exist. Stated somewhat paradoxically, and circularly: we are forced to talk to one another because communication fails (cf. Verhaeghe 1999, 2000). If we accept these propositions we must view the notion of 'full' pedagogic communication as a regulative ideal rather than an empirically realizable event; that is, as something akin to an imperative establishing a moral horizon for pedagogic communication, as the expression of a desire for what *ought-to-be* in opposition to what *is*.

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Once we have noted that the notion of 'full' communication implicit in methodologies and theories of pedagogic communication has the status of a moral ought-to-be, we are obliged to follow that realization with a subsequent recognition that the ought-to-be is itself an index of the existence of an obstacle to pedagogic communication. Now, in one sense, this obstacle is nothing other than the absence of a linearly deterministic causal necessity in pedagogic communication. The insistent need to communicate, as we argued above, has as its cause the failure of communication and arises directly from social relations. It is therefore the misfiring of communication that gives momentum and life to communication. In other words, communication starts from the necessity of its own failure and that failure functions as the index of its cause: communication starts from an ought-to-be (moral discourse), which is nothing other than a wanting-to-be (desire). In this way desire and the moral law are bound together inextricably. Therefore, when we picture the pedagogic relation as triadic we exclude from consideration the effect of the absence of linearly deterministic causal necessity; in other words, we ignore the operation of a lack (of causal necessity) in the structuring of pedagogic communication. In addition, we see that we must revise our assumption about the starting point of the 'flow' of communication: our diagram should show a fourth term which is prior to sender and receiver, and we shall refer to this primary position in the 'flow' of communication as its *truth*. It follows that the sender of the message is only apparently its agent. Consequently our diagrammatic representation of the central relation we are concerned with changes, as is shown in Figure 4.3. In order that our terms are compatible with the theoretical work we draw on, and also to distance ourselves from standard models of communication that (implicitly or explicitly) rely on a notion of 'full' communication, we substitute the terms 'sender' and 'receiver' with 'agent' and 'other', respectively (see Lacan (1998) for a more extended discussion of these terms).

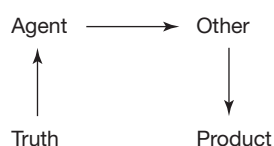


Figure 4.3 The relation of the fundamental elements of pedagogic communication

The absence of necessity in the form of deterministic laws in pedagogic communication introduces two additional complications into the theorizing of pedagogy. These complications take the form of two disjunctions: first, the failure of communication holds the *agent* and its *other* distinct and in opposition. Second, the failure of communication therefore also means that *truth* and *product* are misaligned.⁴

As to the first disjunction, agent and other are ultimately in opposition because the need for communication, which we have argued is an index of

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its failure, may also be understood as the index of the existence of ignorance; that is, of a place representing the absence of the message. Thus knowledge is confronted by its other, ignorance, which is nothing other than its own absence. Here we need merely remind ourselves that the entire machinery constructed to produce an evaluative commentary on the student in the form of a hierarchically arranged set of grades claims to measure the extent of the ignorance of the student; in other words, it is an index of the failure, for whatever supposed reasons, of pedagogic communication and simultaneously an attempt to stabilize the presence of contingency by rationalizing failure.⁵ Since the very existence of a graduated scale of measures implies the failure of pedagogic communication, we see that the disjunction is one of the impossibility of 'full' communication.

The second disjunction represents a state of impotence with respect to achieving the alignment of truth and product. One reason for this misalignment of truth and product is that the truth of the agent is necessarily distinct from the product of another. If it were not so, the idea of an ought-to-be (moral discourse) – and so, too, of a wanting-to-be (desire) would be unthinkable. The above considerations produce Figure 4.4.⁶

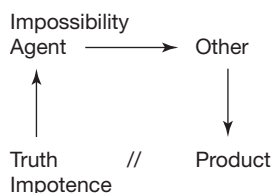


Figure 4.4 Pedagogic communication showing disjunctions

It should, in addition, be noted that the structure of language makes the ought-to-be unavoidable in the following way. The production of meaning requires that the meaning potential of language be arrested in a particular way for specific meanings to be realized. For example, when a beam balance is used in order to introduce students to the idea of an equation, the linguistic specialization of meaning is intended to be overdetermined by mathematics: the student is not intended to move into a study of the beam balance but rather should begin to predicate the signifier/equation/in a mathematically appropriate fashion, using the idea of a balance as a resource. In other words, the metaphor constructing a speculative identity between an equation and a beam balance is a device that introduces an ought-to-be into mathematical specialization. At the moment that meaning is fixed, 'naturalized', the present of the order of meaning appears as something that just *is*, as constative (factual), while the future is still what ought-to-be, what is to be subjected to the performative labour of/on language. An important effect of the future of the order of meaning is that, at any moment, what has been accepted as that which *is* can nevertheless be transformed through a retroactive rereading

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and become something else with respect to the order of meaning; that is, the past can always come to mean something different as an effect of the future. Even where past meanings are appealed to in order to delimit potential future meanings, they are in that instance deployed in the service of what ought-to-be. It follows that the whole of the temporal flow of the production of meaning is subject to an operation that functions like moral discourse; expressed in Bernstein's terms, pedagogic discourse is an instructional discourse embedded in a regulative discourse and the regulative discourse is dominant (cf. Bernstein 1996).

The structure of the pedagogic relation

The structure shown in Figure 4.4 gives us the fundamental generative matrix of a social bond showing the relations between four positions. In order to fill out the positions we now consider the elements of the pedagogic relation. Recall once more that when Bernstein kicks off his discussion of the pedagogic device he starts with a question about the principles of the transformation of knowledge into pedagogic communication, a question that announces the supposition of two principal subjects of pedagogic discourse: a *subject-supposed-to-know* as well as its other, a *subject-supposed-not-to-know* – or, as Bernstein would have it, a *transmitter* and an *acquirer*. The former is supposedly on the side of knowledge; the latter, on the side of ignorance. The supposition of these two subjects of pedagogic discourse therefore announces, in addition, a supposition of the existence of knowledge and of its other, ignorance. Thus our little theoretical drama, it would seem, stages the marriage of two couples: a subject with knowledge and a subject with ignorance. These two modalities of the subject therefore have as predicates knowledge and ignorance, suggesting the supposition of a moment of subjectless knowledge and a subjectless ignorance that pre-exist pedagogic discourse: there is knowledge and there is ignorance. But are we now not merely describing the subjects of knowledge and ignorance in two different ways and pretending that they are different? Here we need only acknowledge that the supposition of the existence of knowledge is necessary in the constitution of any particular discursive field: we cannot speak of mathematics, for example, without the supposition that the discursive field we refer to as mathematics, even though it is produced through the activity of individuals, follows an elaboration which is independent of any given individual. When we speak of the 'nature' of mathematics we appear to be referring to the peculiarities and specificities of its internal logic rather than to the individuals implicated in its production. The notion of a subjectless ignorance may be understood, simply, as that which escapes knowledge, as the incompleteness of knowledge. With respect to mathematics, we need search no further than the work of Kurt Gödel for a statement of the limits of knowledge, of a necessary ignorance that escapes subjectification.

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We see that we have four rather than only two couples making up the *dramatis personae* of our theatre of suppositions: the subject and knowledge, the subject and the negation of knowledge, the negation of the subject and knowledge (subjectless knowledge) and, finally, the negation of the subject and the negation of knowledge (subjectless ignorance). The question is how these couples should stand in relation to each other in pedagogic discourse. We note that the first pair of couples form an opposition as do the latter pair. Of these two oppositions, which should inhabit the positions of *agent* and *other*? As we argued above, pedagogy implies the supposed prior existence of both knowledge and its absence, so that the opposition between *knowledge* and its absence, which we shall refer to as *~knowledge*, is to be taken as primary. Now knowledge in itself does not and cannot exist without the supplementary existence of a guarantor whose presence confers on it a semblance of consistency. Knowledge in this aspect is mute, and ultimately requires the presence of an agent who is deemed able to judge whether or not a given chain of signifiers is an instance of knowledge: the teacher, the examiner, the peer reviewer, the textbook author represented in the guise of model solutions to problems, and even the student who is called upon to assess his or her own work. The paradigmatic agent exercising evaluative judgement (of what ought-to-be) is the *teacher*. The teacher therefore holds the symbolic mandate of knowledge, representing subjectified knowledge, and so occupies the position of *truth*. In that way the teacher also represents a position of mastery. What is it that the teacher exercises judgement over? Over the productions of the student, of course, and the student is made to represent subjectified ignorance. In relation to the teacher as the holder of the symbolic mandate of knowledge, the student suffers a lack. In other words, pedagogic discourse, while it aims at the reproduction of knowledge, produces the student as a subject split from knowledge. Here it is worth noting that even those practitioners of contemporary pedagogies claiming the prior existence of knowledge already held by the student cannot function without producing the student as split from his or her own, presumed knowledge: for example, our students already know, only they don't know that they know.

We can now represent the pedagogic relation as shown in Figure 4.5. What we have arrived at is a formal model of the structure of the social bond of educating. In order to (1) draw attention to the central features of the categories indicated by the terms *knowledge*, *~knowledge*, *teacher* and *student*, and also to (2) facilitate a more flexible descriptive and analytic use of the structure, we will replace these initial terms with a second series of terms along the lines described below. First, in terms of our previous discussion of knowledge *qua* field of linear deterministic laws, we can replace the term *knowledge* with *law*. Second, we consider how it is that we should render *~knowledge* in opposition to the term *law*. The obvious term indexing opposition to the idea of the law is, of course, *crime*. When we ask what the formal character of a crime is, we note that it is the assertion of an illicit

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usufruct over some or other social good. In other words, a crime represents an illicit form of enjoyment; a form of enjoyment evading the law (*jouissance*). We will therefore replace the term *~knowledge* with the term *enjoyment*. Third, when we consider the teacher as a necessary supplement to the field of knowledge, the holder of the symbolic mandate of the field of knowledge, the teacher is the embodiment of mastery. We therefore replace the term *teacher* with the term *master*. Finally, the student is always produced as a subject split from knowledge and we replace the term *student* with *split subject*. This series of substitutions produces a new rendering of the structure shown in Figure 4.5, which we shall refer to as D_1 ('D' for *discourse*).

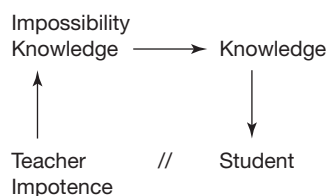


Figure 4.5 Formal structure of the social bond of educating



Figure 4.6 D_1 – the social bond of educating, revised

A central feature of D_1 needs to be noted before we continue. The relational matrix describing the social bond D_1 shows the master function as suppressed. What this means is that the law (field of knowledge) cannot operate without the supplementary function of a master (teacher/transmitter) as guarantor of the consistency of the law. Here the master defers to the law in the sense of policing the law rather than generating it. This means that pedagogic judgement appeals to the field of knowledge to support evaluation – recall that evaluation condenses the meaning of the whole of the pedagogic device. But pedagogy need not proceed in such a manner. What has, in the more popular idiom, come to be named ‘authoritarian teaching’ produces a social bond somewhat different from D_1 in the sense that it is the master function rather than the law that is in the position of agent. In such a pedagogic modality we witness evaluation working in a manner in which, from the perspective of the student, knowledge is apparently prescribed by the teacher without rhyme or reason. When the student asks why a certain result is true, or why a certain technique should be used, the response of the

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teacher is something akin to ‘Because I say so’ or ‘That’s just the way it is’. What is denied and suppressed here by the teacher is, ultimately, a split subject, and the teacher acts as though he or she is a master determining the field of knowledge. The places of *agent* and *other* are occupied by the master and the law, respectively, and what is produced is ignorance (enjoyment). The structure of this social bond, which we label D_2 , is shown in Figure 4.7, and it should be clear that, with respect to the activity of the reproduction of knowledge as described in terms of D_1 , D_2 is a regression.

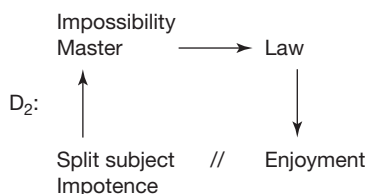


Figure 4.7 D_2 – the social bond of educating as governing

However, when considering pedagogic relations and the operation of the evaluative rule of the pedagogic device we should bear in mind that the activity of the student is dominated by a concern with recognition and realization rules: ‘What must I do? How can I achieve what has been demanded of me?’ This insistent questioning by the student, whether verbalized or not, is nothing if not an index of a necessary point of ignorance in the pedagogic relation and, in that sense, it is also an index of a point of resistance to the reproduction of knowledge – even when the subjective orientation of the student is one of not wanting to resist. In other words, the student desperately and continuously strives to overcome the dehiscence central to his or her relation to knowledge and is forced to address the teacher or field of knowledge in that regard. Structurally, the position of the student may therefore be described as one that continuously confronts the teacher and the field of knowledge with the question ‘Why . . .?’ (Why am I what you say I am? Why are things the way they are?). In this way the mere phenomenal presence of the student questions the validity of the symbolic mandate held by the teacher as master. The only way in which this confrontation may be resolved is with the production of knowledge in answer to the insistent ‘Why . . .?’ of the student. We should also note that the position of the student is one of desiring. There are, however, different ways in which the demanded knowledge can be produced, which we shall discuss below. For now we need to pause and recognize the formal structure of this social bond, D_3 , as shown in Figure 4.8. The structure reveals a feature that, on initial encounter, might be considered counter-intuitive: the product of this bond is the installation of the law!

The resolution of the challenge to the teacher, indicated by the structure D_3 , can take a number of different forms. First, since the student is, in formal

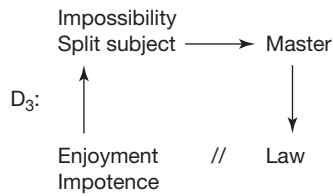


Figure 4.8 D3 – the social bond of educating as desiring

terms, challenging the mastery of the teacher, the latter can opt to respond as a master: 'Just do the problem in *this* way and you will solve it.' Here the teacher does not attempt to engage with the specificities of the student's difficulty, choosing instead the (apparently) most economical response in the short term and draws the student into D_2 , the result of which is that the student may solve the problem yet still remain ignorant. Alternatively the teacher could engage the student in order to understand his or her difficulties and direct the student to the ideas that would enable the construction of an appropriate solution. In this case the teacher is not acting as a master but, instead, attempts to encourage the student to recognize how the necessity of a particular content emerges from the relations internal to knowledge and, in that way, draws the student into D_1 . Both of D_1 and D_2 may be referred to as social bonds that encourage a visible pedagogy. Loosely, one way of marking how they are different would be to say that D_1 could be associated with what Dowling (1998) refers to as *discursive elaboration* and D_2 , with *procedural elaboration*. However, it is also possible that an attempt is made to maintain D_3 as the dominant social bond, as in progressivist education where, in terms of our discussion, enjoyment (*jouissance*) is fended off by keeping the student in a hysterical, desiring state.⁷

There is a fourth possible response to the student's 'Why . . .?' which is, strictly speaking, impossible to sustain in any educational context dedicated to the *reproduction of knowledge*. Before discussing this possibility we are obliged to recognize that schooling is concerned with the reproduction of extant knowledge rather than with the production of new knowledge and, while we might elect to play the game often indulged in by the pedagogic constructivists, of claiming that students are in the business of constructing knowledge that is *new to them*, the fact is that the student's productions are never seriously approached as though they were novel ideas that should be incorporated into the body of knowledge: at the end of the school year the student's notebooks are tossed into the dustbin, either actually or metaphorically, rather than submitted to research journals for dissemination. This social bond is one in which the student confronts the ignorance of the field of knowledge itself, in which the student approaches the points of insufficiency or failure of knowledge and attempts to stop the lack represented by those failures. In such a case there can be no calming assertion of mastery by the teacher, nor can the student be directed to answers that can be constructed

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from ideas which already exist without going beyond those ideas. In other words, in this case the student's 'Why . . .?' is met with a formally necessary silence – both the master and the field of knowledge are impotent since there is no possible answer without the labour of constructing ideas that did not previously exist in the field. With this social bond it is extant knowledge that is suppressed as the points of ignorance of the field are revealed, and what is produced is a moment of new mastery that has the effect of transforming the field of knowledge. The structure of the social bond implicated in such transformations of the field is shown in Figure 4.9.

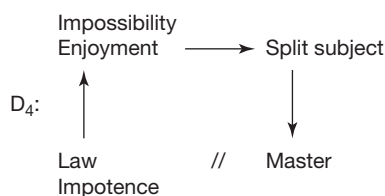


Figure 4.9 D4 – the social bond of educating as knowledge production

While it may be argued that, even at the moment of the reproduction of knowledge, a process akin to that described here is necessary for the transformation of the consciousness of each individual student, there is nevertheless a crucial difference between the reproduction and production of knowledge bound up with the differences of the operation of the ought-to-be (regulative discourse) at those two moments. At the moment of reproduction the regulative discourse is essentially fixed with respect to what ought-to-be realized, while in the instance of production the coordinates of what ought-to-be are momentarily undecided. More importantly, the production of new knowledge potentially has the retroactive effect of transforming the very idea of what ought-to-be and so, strictly speaking, potentially transforms previously existing knowledge in the process. Things cannot easily remain the same after a moment of production.

Thus a fundamental difference between the construction of knowledge at the moments of reproduction and production is that the former is always-already structured by a prior ought-to-be in such a way that the production of new knowledge is foreclosed; the latter in such a way that the **production** of new knowledge is possible with the additional feature of potentially changing the very conception of what ought-to-be.

Conclusion

A central task of the transmitter of specialized knowledge in the classroom and lecture hall is to strive towards achieving the reproduction of knowledge. Reproduction, however, always stumbles against the central obstacle to its realization: that point of indeterminacy which is the ignorance *qua* illicit

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enjoyment (*jouissance*) of the student.⁸ Lacan would say that pedagogy stumbles against the subject. Now recall that for Bernstein the meaning of the whole of the pedagogic device is condensed in its evaluative rules and that the operation of the evaluative rules effects the transmission and acquisition of recognition and realization rules. It follows that since the evaluative rules of the pedagogic device are realized in the context of pedagogic communication, their particular modalities may be described in terms of the ways in which they operationalize the various social bonds. That is to say, we can begin to develop a new way of describing pedagogic modalities, one which explicitly includes the place of indeterminacy (enjoyment).⁹ The evaluative rules have to engage the obstacle to reproduction, and that obstacle as challenge and resistance is to be found in the 'Why . . .?' of the student, and the response to this 'Why . . .?' can, in principle, be realized in terms of any of the social bonds.

We conclude that:

- 1 The initial, and inevitably returned to, stance of the acquirer in the pedagogic relation is hysterical. More generally, the subject is characterized by a hysterical stance as may be seen in Althusser's (2001) widely cited discussion of interpellation. What is commonly ignored in interpretations of Althusser's famous discussion of his hailing metaphor is that, along with the identification that inheres in interpellation, there is a prior moment of doubt accompanied by abstract guilt – Why me? What have I done? What do you want from me? – which is the fundamental feature of hysteria. The abstract guilt experienced flows directly from a radical ignorance of what it is that caused one to be hailed. The identification which follows is the mechanism by means of which the condition troubled by doubt and abstract guilt is cured.¹⁰ More specifically with regard to the pedagogic relation, interpellation recurrently produces the acquirer as hysterical, and the social bond that pertains at such moments is D_3 .
- 2 The move from the situation outlined in (1) to other bonds, including remaining with D_3 , may be thought of as responses to the initial occurrence of D_3 ; in other words, as effecting different modes of identification/interpellation.
- 3 D_3 engages the evaluative rules of the pedagogic device in the sense that it calls for identification as a cure for the hysteria suffered by the acquirer, and the identification produced emerges from the attempts at the transmission and acquisition of recognition and realization rules.

From this it follows that the further development of the theory in such a way that the place of indeterminacy, as well as its effects on pedagogy, are held in focus requires that we now turn our attention to the operation of the evaluative rules of the device, since that is the point at which the problematic of order and disorder, of the sacred and profane, of interpellation, is ultimately situated.

Notes

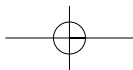
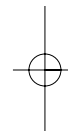
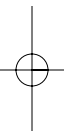
- 1 See e.g. Freud (2001a, 2001b) and Lacan (1977, 1998). Note that for Lacan the subject *is* this indeterminacy. His use of the term *subject* should therefore not be confused with the poststructuralist idea of *subject positions*. Lacan, unlike the structuralists and poststructuralists, retains the notion of the subject, but his subject is an opaque entity and not the self-transparent, self-identical entity dismissed by structuralism and poststructuralism.
- 2 Many of the current efforts in mathematics education, directed at uncovering the 'types of knowledges' used by successful teachers, especially those current efforts inspired by Shulman's (1987) notion of *pedagogic content knowledge*, appear to be predicated on this assumption.
- 3 We can, of course, list many other reasons for the failure of pedagogic communication, but that is not the point. We are not interested in enumerating the infinite number and variety of contingencies that might distort communication; what we wish to point to is the *necessary* failure of communication.
- 4 See Lacan (1998) for a fuller discussion of the two disjunctions.
- 5 We could, equivalently, say that evaluation measures the extent of the knowledge of the student, but such a formulation masks the point we are wishing to emphasize here.
- 6 With Figure 4.4 we arrive at the generating matrix used by Lacan to describe the social bonds that make up the 'four discourses' of his discourse theory (cf. Lacan 1998).
- 7 An examination of some of the effects of pedagogic modalities dominated by D_3 may be found in Davis (2003).
- 8 Hence the endemic concern with 'discipline problems' and 'fun lessons' in schooling where, it should now be recognized, it is no coincidence that teachers are simultaneously concerned with the realization of both the seriousness of 'discipline' and the playfulness of 'fun'. To this end, the offer of 'fun' to the student is an attempt at inciting the substitution of illicit enjoyment with benign pleasure.
- 9 Such work has recently begun, and the initial developments are discussed in Adler and Davis (2003) and Davis *et al.* (2003).
- 10 See Žižek (1992) for a discussion of how this relation of doubt and guilt is already apparent in Descartes' debate on the *cogito*.

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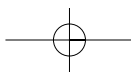
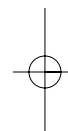
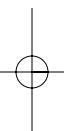
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Section 2

Learning in school contexts



5 Framing talk

Towards a 'radical visible pedagogy'

Jill Bourne

There can be little doubt from the evidence in his work that, although critical of much present practice, Basil Bernstein believed passionately in the possibilities of schooling in bringing about social transformation through individual enhancement, inclusion and participation (Bernstein 1996). Central to his conception of education is a recognition of *communitas*, namely education as a collective undertaking. This is important for those of us working in the context of mass schooling and with an interest, therefore, in developing effective, whole-class teaching and learning. Classroom learning is not simply a rather unfortunate method of education that would be better done in one-to-one interactions with a sympathetic adult, similar to dyadic mother-child learning situations, with the 'transmitter' as a sort of 'super mum'. Rather, I want to argue that secondary socialization is a different thing altogether from primary socialization in the closeness of the family. It is an induction into the wider collective, into historically formed ways of knowing and ideally into an understanding of the individual's positioning within, and potential contribution to transforming, the social and political.

I believe that developing a view of education as a collective undertaking is important in the current context where arguments for diversified forms of schooling dependent on parental ability to pay and parental choice are gaining ground among educational policy makers. At the same time arguments for 'de-schooling' are being reinforced by the development of information and communications technology. ICT offers the possibility of offering independent learning for those individuals with access to the Internet and who choose to take advantage of better resourced forms of education. Meanwhile, for the majority, cash-strapped state education systems focus on a narrow (and cheap) entitlement of basic skills and training, perhaps simultaneously using dubious assessment methods to identify a very small number of 'gifted and talented' pupils for exclusive, enriched provision (Bourne 2000).

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Learning as the experience of boundaries

Bernstein (1996: 6) saw individual enhancement as:

a condition of experiencing boundaries, be they social, intellectual or personal, not as prisons, or stereotypes, but as tension points condensing the past *and* opening possible futures. Enhancement entails a discipline. . . . It is the right to the means of critical understanding and to new possibilities.

Discipline and the experience of boundaries were also important to his understanding of participation, which included not only discussion, but 'a practice which must have *outcomes*' (1996: 7), ideally as participation in the construction, maintenance and transformation of social order. Out of this transformation would emerge a new pedagogic discourse, the tantalizingly named 'yet to be voiced', signalling a new and as yet unknown form of enhanced pedagogic practice.

Personal change and 'enhancement' through the appropriation and remaking of knowledge was, for Bernstein, part of what education should mean. His critique was not of the inevitable regulation of children's social formation through education as their induction into social order, but of the unequal distribution of rights of participation in its construction; rights of seeing oneself as valued within that order; and rights of personal enhancement through 'experiencing boundaries as tension points between the past and possible futures' (1996: 6).

Horizontal and vertical discourse

Bernstein's understanding of education as the experience of boundaries with a focus on social outcomes emerges in his analysis of contrasting horizontal and vertical forms of discourse. Everyday 'commonsense' knowledge is expressed in horizontal discourse which is 'local, segmental, context dependent, tacit, multi-layered, often contradictory across contexts but not within contexts'. In contrast, a vertical discourse 'takes the form of a coherent, explicit, systematically principled structure, hierarchically organized, or it takes the form of a series of specialized languages' (Bernstein 1996: 170–1). The school systematically selects and regulates the forms of knowledge it provides, responding to external social pressures. School contexts are outcome orientated, towards 'the production of classified competences or performances' (1996: 179). They 'take their significance from the future and not from the present' (ibid.). As Moss (2001: 155–6) explains:

Forms of knowledge in schooled settings are always sequentially ordered. What is known now gains its significance from what comes next, as well as what has gone before. In this sense knowledge enacted at a particular

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moment in formal settings is never self-contained, but always points both onward and back, creating strong development trajectories.

Bernstein thus sets up his own strong classification between pedagogic (vertical) discourse and informal local discourses (horizontal). Pedagogic discourse is not disembedded from this position, but is embedded in a different context and system of practices. This means that school contexts must inevitably differ from informal contexts in crucial ways. Not only is the vertical discourse of schooling strongly classified, it is strongly framed. School discourses are goal focused, towards socially set ends, within which there is limited opportunity for local classroom negotiation, either for teachers or pupils. This essential characteristic can be 'masked' from all or some participants, or made clear and explicit to all, so that all involved can understand it.

Bernstein's concept of vertical and horizontal discourse offers an explanation of why attempting to weaken classification and framing in progressive forms of education (for example, by trying to make school more like home by introducing informal discourses) does not make learning more effective for children but, quite possibly, has the opposite effect. 'Vertical discourse', as defined by Bernstein, is necessarily strongly framed (selected, sequenced, paced and evaluated). This framing, he has argued, can either be explicit, as in traditional transmission-type pedagogy, or 'masked' and hidden, as in progressive pedagogy. However, the alternative to progressive pedagogy is not necessarily a return to conservatism – the picture is more complex than that.

Towards a visible radical pedagogy

Bernstein (1990, Fig. 2.3: 72 and Fig. 5.9: 213) drew an interesting distinction between what he termed 'conservative' forms of teaching and their underlying 'behaviourist' theories of learning – with teaching and learning both focused on the individual – and 'radical' forms of teaching which are based on social psychological theories of learning and focus on intergroup relations and outcomes. Both of these pedagogic practices, he argued, emphasize 'a logic of transmission', in contrast to the 'logic of acquisition' emphasized by child-centred pedagogy influenced by Piaget and Chomsky, with a focus on the individual.

In the case of a logic of acquisition the focus is upon the development of shared competences in which the acquirer is active in regulating an *implicit* facilitating practice. In the case of a logic of transmission the emphasis is upon the *explicit* effective ordering of the discourse to be acquired by the transmitter (Bernstein 1990: 214).

Figure 5.1, adapted from Bernstein (1990), offers a broad typology of pedagogic styles, classified on two dimensions, whether focused on the intra-individual/intergroup (the vertical axis) and whether operating a logic of acquisition or logic of transmission (the horizontal).

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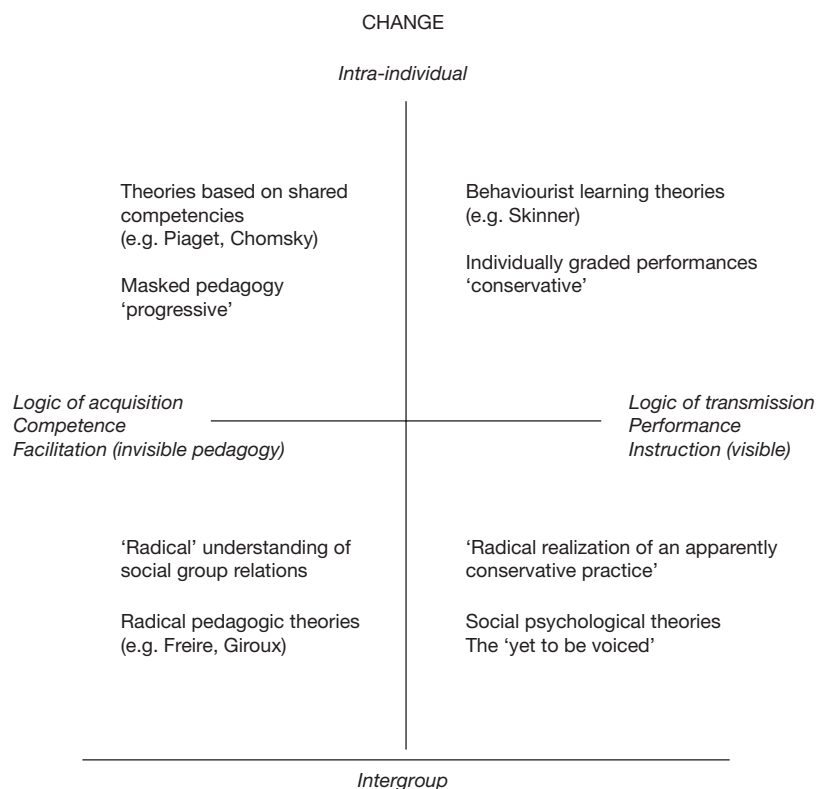


Figure 5.1 Forms of pedagogy

Source: Adapted from Bernstein 1990

In a competence-orientated, intra-individual pedagogy (top left quadrant), curriculum pacing and sequencing are weak, children are offered choices in activities, the teacher becomes a background 'facilitator' rather than an instructor, and students are recognized as progressing 'at their own pace'. In this context, in Bernstein's terms, the classroom operates with an *apparently* weak classification of knowledge, and of home and school practices and activities. There is also *apparently* weak 'framing' – the selection, sequencing and pacing of activities. However, while permitting children choice from a range of activities and ways of learning in the classroom, giving them more apparent control of their learning, developmental learning theories also require teachers to *evaluate* children's productions against selected fixed norms of attainment. These biologize children's attainments, and place responsibility for what is perceived as 'success or failure' firmly with the child, as evidence of their own 'natural' capacity. In this 'masked pedagogy', evaluation replaces instruction, and certain children are not given access to the vertical discourses on which the development of subject-knowledge concepts ultimately depends. Bernstein (1990) has described such classrooms

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as places of covert evaluation, which produce learners at different levels of competence. He argues that those parents who themselves have access to valued forms of knowledge are able to pass these on to their own children, the work of such homes supplementing the work of the school in achieving success for those children in contrast to others.

A second but very different form of 'invisible' acquisition-oriented pedagogy is seen in the bottom left quadrant, which refers to a revolutionary pedagogy, such as that developed by Paulo Freire (1971), in which content, pacing, sequencing and evaluation rules are relaxed and in which the voices, knowledge and understanding of disadvantaged groups are politically valorized. This is, however, a far cry from the context of a National Curriculum, where the content, sequencing and pacing of learning is subject to nationally set examinations, the results of which impact upon students' life chances. Local valorization of disadvantaged groups' knowledge in this evaluative context can only lead back to a masked pedagogy.

The alternative usually offered to progressivism is a traditional transmission pedagogy, where, as the top right quadrant suggests, achievement is also individualized but openly competitive, and where success or failure also correlates significantly with social class background. Inequalities in both the upper quadrants arise out of differences in what we might call cultural capital, or, in Bernstein's terms, the lack of tuition in the secondary pedagogic space (the home). As with the 'masked pedagogy' of quadrant 1, stratification leads to less successful acquirers being offered 'operations, local skills rather than the exploration of principles and general skills and the pacing is likely to be weakened' (Bernstein 1990: 77). Thus the consciousness of students is differentially regulated according to social class background.

Despite the apparent differences, Bernstein (1999: 259) argues that all forms of pedagogy, whether the focus is transmission or acquisition, involve the social formation and regulation of individual bodies:

Pedagogy is a sustained process whereby somebody(s) acquires new forms or develops existing forms of conduct, knowledge, practice and criteria, from somebody(s) or something deemed to be an appropriate provider and evaluator.

Visible pedagogy is explicit in acknowledging responsibility for taking up a position of authority; invisible pedagogy (whether progressive or 'emancipatory') simply masks the inescapable authority of the teacher.

However, Bernstein (1990: 73) presents one further modality of pedagogic practice (bottom right) which 'shows a radical realization of an apparently conservative practice'. Bernstein suggests that on first sight an observer may have difficulty in distinguishing this type of pedagogy from a conservative transmission pedagogy, given the explicit authority evinced by both forms. The crucial difference, Bernstein argues, is in their *objective*. In the former, this is competitive and individual, producing differences between individuals,

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resulting in hierarchical ranking; in the latter, it is to produce changes in the relations between social groups through coming to an 'understanding of your own position in society, through coming to an understanding of the relationship between social groups, and through this new appreciation, the ability to change practice' (Bernstein 1990: 72).

This 'visible' radical pedagogy draws on social psychological theories of learning, in which competitive concepts of innate individual 'ability' and 'talent' are replaced by the concept of collective access to and participation in academically valued social practices and the discourses by which they are constituted. It situates learning within the social and political context in which learners are themselves socially positioned. Thus it foregrounds learning as a collective endeavour rather than a neutral and individual attainment.

Since, from this perspective, 'thinking occurs as much among as within individuals' (Cole and Engestrom 1993: 43), it becomes less crucial for each student to be involved in each activity; all can participate in the collective and one student can 'represent' the others in the learning activity. The class is still actively learning by watching and listening, and all move forward together. As different students, over time, take their turn to represent the class, talking their way into the expertise of the community, others are involved in 'legitimate peripheral participation' (Lave and Wenger 1991), still part of the community of practice.

The emphasis in this type of pedagogy is on 'the *explicit* effective ordering [by the teacher] of the discourse to be acquired' by the student (Bernstein 1990: 214). The students' performance of the pedagogic discourse is a sign of the effectiveness of the teaching rather than a sign of individual and innate levels of 'ability'. It relies, then, on a radically different understanding of achievement, one which changes the relationship between the teacher and the student.

A further difference between conservative and radical pedagogies, and one important for this chapter, is found in the weakening of the framing regulating communication. We would expect then to find an openness in radical pedagogy to the introduction into the classroom of a variety of local forms of discourse, achieving cultural connectedness through the *managed* introduction of horizontal discourse. There should therefore remain some space at school and classroom level for negotiation between teachers and the set curriculum, and between teachers and their particular classes. I want to argue that it is this negotiation which impacts on and can transform outcomes for otherwise socially disadvantaged students.

The managed introduction of horizontal discourse

I want to take an example drawn from a school achieving consistently high examination results in comparison to schools with a similarly high intake of students from socially disadvantaged backgrounds. The data is based on

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videotaped observations of one experienced teacher and interviews with her and a group of her students, a class of 14- to 15-year-olds, in an urban, multi-ethnic school. I want to suggest that this teacher offers an example of an *emerging*, radical, visible pedagogy, as outlined above. Of course, the teacher was operating within the constraints of a National Curriculum and national assessment system, and was not free to be flexible in the sequencing and pacing of learning, the key features of such a pedagogy in Bernstein's analysis. However, of the nine different secondary schoolteachers whom we observed, she alone managed to draw in and draw on horizontal forms of discourse through student contributions, while at the same time successfully inducting students into the discourse of school subject English, which is so necessary for school examination achievement and improved life chances.

I want to argue that this was realized through an overtly highly regulated discourse but one in which the tenor of the prevailing relationships between teacher and students was established multi-modally by means of gaze, gesture and movement, which both softened and controlled as required. For example, her management of changes of place, pace and deportment, an increase of expansive gestures and the offer of new discursive opportunities provided entry points for the horizontal discourses familiar to the students.

The teacher was a black woman of African-Caribbean origin. She first became interested in teaching as a volunteer youth worker on a project attempting to raise the attainment of African-Caribbean youth who were having difficulties at school, only later going on to train as a teacher. Her first engagement with young people, then, was political. She retained a powerful interest in the impact of cultural difference on learning, and a commitment to raising students' attainment. On entry to the school at 11 years old many of her students had been 'two years behind normal reading ages', she reported. However, students now regularly achieved considerable success by the time of their final school-leaving examinations. The confident student group interviewed from her class described themselves to our interviewer as follows: 'Half black, quarter English, quarter Indian'; 'Afro-English'; 'black'; 'mixed race'. One boy described himself as a 'black guy with a lot of sense and street knowledge'.

In the lesson reported here, the teacher was working at mediating a text to the students as part of the 'wider reading' curriculum. The text focused on marriage as portrayed in a short story by William Trevor, 'Teresa's Wedding', examining the relationships among an Irish Catholic family and their friends and partners. The teacher's immediate curriculum aim was to develop students' interpretative skills, providing evidence from the text to justify their interpretations of characters, their feelings and motives. The work on the texts over a sequence of weeks would lead to the requirement for the students to write an assessed essay. This underlying evaluative purpose was understood by the students.

The lesson was teacher led, mainly from the front of the classroom, and involved the whole class working together. The teacher's usual style was

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formal, public rather than conversational. She spoke in a declamatory, stylized form. This was emphasized in her deportment which was also formal. She was seated upright throughout most of the lesson, making only small hand gestures. The focus was on language – the written text and the public spoken form. Students were also expected to respond formally. (In Extract 1 below, a boy apologizes immediately, before rebuke, for using an inappropriate and ‘disrespectful’ response, ‘yeah, whatever’, indicating that the rules of classroom discourse are well known.) Resources used and offered to students were minimal: the photocopied text of the story and pencils with which to ‘annotate’ the text. The teacher left the front of the class only mid-lesson and then only to scan students’ annotations quickly around the room. Thus, in many ways, this could be seen as a traditional ‘conservative’ classroom, highly structured, overtly regulated.

Extract 1

The students have been given the text previously to read as homework.

TEACHER (T) [*Sitting behind desk, feet together neatly, holding herself very upright, holding her hands clasped and still before her. The students put their hands up to respond to questions, and are nominated by eye contact with the teacher*]: Remember what I said, in this comparative writing you need to be aware of the various issues arising so that you can group similarities and differences in order to write a valid response. Those of you who have not got pencils, remember what I said. [*Wagging pencil at them*] You must not come to your English lessons without pencils, because you need to annotate. And if I hear you asking again, Anthony, I’m going to give you a detention. And David. Right. That’ll be the last time.

OK. Now, we started by brainstorming the title, ‘Teresa’s Wedding’. Now you’ve read the story, you can make more sense of it. Let’s make more sense, even more sense of the title. Yes, ‘Teresa’s Wedding’. Yes, Teresa’s the central character and there must be some reason why we’re reading about Teresa’s wedding. Is the writer writing about Teresa’s wedding? Or? What do you think?

BOY 1: The subject is the wedding.

T: Is the writer using it in any way? To do what?

BOY 2: To show the effect of what the wedding has both on the couple and on the people around them. Because they’ve already had the baby.

T: Yes, she’s expecting a baby.

BOY 2: Yeah, whatever. [*Another pupil laughs*] I’m sorry. I didn’t mean it like that. [*Smiles at Teacher*] Because she’s having the baby. The wedding is to try to bring them together.

T: All right. [*Looks around class*] Is – could you not make any one statement about weddings or marriages or whatever?

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- GIRL 1: [*Posture mirrors teacher's, also uses similar hand gestures*]: They are meant to be, um, a happy occasion of union and sometimes, because weddings don't happen every day, and you don't necessarily get to see what's going on around, what lies beneath, and everything else, so we sort of become blind to what's going on around them.
 [*While she speaks, the teacher clasps hands on desk, looking towards the girl, listening, nodding*]
- T: OK. So 'Teresa's Wedding'? [*Holds out hands wide apart in questioning gesture to class*] Is Teresa's wedding an example to tell us something about the subject of marriage? Because we are not only reading about Teresa's wedding are we?

For much of the lesson the teacher is static, seated formally and upright behind her desk. The students attempt to respond to her equally formally; this is not casual conversation. In the crucial incident I want to analyse next, however, her physical posture changes as well as the discourse as, I suggest, she hands over interpretation to the class, using their knowledge to illuminate the text, and the text to illuminate their lives. The relationship in the class changes as she moves from the text to their own experience, calling for a personal response, then uses their experience to help them understand the text; finally moving again from the text to invite them to reappraise their own experience from a new perspective.

This is signalled not only verbally in a switch from academic and formal (vertical) to informal (horizontal) discourse genres, but also by a significant change in her posture and position in the class. She steps to the side of the class and sits down on a desk top, signalling overtly to the class a change in the classification and framing of the event: 'But even so, ah, you question yourself, you know, ah. . . .' Appealing for a personal response she asks: 'What's wrong with that? What makes you feel – what is wrong with Screw Doyle telling Artie on his wedding day? Would you have expected . . .?' At the same time the students' response changes. Students begin calling out. One girl calls 'That's terrible!' A number speak at the same time. A new pattern of temporarily legitimate discourse emerges, signalled by the teacher's repositioning and physical posture.

Extract 2

- LUCY: It's like a game.
- T: Mm, it's like women and men. Men can feel free to talk about your – their conquests.
- LUCY: Men disrespect.
- T: Disrespect. [*Holding arm out, 'conducting' debate, encouraging pace, bringing in rapid responses from students*]
- AMY: Disloyal.
- T: Disloyal. [*Nods*]

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DARCUS: But the women have. . .

LUCY: But the men have all these expectations of women, but the women never have any expectations of men.

T: Ah! All right! Hold on to that. [*Nominates a girl with her hand up*] Marissa?

[*Having involved the girls in the debate, the teacher brings in the boys shortly afterwards, by both nominating them and using gaze and gesture*]

T: How would you have felt? Put your hands up – as males in this room – if it had been your wedding night, Christopher, and somebody had revealed that about your bride? How would you have reacted? Your friend, you know. Your good friend!

The discourse style has now completely changed from that of the main body of the lesson. The students, similarly, draw on other discourses. The debate is animated, taking on aspects of the emotional audience interaction in an Oprah Winfrey or Jerry Springer televised debate.

Extract 3

[*The students are all talking at once, animatedly*]

PETER: [*Urgently, leaning forward and jabbing his arm at the teacher from across the classroom, pointing at her*] It is different between men and women. But also, a friend – yeah, he's been his friend for years. Her, he didn't even love her too much.

STUDENTS: [*All talking at once. Teacher waits, listening*]

T: [*Leans back, speaks softly*] So men can behave in a certain way. That is acceptable. But a woman can't? [*In performative voice, returning to the text*] He was cross with Teresa. Didn't even want to sit next to her on the bus. Do you remember?

DARCUS: No – where does it say that?

T: Look at your story. Didn't affect his relationship, friendship with Screw Doyle. That's a men thing. [*Then, leaning forward, looking at a boys' table, speaking emphatically*] And you boys will need to examine sometimes how you behave towards girls, even in school as well, yes?

[*From this point the lesson reverts to the earlier, formal and text-focused style of discourse. The teacher first stands, then returns to her desk. The easy range of physical movement becomes once again more tightly restricted and formalized, gesture and expression are backgrounded, the text is foregrounded.*]

T: All right, so what happens when he learns the truth? So, Gemma, find the bit where he is enlightened further as to when this relationship actually took place.

There are interesting rhetorical devices in this extract: the use of questions and answers but also reiteration of answers; the demand from the teacher

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for pace, for digging deeper into the meaning. By partially handing over to students she engenders debate, which is risky for any teacher, since they have to be able to manage and control it. At the moment when 'Peter' challenges her, he adopts similar hand gestures to her own, more urgent gestures as she encourages them to dig for meaning. Peter makes a claim for the loyalty of long-term friendship among men, an interpretation apparently shared by many of the boys in the room. Again, the teacher's posture changes: she counters him less as a teacher for the minute, but as a grown and powerful woman, before reverting to teacher and moral authority, ending the interchange with 'And you boys will need to examine sometimes how you behave towards girls, even in school as well'. His interpretation stands, one among many, but the moral lesson is driven home. This lesson should be seen in the context of contemporary debate within the UK black community and in the press on the problematic relationship of black males to women and to the family, issues of which the class would be well aware.

The teacher's art is in tightening and relaxing the classification between discourses and also in the tenor of teacher/student relationships. Similarly, the framing varies from strong to weak across the lesson. These changes allow time for exploration, for the introduction of horizontal discourses and more personally embedded meanings, building more disembedded concepts while still maintaining the necessarily strongly framed teaching agenda of an examination-focused curriculum and carrying the whole class through the agenda as a collectivity. Thus we find strong pacing with episodes of weak pacing, school discourse with episodes of horizontal discourses, with the switch between these strongly and unambiguously marked for learners by clear changes in other semiotic modes: gesture, position, facial expression.

This teacher sees her challenge as making the texts relevant to students' own experience. 'We are trying to prepare them for the world', she says, 'for some things they possibly might encounter later in life. It may be they look back at some experience in the classroom and say "I've come across this before". . . . It is life experience for them.' However, her starting point is a recognition of fundamental inequalities in society, along lines of class, 'race' and gender, which she sees her role being to address. She sees her students not simply as individuals, but positioned in the social structure. She says:

We are talking about a subtly class-divided society where our children in the past, in a school like this one, would once not have been able to structure a letter in the way they should, because people were only concerned with 'creativity' – they must be able to learn to write, to communicate, that is what it is all about.

There is strong and explicit regulation in this class. Her teaching style is formal, to provide students, she says, with a framework they can use themselves. In working on the short story in this lesson, she aims to get students to read critically: 'They have to be able to understand how things are put

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together and to see inside'; to read 'at the heart of the text'. She uses whole-class dialogic enquiry as her teaching strategy, involving her students in constructing the lesson through questions and answers around the room but driving a firm teaching agenda of her own, bringing the lesson in on time and making the points she wants them to be able to draw on in constructing their own examined essays.

There is a remarkable congruence between the way in which the teacher explains what she is doing in the English class and her students' own understandings. The group of students interviewed explained that English 'prepares you for the future' by helping you 'look at the deeper meaning'. 'You could look at something and don't pay much attention to it. English, you can go deeper into it.' 'You can hear other people's idea, take your own into consideration and evaluate it all up and then sort of understand it.' Through English they felt they were helped to understand that 'even though people have different values, people have the same sorts of feelings'.

The power of language in addressing inequality and in determining their future lives was very clear to the students. They said that 'In English we feel we have got respect'; 'we voice our opinions . . . we are allowed to talk and say what we feel'. Nevertheless, they knew they were also required to learn to speak and write formally – to adopt a different style of discourse: 'She will stop us and say "no, look, what do you mean by that? Don't talk like that, say that again".' Another explained: 'I don't think she minds us talking how we talk because that is us, but she wants us to know when to stop.' They saw this as preparation for future lives when they would be likely to face discrimination and injustice.

Extract 4

STUDENT 1: She will use her own experiences. She has told us a lot about herself like when she went on trial.

STUDENT 2: In the jury.

STUDENT 1: And she was telling us the man who was being charged, he didn't do it. And she looked at the meaning of it.

STUDENT 3: Because when I went to court the other day, I was doing work experience that made me notice and I looked at the jury and there were a lot of white people and like two black guys and I thought straight away what Miss W. had said and I looked at the guy who was being convicted, looked at his colour and then I thought 'you ain't got a chance'.

INTERVIEWER: Was he black?

STUDENT 3: Yes.

STUDENT 1: Miss W. said she wasn't the only black person on the jury but she did actually voice herself.

These students in this classroom were learning to 'voice themselves', and to understand the workings of power in everyday English society. Voicing

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oneself in this context does not mean leaving students to find some inner well of personal expression. The teacher offers students access to a new discursive network through a vertical discourse of analysis and interpretation, part of the wider genre network of schooling. At the same time, she is not afraid to position herself, both as a woman and as black, in relation to the curriculum on offer, and to encourage her students to do likewise. In this classroom knowledge is no longer 'divorced from persons, their commitments, their personal dedication' (Bernstein 1990: 155). Something different appears to be happening. Although in some ways having the appearance of a conservative pedagogy, this is on the way to being the 'radical realization of an apparently conservative practice' defined by Bernstein (1990), which he says requires coming to an 'understanding of your own position in society, through coming to an understanding of the relationship between social groups, and through this new appreciation, the ability to change practice' (1990: 72).

Conclusion

New interpretations of learning in social context have stressed the importance of the need to integrate subject knowledge and everyday knowledge (Daniels 2001). At the same time, Bernstein's distinction between horizontal and vertical discourses should make us:

wary of providing learners with experiences which lead to their positioning within what he terms a segmented horizontal discourse, whereby participants are unlikely to access the analytical power or certainly the 'cultural capital' of scientific concepts. The radically situated accounts of knowledge and learning must be placed within a political analysis of power and control. If not, those who are situated in advantaging contexts will be further advantaged.

(Daniels 2001: 116)

The vertical discourse of school holds a special status in our society, and also has a special role in constructing specific types of abstract meanings. As Moss (2001) argues, it is necessary to disentangle its specific institutionally based role in relation to learning from middle-class norms of discourse, looking at how different communities relate to the regulation which takes place in school, how they manage the contact with school discourse in the context of their own lives, and how far and to what purpose they appropriate its structures. I have tried in the last example to show how one group of students responded to their teacher's attempt to relate to these complex demands, drawing students into a vertical discourse not in order to induct them into the dominant society's middle-class cultural norms, but to develop ways of analysing the world and their own position in society, and to 'voice themselves', using – and in the process perhaps transforming – all the discourses available to them.

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Acknowledgements

This chapter is adapted from an earlier, extended version published online in the *European Educational Research Journal*, 2/4 (2003). The data drawn on in Extracts 1–4 were collected as part of the ESRC funded School English Project, developed by an inter-university group of academics from the Universities of Keele, Southampton and the Institute of Education, London.

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6 The *what* and the *how* of teaching and learning

Going deeper into sociological analysis and intervention

Ana Morais, Isabel Neves and Delmina Pires

Introduction

This chapter focuses on primary school science learning contexts and addresses one of the major research areas of the ESSA Group: the characteristics of pedagogic practices most favourable to the acquisition of scientific knowledge and competences by students of different social backgrounds. It is based on Bernstein's theory of pedagogic discourse and Vygotsky's social constructivism, and asks which modalities of pedagogic practice are more favourable to the acquisition of scientific knowledge and competences by *all* children. Our studies have shown that the effect of pedagogic practice can overcome the effect of children's social background and suggest a mixed pedagogy for successful scientific, social and affective learning (Morais and Neves 2001), and indicated how teachers' conceptual demand¹ with respect to scientific knowledge and investigative competences is influenced by the social context of the school (Domingos 1989b; Miranda and Morais 1994).

The study starts from these results and goes deeper into classroom analysis in order to search for a more comprehensive and detailed picture of the relative importance of each characteristic of pedagogic practice and their interplay for effective learning. We attempt to distinguish the characteristics of a practice both as a whole and separately. With this objective in mind we have considered the:

- 1 sociological characteristics of pedagogic practices that lead to the success of *all* children;
- 2 interaction between children's social background, pedagogic practice and scientific learning;
- 3 interactions between the distinct characteristics of a pedagogic practice that make for better scientific learning.

The first and second questions require consideration not only of the *how* of teaching and learning (classroom social contexts) but also the *what* (scientific knowledge and investigative competences) distinguished by degree of

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conceptual demand and status. For that reason *the what of learning* was taken as a sociological characteristic. Teachers can variously recontextualize the same scientific subjects not only on the basis of epistemological and psychological but also sociological assumptions. They can implement pedagogic practices with low levels of conceptual demand, promoting fundamentally terminological and factual learning and appealing to low-level investigative competences, limiting children to acquisition of simple cognitive competences that privilege memorizing and low-level understanding and observation. Teachers can also seek to implement pedagogic practices involving high levels of conceptual demand when they promote learning processes based on conceptualizing and applying knowledge and developing competences with investigative potential, such as in problem solving. Such practices promote the development of complex cognitive competences and access of *all* children to texts more highly valued by the scientific community and society. The *what* considered in our studies is therefore not related to the scientific themes to be learned but to the conceptual level at which they are intended to be learned.

In our third research question, we wanted to achieve deeper understanding of the extent to which some characteristics of the social classroom context, highlighted in earlier studies, constitute limiting factors to others and the relative importance of each. In particular, we sought to understand how conceptual demand, in terms of scientific knowledge and investigative competences, the *what* of learning, may be a limiting factor for characteristics of the classroom social context, the *how* of learning. A complete description of the research is available in Pires (2001).

Theoretical framework

The study is based on Vygotsky's ideas (1978, 1992) about the child as an active learner and of the role of the teacher as creator of social contexts that enhance learning. It is focused particularly on Bernstein's theory of pedagogic discourse (Bernstein 1990, 2000) in defining those contexts, the interactions which occur in them and in analysing the influence they may have on children's scientific learning.

For Vygotsky, learning involves the social construction of knowledge for which the nature of the social interaction the teacher promotes in the classroom context is fundamental. For that learning to be meaningful and to allow the development of the total cognitive potential of children, teachers must promote learning processes which go beyond children's actual to exploring their potential development through the creation of the zone of proximal development.² This requires teaching-learning processes that are not based on low-level conceptual demand and implies that children learn in contexts which allow dialogue and interaction with others.

According to Bernstein, the nature of social interaction that characterizes given teaching-learning contexts at the micro-level of the classroom is a

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consequence of power and control relations between subjects, discourses and spaces. Classification (power) and framing (control) are conceptual instruments used to characterise the *how* of pedagogic practice, both instructionally and regulatively. In instructional contexts, discursive rules of selection, sequence, pacing and evaluation define teacher–child relations using distinct values of framing. Stronger values characterize theories of instruction more centred on the transmitter, and weaker values those more centred on the acquirer. Intra-disciplinary, inter-disciplinary and academic/non-academic relations between discourses are characterized by distinct values of classification. Strong classification of intra-disciplinary relations entails clear boundaries between various scientific contents to be learned within disciplines and weak classification entails blurred boundaries. These lead to smaller or greater conceptual articulation between the various contents of a discipline. Strong classification of inter-disciplinary relations and between academic and non-academic knowledges indicates higher status given to knowledge of a discipline, relative to that of others in the curriculum and to academic knowledge, relative to the non-academic knowledge, respectively. Whenever knowledge from other disciplines and non-academic knowledge is allowed to enter subject classrooms, classification between them becomes more blurred. In the regulative context of pedagogic practice, hierarchical rules that define communicative relations between teachers and children and children themselves may be characterized according to distinct framing values. Strong framing shows communication with heightened control by teachers and children of higher social status, respectively, and weak framing of communication where all children, including those of lower social status, have some form of control. Relations between spaces also have distinct classification values. Teachers' and children's spaces and those of children of distinct socio-cultural backgrounds, gender and achievement may be strongly classified and bounded or have weak or blurred boundaries.

Methodology

The study took two years and followed a rather unusual action research methodology, rejecting both analysis of the empirical without an underlying theoretical basis and uses of theory which do not allow for its transformation on the basis of the empirical. Rather, we have used an external language of description, as advocated by Bernstein (2000), whereby the theoretical and empirical are viewed dialectically. Researchers and teachers were always strongly classified, with the possibility of varying control relations (see Afonso 2002; Neves, Morais and Afonso Chapter 12, this volume).

Sample

The sample was made up of four female teachers in four fourth-year (age 9 to 10) primary school classes, in schools located in two country towns. They

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taught ninety-one children (thirty-nine boys and fifty-two girls) from families differing by socio-economic level in terms of fathers' and mothers' academic qualifications and occupations.³ They were grouped into three categories: working class (WC), lower-middle class (MC⁻) and higher-middle class (MC⁺) (see Table 6.1).⁴

Table 6.1 Social composition of the four school classes

<i>Teachers</i>	<i>Family socio-economic level</i>		
	WC	MC ⁻	MC ⁺
A	7	9	8
B	4	3	12
C	10	10	10
D	3	8	7

Notes

WC = Working class; MC⁻ = Lower-middle class; MC⁺ = Higher-middle class.

Methodological procedures

The first year of the research was dedicated to intensive teacher training involving learning about scientific content and processes and pedagogical content, particularly Bernstein's theory and related research. It was also dedicated to the piloting of one teaching unit by each teacher and the construction of instruments to characterize teachers' pedagogic practice in terms of Bernstein's concepts of classification and framing. Two teaching units and relevant materials were constructed and delivered during the second year of the study.

Instruments were devised to analyse teachers' practices during the first and second stages of the study in terms of the relations between subjects (teachers, children), discourses (intra-disciplinary, inter-disciplinary, academic/non-academic) and spaces (teacher's space, children's spaces) present in the classroom context. They guided teachers' actions in their classrooms and were used to characterize the pedagogic practices that took place. Each relation analysed had several indicators measured on a four-point scale of classification and framing, from very strong to very weak (C⁺⁺, C⁺, C⁻, C⁻⁻⁻; F⁺⁺, F⁺, F⁻, F⁻⁻⁻). The number and type of indicators for each relation varied according to the instructional and regulative context under analysis. The results obtained made it possible to characterize the pedagogic practice of each teacher in relation to the characteristics of the theoretical profile of the practice that they were intended to implement. These characteristics had been suggested by former studies as having the potential to promote favourable learning by all children (Morais and Neves 2001).

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Our methodology was based on a dialectical relation between the theoretical and the empirical. We developed an external language of description so that the notion of Bernstein's internal language of description could guide observation, and the empirical data obtained provided a basis to define indicators more adequate to the relations under analysis. Thus the instruments contain textual indicators of the specific characteristics of the contexts under study.

Table 6.2 exemplifies an extract from the instrument used to characterize the instructional context of the pedagogic practice with respect of the discursive rule sequence and one of the indicators used in the analysis of this rule. This is followed by transcripts obtained from classroom observation which show two values of framing on a four-point scale.

Table 6.2 Extract of the instrument for analysis of the discursive rule sequence and respective examples of transcripts

<i>Example of indicator</i>				
<i>Indicator</i>	<i>F⁺⁺</i>	<i>F⁺</i>	<i>F⁻</i>	<i>F⁻⁻</i>
Exploring/ discussing themes under study	The teacher explores contents according to a rigid order which is never altered even when children intervene	The teacher explores contents according to a given order but accepts children's interventions at the level of the micro- sequence	The teacher explores contents altering the micro-sequence, and occasionally the macro- sequence, as a result of children's interventions	The teacher explores the contents, even changing the macro- sequence, as a result of children's interventions

Notes

Examples of transcripts:

F⁺⁺ Ronaldo reads aloud the material needed to the realization of an experiment planned by his group.
David, who is part of another group, wants to ask a question.
'No, sorry, we are letting doubts to the end.' (Teacher).

F⁻⁻ Children made a variety of experiments about several state changes of various substances. The description of the experiences and the presentation of the results is done according to an order chosen by children.
Teacher's questions intend to clarify some aspects referred to by children, but do not suggest any sequence to work presentation.

Having characterized each teacher's actual pedagogic practice over two teaching units, we determined its degree of approximation to the theoretical profile previously planned, on a four-point scale, for both instructional and the regulative contexts, over twelve characteristics in all.⁵ The value 4 was given whenever a teacher's practice was similar to the theoretical profile with respect to the characteristic under analysis, and 1 was given whenever

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practice was distant from the theoretical profile.⁶ The total of points possible for each teacher on all twelve characteristics of the practice, like the total of points for the theoretical profile, was $12 \times 4 = 48$. Their juxtaposition gave us a profile of teachers' pedagogic practice in relation to the theoretical profile of effective teaching that we had derived from past research, in terms of the *how* of learning.

We also characterized practice in terms of the *what* of learning (teachers' scientific competence) using data obtained from classroom observation and other data collected in the course of the teachers' training process. This characterization considered both scientific knowledge and investigative competences. For each, a four-point scale was again constructed, where higher values of the scale (2×4 , maximum of 8) represented higher teacher scientific competence, and lower values (minimum of 2) represented lower competence. In all modalities of pedagogic practice power relations between teachers and children were strongly classified; teachers having higher status in the pedagogic relation and determining both organizational and communicational features of the teaching-learning context.

Table 6.3 shows the position of each teacher in terms of the *what* and the *how* of his or her pedagogic practice in delivering the two teaching units. The table also shows, for pedagogic practices as a whole, the percentage of the theoretical practice achieved by each teacher and its classification.

Children's degree of scientific learning⁷ was estimated by tests containing questions to evaluate the development of both simple and complex cognitive competences.⁸ For each set of competences, children's marks were transformed on a four-point scale where: 0–24 per cent = 1; 25–49 per cent = 2; 50–74 per cent = 3; 75–100 per cent = 4.

The relation between teachers' pedagogic practice as a whole and children's achievement was measured through analysis of variance (one-way Anova), followed by a post hoc test (multiple comparisons) whenever the value given by the variance analysis was significant. This statistical treatment was also used to analyse the same relation in terms of children's socio-economic level. To express the relative weight of each one of the characteristics of pedagogic practice on children's learning, we used stepwise regression, considering the *what* and *how* of pedagogic practice and the characteristics of instructional and regulative contexts separately.

Data analysis

We analysed the relation between teachers' pedagogic practice and children's scientific achievement by considering the characteristics of their practices both as a whole and separately. Following earlier studies (e.g. Domingos 1989a; Morais *et al.* 1993, 2000⁹; Neves and Morais 2004) which showed family socio-economic background to be a variable influencing students' scientific achievement, we focused on the interaction between children's social background, pedagogic practice and scientific learning, taking the level

Table 6.3 Teachers' pedagogic practices when teaching the first and second units

Pedagogic practice	Teacher A		Teacher B		Teacher C		Teacher D	
	1st	2nd	1st	2nd	1st	2nd	1st	2nd
The <i>how</i>	28/48	32/48	42/48	38.5/48	40/48	43/48	29.5/48	35/48
The <i>what</i>	2/8	2/8	6/8	8/8	8/8	8/8	8/8	8/8
Total	30/56	34/56	48/56	46.5/56	48/56	51/56	37.5/56	43/56
	53.6%	60.7%	85.7%	83%	85.7%	91.1%	67%	76.7%
Modality of pedagogic practice	Pp1	Pp2	Pp4	Pp4	Pp4	Pp5	Pp2	Pp3

Notes
1st = First unit; 2nd = Second unit.

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attained by children in complex cognitive competences as a measure of achievement. Studies by Domingos (1989a, b) and Morais *et al.* (1992b) had shown that differences in scientific achievement related to a family's socio-economic background were particularly marked when the level of conceptual demand was higher.

Interaction between pedagogic practice, family socio-economic background and achievement in sciences

Analysis of variance was carried out, where the dependent variable was children's achievement in complex cognitive competences (CC), the independent variable was pedagogic practice (Pp) and the mediating variable was a family's socio-economic level (FSEL). Achievement was measured on a 1–4 scale, where level 1 indicates very low achievement and level 4 very high achievement in CC. Teachers' pedagogic practice was measured on a 1–5 scale, where 1 indicates the practice most distanced and 5 the nearest to the pedagogic practice which previous studies had shown to be favourable to the scientific learning of all children (see Table 6.3). Family socio-economic level was measured on a 1–3 scale: 1 working class; 2 lower-middle class; and 3 higher-middle class.

The analysis was carried out for all children in the sample at the same two points when their teachers' pedagogic practice was characterized. However, the analysis presented here concerns only results from two teachers and their children after delivery of the second teaching unit when not only teachers changed practices but children's progress should have been most evident. To highlight the relation between pedagogic practice and achievement, as mediated by family socio-economic level, we selected the two teachers (A and C) who showed greatest contrast in their pedagogic practice and whose children's science results were significantly different at the point of delivery of both teaching units. At the same time, their pupils were the most evenly distributed in terms of social class levels. Figure 6.1 shows the results of the analysis. The percentages on the vertical dimension refer to the distribution of children, by social group and achievement level.

The data show that teacher C, with pedagogic practice nearer to the characteristics shown to be favourable to children's achievement, achieves the best results: the percentage of children with low achievement (2 or less) is lower than 50 per cent for any social group. Teacher A, whose pedagogic practice is furthest away from the characteristics favourable to children's achievement, has more than 50 per cent of children in all social groups showing low achievement. Indeed, a high percentage of teacher A's children in all social groups show very low achievement (level 1) and level 4 is achieved only by socially advantaged children (FSEL 3). In contrast, the percentage of teacher C's children with very low achievement is very small and the highest achievement is not restricted to socially advantaged children. These results support the conclusions of our earlier studies which show that pedagogic

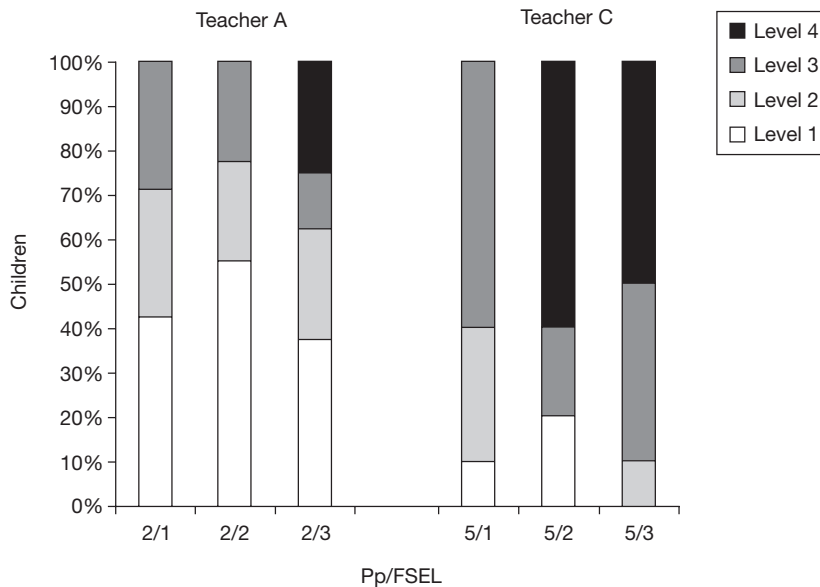


Figure 6.1 Interaction between pedagogic practice, family socio-economic level and achievement in sciences – second stage of research

practice can overcome the effect of children's social background (e.g. Fontinhas *et al.* 1995; Morais and Miranda 1996; Morais *et al.* 1992, 1993, 2000).

The influence of different characteristics of pedagogic practice on scientific development

To provide a more comprehensive and detailed picture of the relative importance of each of the various characteristics of pedagogic practice and their interplay for effective learning, we undertook a stepwise regression analysis to estimate the contribution of each characteristic of pedagogic practice for children's success in complex cognitive competences. The results showed that differences in scientific achievement were explained mainly by the *what* of the pedagogic practice, explaining 25.8 per cent of the variation of children's results after delivery of the first unit and 24 per cent after the second. When only the *how* of pedagogic practice was considered, by analysing each of the sociological characteristics which defined its instructional context, intra-disciplinary relations and evaluation criteria emerged as those with higher explanation value of children's results after the first unit, together explaining 26 per cent of the variance (15.8 per cent and 10.2 per cent, respectively). After the second unit, evaluation criteria again came out as the characteristic of the instructional context having greater influence on children's results, explaining 23.3 per cent of the variation.

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When we analysed the relation between the sociological characteristics which define the regulative context of pedagogic practice and children's results in complex cognitive competences, regression analysis indicated the relation between teachers' and children's space and child-child hierarchical rules as those with highest influence on achievement after the first unit, together explaining 23.4 per cent of the variance (20.1 per cent and 3.3 per cent, respectively). After the second unit, teachers'-children's space relation emerged again as the characteristic of the regulative context with greatest influence on children's achievement, explaining 24 per cent of the variance.

These results support the idea that an important condition of children's success in complex cognitive competences is the scientific competence of teachers: their knowledge proficiency and command of the investigative competences to be developed. However, this *what* is a necessary but not a sufficient condition. The explicating of evaluation criteria (strong framing of this discursive rule) and the blurring of boundaries between teachers' and children's spaces (weak classification) are further crucial conditions for children's success. Statistically, the blurring of boundaries between knowledges of a discipline (weak classification of intra-disciplinary relations) and the existence of open and intense communication between various children (weak framing of child/child hierarchical rules) were also important.

This statistical analysis complements the results of the earlier ones, revealing which practices contributed most to differential scientific achievement among children. When there is a poor pedagogic practice at the level of the *what* and it is characterized, at the level of the *how*, by weak framing of evaluation criteria, strong classification of teacher and child spaces and of intra-disciplinary relations and strong framing of child/child hierarchical rules, there is a low level of scientific learning and high differential achievement among children. In contrast, when there is good pedagogic practice at the level of the *what* and it is characterized at the level of the *how* by strong framing of evaluation criteria, weak classification between teacher and child space and intra-disciplinary relations and a weak framing of child/child hierarchical rules, there is a high level of scientific learning and low differential achievement among children.

The characteristics of the pedagogic practice highlighted by this analysis must be seen in the context of the results obtained by the whole group of teachers who were part of the study. Some of the characteristics showed teachers to be similar or having little difference between them, as in the case of pacing, so that it is understandable why they did not come out as explaining differential results. However, it must be borne in mind that similarity between some teachers in the present study was engendered partly, at least, by the training they received in the course of the action-research process. This suggests the importance of developing further research involving teachers whose pedagogic practices are more markedly distinct in terms of those characteristics (see Afonso 2002; Neves, Morais and Afonso, Chapter 12, this volume).

Interplay between various characteristics of pedagogic practice and the relation between children's achievement and practice

The statistical results of previous analyses indicate that there is a relation between pedagogic practice and children's differential achievement and that some characteristics are more important in that relation. But what is the extent to which the interplay of the various characteristics of the practice explains the relations suggested by the results? We must look at the interplay between the characteristics which emerged as fundamental factors for children's differentiated achievement in order to understand the reason why they perform a crucial role in the pedagogic practice as a whole. We should also look at the interplay between those characteristics and other characteristics of the pedagogic practice in order to obtain a more comprehensive picture about the relation between practice and achievement.

If explicating the evaluation criteria (strong framing) is a crucial condition for efficient scientific learning, that explicating will be more successful when communication relations between subjects in interaction are more open. In order for the text that children are expected to produce to be explicit, it should be constructed (with the teacher's support) by children in interaction with other children. This requires a weak framing of hierarchical rules so that children can intervene in discussions and so that all children feel their opinions are valued. Moreover, the classification between teacher's and children's spaces should be weak so that there are open teacher-children communication relations. Furthermore, so that the text should be made explicit to children represents a high level of scientific conceptualization, a condition for success at the level of complex cognitive competences, the blurring of boundaries between the various subjects of the discipline is needed. This requires a weak classification at the level of intra-disciplinary relations, an aspect that previous analyses showed to be an important condition for that success. On the other hand, if a crucial condition for efficient learning is high scientific competence on the part of teachers, the explicating of evaluation criteria will lead to efficient learning only when that competence exists.

We are encouraged to believe that effecting all these aspects of pedagogic practice requires weak framing of pacing if time restrictions are not to prevent the whole process. For text to be acquired by children to be made explicit, in detail and with rigour and articulation of distinct knowledges of a discipline to be systematically achieved and frequent open communication between teacher and children and among children themselves to occur, time is needed. However, contrary to what is believed, it is possible to weaken the framing of pacing without significantly increasing the amount of time school has to offer to children. If efficient intra-disciplinary relations require time, they may, in turn, increase time for learning. When returning systematically to scientific knowledge already explored in order to relate it to new content to be learned, teachers increase learning time for the former.

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Detailed analysis of the pedagogic practice of teachers A and C shows that they differed in terms of evaluation criteria (teacher A with weak and teacher C with strong framing), child–child hierarchical rules (framed more weakly for teacher C than for teacher A) and the relation between teacher and child spaces (teacher A with strong and teacher C with weak *classification*). Teacher A also had very strong classification at the level of children's power relations, stronger classification of academic–non/academic relations and strong framing of the teacher–children hierarchical rules. Teacher C had very weak classification at the level of children's power relations, relatively weaker classification at the level of academic–non/academic relations and very weak framing of teacher–children hierarchical rules. Pacing and children's space were framed and classified more weakly for teacher C than for teacher A. These differences could also account for differences in their children's achievement. They also lead us to contend that learning time cannot itself be a sufficient reason to explain children's differential achievement. For example, the lesser attention given by teacher A than by teacher C to the relation between academic and non-academic knowledge and to teacher–children communication may be seen in terms of differences in learning time. However, since framing of pacing for teacher A is also weak, it is not the most relevant difference between their practices: it is possible to think that teacher A did not use the time to put into practice that which ostensibly distinguished her from teacher C. This illustrates the complexity of the relations between the various characteristics which define a pedagogic practice, and help us to understand how these relations may explain its influence as a whole on school achievement.

Conclusion

The current and earlier studies reveal that the pedagogic practice which promotes a high level of scientific development in primary school children is *mixed*, with: (1) weak boundaries between teachers' and children's spaces; (2) open communication relations between teacher–children and child–child; (3) explicit evaluation criteria; (4) weak pacing of learning; (5) strong intra-disciplinary relations; (6) high level of conceptual demand; and (7) high level of investigative proficiency. Primary schoolchildren are able to develop scientific knowledge and investigative competences provided their teachers possess sound scientific and pedagogic competences. As in Morais *et al.* (1993), Morais *et al.* (2000), and Morais and Neves (2001), we show that pedagogic practice can overcome students' social background, even in developing complex cognitive competences, where the disadvantaged tend to show greater difficulty. This implies that there is no need to lower the level of conceptual demand in order for *all* children to succeed at school. Raising the level of conceptual demand is, indeed, a crucial step in order that all may have access to a higher level of scientific literacy valued both by the scientific community and society at large.

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A pedagogic practice which makes possible attainment of a good level of school science success, even when the level of conceptual demand is raised, creates conditions for working in the zone of proximal development of given groups of children, exploring all their potential levels of development, as suggested by Vygotsky when he said that 'pedagogy should be directed not to the yesterday but to the tomorrow of child's development' (Davydov 1995: 18). Vygotsky contends that learning precedes development, 'that an adequately organised instruction leads to mental development' (Wertsch 1991: 72) so that good learning goes beyond actual development; if it does not it is not learning. The level of conceptual demand we provide for children should be somewhat higher than what their actual development suggests they are able to achieve. Learning is a complex social process in which knowledge is socially constructed in interaction with others; that social, inter-psychological processes precede subject, intra-psychological processes will be of extreme relevance to the characteristics of the social context which define a given pedagogic practice.

The primary condition for children's success in complex cognitive competences is the scientific competence of teachers. Making evaluation criteria explicit and arranging weakly classified teacher-child space are also crucial, while the blurring of boundaries between distinct scientific content, with open and intense communication between children, all of whose opinions are equally valued, is important. Marked weakening of pacing, blurring of boundaries between children's spaces, an open relation of communication between teacher and children and between academic and non-academic knowledge also characterized the arrangements of the teacher whose pedagogic practice was closest to our theoretical profile and whose children were relatively the most successful. Bernstein's and Vygotsky's ideas clearly give meaning to these linkages, synthesized in Figure 6.2.

Once more we underline that although teachers' scientific competence is a necessary condition for learning, it is not sufficient. The other characteristics presented in the diagram are also fundamental to the success of *all* children; their interplay in the creation of a learning context favourable to *all* children permits understanding of the extent to which their mutual interdependence explains children's school performances.

This study is able to explain with greater rigour why pedagogic practice plays so important a role in children's level of scientific development and the meaning of the interdependence of its various characteristics. Methodologically we have attained a better model of an efficient pedagogic practice and can now go further in seeing the extent to which this model adapts to multiple schooling situations, increasing the precision of our knowledge of the conditions of effectiveness of the characteristics indicated by our model.

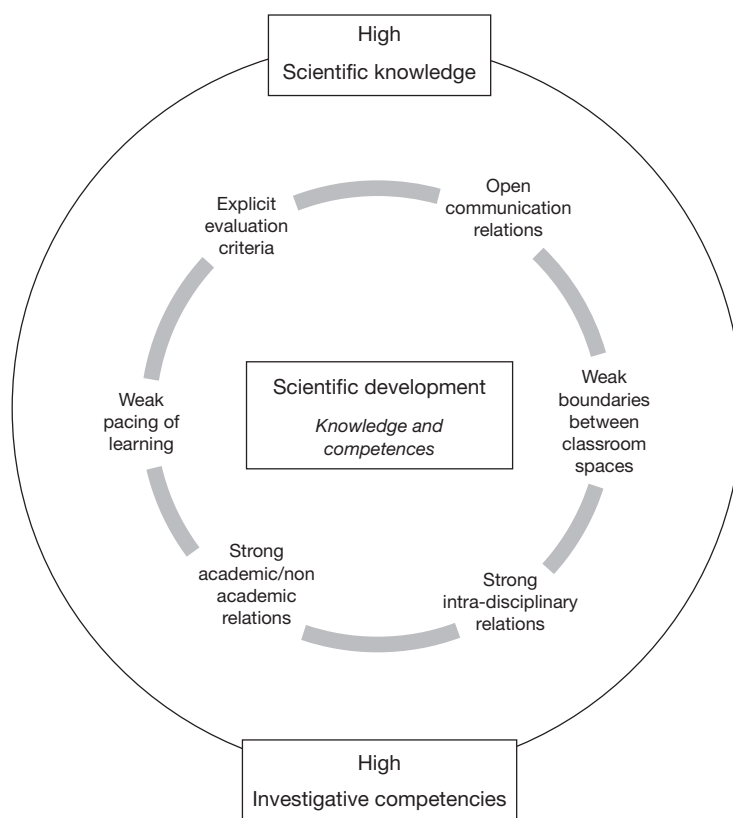


Figure 6.2 Interrelations between the characteristics of the pedagogic practice and scientific development

Acknowledgements

We acknowledge the financial support of the Gulbenkian Foundation and the Institute for Educational Innovation for the project of which this study is part.

Notes

- 1 Teachers' level of conceptual demand is related to the nature of the cognitive competences to be developed by children. When there is a low level of conceptual demand, these competences involve a low level of abstraction (memorization and understanding at a simple level); when there is a high level of conceptual demand, the competences involve a high level of abstraction (understanding at a high level, application, synthesis and evaluation).
- 2 According to Vygotsky (1978: 86), the zone of proximal development 'is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through

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- problem solving under adult guidance or in collaboration with more capable peers’.
- 3 The FSEL was obtained from a composite index based on fathers’ and mothers’ occupations and academic qualifications, each scoring 1–6. Their sum was then converted to a percentage and this percentage was scaled (1: ≤ 58 per cent; 2: 59–83 per cent; 3: 84–100 per cent).
 - 4 Social class should be understood here as a nominal concept.
 - 5 *Instructional context*: selection, sequence, pacing, evaluation criteria, intra-disciplinary relations, inter-disciplinary relations, relations between academic and non-academic knowledges. *Regulative context*: hierarchical rules teacher–children, power relations child–child, hierarchical rules child–child, teacher–children spaces, children’s spaces.
 - 6 For example, according to the theoretical profile, pacing would be characterized by very weak framing (F^-) and the evaluation criteria by a very strong framing (F^{++}). In the case of pacing, the value 4 was given to pedagogic practice F^{-} , 3 to practice F^- , 2 to practice F^+ and 1 to practice F^{++} . On the contrary, in the case of the evaluation criteria, the value 4 was given to pedagogic practice F^{++} , 3 to practice F^+ , 2 to practice F^- and 1 to practice F^{-} .
 - 7 Children’s scientific learning was also measured (Pires 2001) in relation to their possession of recognition and realization rules regarding knowledge and competence. This analysis will be the object of a further study.
 - 8 An example of a question to measure the development of complex cognitive competences and of two answers given by children was:

Question: You have probably seen that when we stir the wood in a fireplace we rekindle the embers. Explain this.

Child A: This happens because when the embers are stirred the ashes are taken away letting oxygen in, which is the air component responsible for making the materials burn, light up.

Child B: Because the embers which were beneath went up when we stirred them, and they could again consume the oxygen which is in the room.

- 9 Morais *et al.* (2000) also contains studies carried out by Afonso, Câmara, Morais, Neves and Pires focusing on family contexts.

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7 Sequencing and pacing of the hidden curriculum

How Indigenous learners are left out of the chain

David Rose

Children who can meet the requirements of the sequencing rules will eventually have access to the principles of their own discourse.

(Bernstein 1990: 75)

This chapter emerges from a long-term action research project, *Learning to Read: Reading to Learn*, in which Indigenous and other Australian students at primary, secondary and tertiary levels learn to read texts across their curricula, and to use what they learn from reading in their writing (Lui-Chivizhe *et al.* 2004; Rose *et al.* 1999). In this light I examine unequal development of orientations to reading through primary and secondary schooling, and the roles of instructional and regulative classroom discourse in maintaining inequality, guided by Bernstein's model of schooling as a 'pedagogic device' (1990, 1996). Four general stages are proposed for the sequencing of reading development, from pre-school through junior and upper primary to secondary school, constituting a literacy curriculum that underlies the overt content of school syllabi. It is suggested that children from highly literate communities access this underlying curriculum tacitly, while many Indigenous and other children from less highly literate communities are effectively excluded. Four learning interactions are analysed to illustrate how patterns of pedagogic discourse in home and school can build both orientations to ways of meaning and children's identities as successful or unsuccessful learners.

Stratifying educational outcomes

Average literacy achievements of Indigenous school students in Australia are well behind general Australian standards (DEST 1997), and as a result, indigenous students in urban or rural communities are more than twice as likely as other groups to quit before completing high school, while over 90 per cent from remote indigenous communities will not complete (ABS 1996). Yet, while these problems are proportionally worse for Indigenous communities, they are not unique, but reflect wider educational inequalities,

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in which 10 to 20 per cent of high school graduates matriculate into universities, 20 to 30 per cent qualify for vocational training, while over 50 per cent receive no further education. That too many Indigenous students fall into the latter category is an unfortunate side effect of an education system that has evolved to service an inherently unequal socio-economic order. Decades of polarized debates over pedagogy seem to have had little effect on this problem: whether the pedagogy is focused on 'competences' or 'performances' in Bernstein's terms (Rose 1999), stratification of outcomes has remained relatively unchanged (ABS 2002). The proposal of this chapter is that the apparent inertia of inequality is a consequence of sequencing and pacing principles of the underlying literacy development curriculum that are deep-rooted in the structure of modern educational systems, functioning to optimize the preparation of elite students for university study, while consigning others to vocational or manual occupations (Rose 1998).

Stages in the literacy development sequence

Two central competences required for university study are first the ability to learn independently from reading, and second to demonstrate through written performances what has been learned from reading, including both the academic field of study, and the patterns of academic language through which it is expressed. Preparation of elite students for these reading and writing skills is accomplished tacitly in the secondary school stage of literacy development by processing large quantities of curriculum 'content' in class and homework, rather than explicit literacy teaching. This strategy forces students to constantly practise independent reading, and written performances for evaluation, so that successful students acquire not only the overt content, but, more importantly, extensive implicit knowledge of the genres of academic study.

Tacit acquisition of academic genres by elite students is possible due to orientations to learning from reading that these students acquire in earlier stages of the literacy development curriculum. Secondary students who have not previously acquired these linguistic orientations adequately will not be able to tacitly acquire the academic literacy for successful performances. Nor will they learn these skills explicitly, since the volume of content allows secondary teachers insufficient time to teach reading and writing skills to weaker students, even if they were trained to do so. The tyranny of curriculum pacing in secondary schooling thus simultaneously achieves successful acquisition of academic literacy for elite students and exclusion of other students from the possibility of professional training at university. Bernstein critiques the effect of this pacing on non-elite students:

The strong pacing of the academic curriculum of the school creates the necessity of two sites of acquisition [school and home]. It creates a particular form/modality of communication which does not privilege

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everyday narrative [the inner structure of the communicative principle children use in everyday life]. In this structure children of the disadvantaged classes are doubly disadvantaged.

(Bernstein 1990: 78)

Since secondary students are evaluated on their control of literacy skills that are not taught explicitly in secondary school, what is actually being evaluated is an ability to learn these skills tacitly, an orientation to written language that is acquired in middle to upper primary school (Grades 4 to 7). Yet even in upper primary, skills in learning from reading are rarely taught explicitly. Rather, the overt upper primary curriculum tends to focus on content 'themes', using a variety of class and individual activities which implicitly support primary students to continually practise learning from reading, and to reproduce what they have learned as written and oral performances. Students who benefit most from the underlying literacy development functions of these activities are those who are already able to read independently with comprehension and accuracy, and to write extended texts that draw on their experience of written language in reading. Again, these 'basic' skills in reading and writing are rarely taught explicitly in the upper primary stage (with exceptions such as genre-based approaches to writing (Cope and Kalantzis 1993; Martin 1999)), but are acquired through activities in junior primary years (1 to 3) that are aimed explicitly at practising elements of reading and writing tasks. Thus activities in upper primary that involve independent reading and writing actually evaluate the acquisition of these skills in junior primary.

As Bernstein points out, 'It is crucial to read early in order to acquire the written code, for beyond the book is the textbook, which is the crucial pedagogic medium and social relation' (1990: 53). Accordingly, independent reading and writing is fostered in junior primary by an overt curriculum focus on class and individual story reading, on letter-sound correspondences and letter formation, and on writing stories based on personal experience. However, for a significant proportion of students, these activities do not provide the independent reading and writing skills necessary for learning from reading in upper primary. For example, in central Australian Indigenous community schools it was found that no children had learned to read independently before Grade 3, that one-third still had not learned to read by Grade 7, while most others were still on basal 'sentence' readers by the end of primary (Gray *et al.* 1998). These students from oral family backgrounds do not come to school with the orientations to written ways of meaning that children from literate families acquire, in up to 1,000 hours of parent-child reading (Bergin 2001; Williams 1999), and junior primary activities do not give them this orientation. Again, what are being evaluated in these activities are orientations to written language that are acquired in a previous stage, in this case in the home. While they may support elite students to develop their existing literacy skills, their effect on other students is merely evaluative.

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To summarize, each stage in the literacy development sequence assumes and evaluates orientations to written ways of meaning that are acquired in previous stages. Thus practices across the secondary school curriculum implicitly assume and evaluate orientations acquired in upper primary, and practices in middle-upper primary assume and evaluate orientations acquired in early school years, which in turn assume and evaluate orientations to written meanings acquired through parent–child reading before school. These four stages in the literacy development sequence are set out in Figure 7.1, including the focus of the reading development curriculum in each stage (in *italics*).

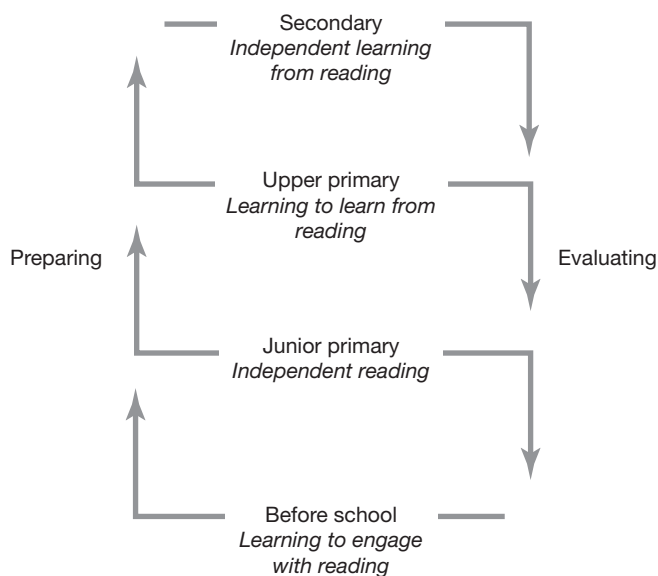


Figure 7.1 Stages in the literacy development sequence

Pedagogic discourse and learning to read

The *Learning to Read* project has demonstrated that all students can independently read at primary, secondary or tertiary levels within one year of regular instruction, no matter what their starting level (McRae *et al.* 2000), so there is no ‘natural’ reason why reading should be taught only in junior primary. According to Bernstein, ‘The age by which a child should be able to read is a function of the sequencing rules of the pedagogic practice of the school’ (1990: 75). Independent reading at an early age is necessary only because tacit acquisition of the underlying reading curriculum in upper primary requires a lot more time than explicit instruction. Paradoxically, the pacing of the underlying curriculum slows down to facilitate tacit acquisition, while the pacing of the overt curriculum accelerates through primary and

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secondary school. This sleight of hand ensures both that access to the underlying curriculum remains unequal and that this inequality of access remains invisible.

However, stratification is maintained not only through the sequencing and pacing of instruction in school. Bernstein reminds us that instructional discourses are always 'embedded' in a regulative discourse, which he describes as a 'moral discourse which creates order, relations and identity' (1996: 46). While the typical forms of instructional discourse, in each stage outlined above, rank students on the basis of reading skills acquired in preceding stages, the regulative discourses in which they are embedded construct and cement learner identities as 'successful', 'average' or 'unsuccessful'. The everyday interactions that imperceptibly construct learner identities are briefly illustrated below with transcripts of reading lessons: first, a parent-child reading session in the home, second, a junior primary reading lesson, third, an English lesson in junior secondary, and finally a secondary reading lesson from the *Learning to Read* project.

Reading before school

Exchange 1 is an extract from a parent-child reading session with an 18-month-old child and her mother.¹ The extract is analysed into five interaction cycles, in which each move is labelled to the right. In one type of move, the child selects the book or the page she wants to look at (Slct). In another move, the mother prepares the child to recognize a feature of the text (Prep). The child then identifies a text feature (Ident), the mother affirms her (Affm), and may elaborate with more information (Elab).

Exchange 1

Ch:	[Brings the book, sits on her mother's lap, and turns the book so the cover is facing right side up.]	Slct	1
M:	The three little pigs [points to each of the pigs on the cover of the book].	Prep	2
Ch:	[Opens the book and turns several pages while her mother is talking.]	Slct	
Ch:	[Points to picture of a tree] Tee [looks up at mother].	Ident	
M:	Yes.	Affm	
	It's a tree.	Elab	
Ch:	[Points to another tree in the picture] Tee [looks up at mother again].	Ident	

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M:	Um, um . . .	Affm	
M:	[Points to each of the little pigs in the illustrations]. Here are the little pigs. Bye-bye mama [waves her hand]. We're going to build a house.	Prep	3
Ch:	[Laughs, waves at the mama pig in the illustration and turns the page.]	Ident	
M:	Look, the first pig . . .	Prep	4
Ch:	[Turns page].	Slct	
M:	Oh, oh, I see that wolf [points to the wolf, eyes get larger as if in fright].	Prep	5
Ch:	[Turns page and points to wolf] Oh, oh.	Ident	
M:	Oh, oh.	Affm	
	He huffed and puffed [blowing on child] and he blewww that pig away. Very bad, isn't he? [in different tone directed toward child as an aside].	Elab	

Each of the exchange cycles begins with the mother's preparation move (Prep), with the exception of move (1), in which the child selects and arranges the book, but of course these behaviours have been repeatedly modelled (i.e. prepared by the mother in earlier interactions). In each of the mother's preparations she directs the child's attention and names characters: 'The three little pigs', 'Here are the little pigs', 'Look, the first pig', 'I see that wolf'. But she also directs attention to more complex features, including expectation of events: 'Bye-bye mama [waves her hand]. We're going to build a house', and feelings 'Oh, oh . . . [eyes get larger as if in fright]'.

The child is too young to follow the narrative sequence, but is tuned into the interaction cycle of identifying text features, for which she expects to be rewarded with her mother's affirmation. Accordingly, she responds to the first preparation move (2) by identifying a text feature as 'tee'. The mother affirms this, but also elaborates it with correct articulation in a complete sentence: 'Yes. It's a tree', and the child repeats her identifying move, which the mother again affirms: 'Um, um'.

In cycle (3) the mother again directs attention to the main characters: 'Here are the little pigs'. This time the child recognizes a more complex relation between the mother's preparation – 'Bye-bye mama [waves her hand]' and the illustration, which she identifies by laughing and waving at the picture. In (4) the mother tries to direct attention to the sequence, but the child turns the page. In the fifth cycle (5), the mother captures the child's attention with the expectant 'Oh, oh, I see that wolf'. The child recognizes this affective

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meaning and responds by turning the page, and identifying both the wolf and the feeling, 'Oh, oh', which the mother affirms by repeating 'Oh, oh'. This preparation provides a foundation of shared understanding for the mother to then read the text, and tell the child what it implies about the wolf's character: 'Very bad, isn't he?'

Through the medium of this highly predictable interaction cycle the mother is repeatedly orienting her child to several crucial features of written stories, long before the child is even ready to follow and understand the story. These include the complex relation of illustrations to the story, judgement of characters and their actions, and expectation of problems. This interaction cycle involves features that are probably fundamental to human learning, including 'joint attention' of parent and child (Tomasello 2000), but has been uniquely adapted in parent-child story reading to maximize children's preparation for school. The type of support the mother provides to the child to understand the story in Exchange 1 has been referred to as 'scaffolding' by Ninio and Bruner (1978), and I will refer to the cycle described as the *scaffolding interaction cycle*. This is shown in Figure 7.2.

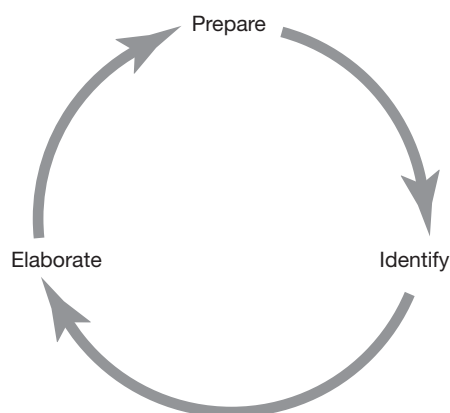


Figure 7.2 Scaffolding interaction cycle

The scaffolding interaction of parent-child book reading is a type of instructional discourse that emerges from the regulative context of the parent-child relationship. It is experienced by the child as consistently positive, as the mother continually supports the child to explore the virtual world of story-books, and affirms her responses; the child is always extended but never negated. Continual growing success in the joint activity of reading within this relationship will ultimately shape the child's identity as a reader and learner.

The scaffolding cycle resembles the 'triadic dialogue' or 'IRF' (Initiation-Response-Feedback) pattern of classroom discourse, described by Nassaji and Wells (2000), among others. But there are three crucial differences

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between scaffolding interactions and typical classroom discourse. First, the mother's initiating moves in Exchange 1 are not simply eliciting a response, but consistently *prepare* the learner to respond successfully; second, her follow-up moves to the child's responses are not simply feedback that evaluates or comments on the response, but consistently *elaborate* shared knowledge about text features; and third, the mother's feedback is always affirming, whereas classroom feedback is frequently negative. By omitting the preparation and elaboration functions of scaffolded learning, the triadic IRF cycles described by these authors do not provide the level of support for engaging with reading shown in Exchange 1. In addition, by rejecting some learners' responses, the associated negative experience can inhibit not only their learning but also the development of their identity as learners. These patterns are illustrated in the following Exchanges 2 and 3.

Reading practices in early school years

Current junior primary literacy practices have a strong focus on engaging children with written stories, but there may be crucial differences between these activities and the strategies by which highly literate parents orient their children to reading. Exchange 2 exemplifies early childhood interactions around story reading.² The pre-school class is discussing a wordless picture story-book about a snowman. The teacher is pointing to the round orange object used to make the snowman's nose.

Exchange 2

Teacher:	What's that he's got, Ben?	Quy
Anna and Jody:	Carrot!	Ident
Teacher:	[makes circular motion on round object in illustration]	Prep
Bobby:	Meatball! Meatball!	Ident
Kris:	Oranges!	Ident
Teacher:	Yes, Kris, I think you. . . That's right!	Affm
Other child:	Meatball! Meatball!	Ident
Anna:	They're oranges!	Ident
Jody:	Oranges!	Ident
Other child:	Tangerine!	Ident
Teacher:	Well, it's kind of oval like a tangerine [makes oval shape with hands].	Neg

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The first key feature of Exchange 2 is that there is no preparation for the teacher's initiating question (Quy), except to point to the illustration and ask Ben to guess what it is. Ben offers no reply, and of those children that do respond only Kris' is affirmed by the teacher. Anna and Jody's initial response of 'carrot' is implicitly rejected by the teacher's non-verbal narrowing of her question's criteria ('round motion'). This is a pervasive pattern in classroom discourse across all years, namely to insert preparations when no one can guess the correct response. Bobby's 'meatball' response to this cue is ignored, while the 'tangerine' response is met with doubt, i.e. qualified negation (Neg). The unidentified child who repeats the unsuccessful 'meatball' perhaps does not yet recognize the criteria for getting affirmation. It may appear a logical response to the child, considering the visible criteria of size, colour and shape, but has already been ignored, and so implicitly rejected by the teacher.

This kind of 'triadic' questioning routine (set out in Figure 7.3) is more complex and unpredictable than the scaffolding interaction cycle. Without adequate preparation for the initiating question, feedback to student responses is more likely to be rejection than affirmation. Responses may be rejected by ignoring, by negating, or with an admonishment (see Exchange 3 below). If negated, the question may be repeated or rephrased. If the question is rephrased the guessing game starts again. Continuous repetition of such questioning routines can lead to frustration, withdrawal or resistance by less successful students, or even to complete breakdown of educational interaction in the classroom, particularly in Indigenous community schools (Malcolm 1991). Learning may then be replaced by busy work which minimizes the need for interaction and does not challenge students' autonomy (Folds 1987).

The guessing competition of Exchange 2 is reproduced from McGee (1998: 163) to exemplify good practice in teaching children to 'make inferences'. In my experience it represents common junior primary practice where children

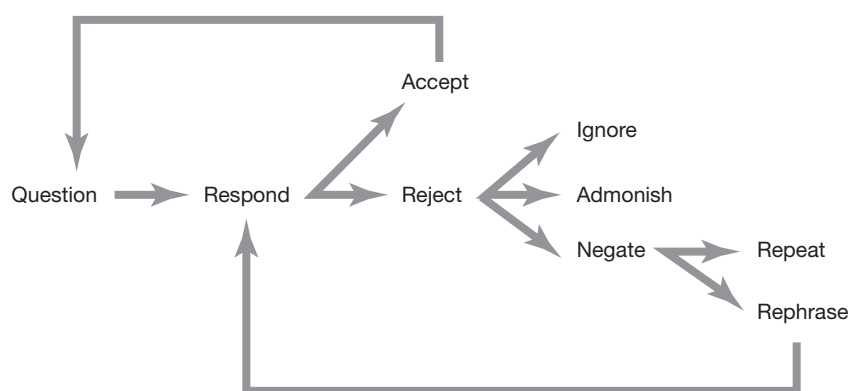


Figure 7.3 Unscaffolding questioning ('IRF') cycles

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are learning something more significant than making inferences: only some responses are acceptable to teachers; the criteria for successful responses are not equally available to all students; and some students are regularly more successful than others. Every teacher knows that more successful students respond consistently to their questioning, average students do so intermittently and least successful students do so rarely if at all. The pervasive instructional discourse of schooling described as ‘IRF’ or ‘triadic dialogue’ is embedded in a regulative discourse that emerges from and functions to reproduce stratified order, relations and identities. This instructional discourse may have evolved out of the kinds of scaffolding learning cycles illustrated in Exchange 1 but its form is distorted to serve a different regulative function, to produce what Bernstein has called ‘specialized competences’. It should be emphasized that teachers are not trained to produce such a discourse; rather we acquire it tacitly and reproduce it unconsciously from our own years of socialization in classrooms. This could be described as the hidden curriculum of teacher training.

Reading practices in the middle years

In upper primary to secondary years, reading and writing activities further differentiate students on their abilities to read and reproduce both text content and text patterns. Exchange 3 is from a junior secondary class including Indigenous and other students who have been read a novel aimed at adolescent readers, *Blueback* (Winton 1997). These students speak English as a first language, but most cannot read at age-appropriate levels, and none read for pleasure. The activities are normal classroom practice in upper primary or junior secondary English, and are intended to extend the students’ ability to analyse elements of the story, although the effect is more evaluative than extending.

Exchange 3

T:	What kind of a man is Abel? (the novel’s central character)	Quy	1
St:	A man.	Slct	
T:	Think of the kinds of things he did.	Prep	
St:	He had the fantasy of the ocean.	Slct	
T:	What? Repeat that.		
St:	Dreamed about the ocean.	Slct	
T:	Thank you June [writes on the board].	Affm	
T:	What else can we say about him? How did he feel?	Qury	2

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St:	Unsure?	Slct	
T:	Unsure's a good one.	Affm	
T:	There's another word that means the same: – A – N – X.	Prep	
St:	Anxious.	Slct	
T:	He was always conf. . . .	Prep	
St:	Confused.	Slct	
T:	[Writes 'anxious' and 'confused' on the board.]	Affm	
T:	What sort of man was Mad Macka?	Qury	3
St:	A dog.	Slct	
T:	Ben, we won't have stupid answers. (Students start calling out answers.)	Neg Slct	
T:	There's one important thing you should understand about Mad Macka.	Qury	4
St:	He was Abel's friend.	Slct	
T:	Not particularly.	Neg	
St:	His family left Abel his boat.	Slct	
T:	Thank you May [writes on board].	Affm	

Despite the difference in years and complexity of the text, the interactions in Exchange 3 display many of the same features as Exchange 2. There is no scaffolding for initial questions in each interaction cycle, but preparations are inserted when no students are able to guess the desired response. Unacceptable responses are ignored or negated, and only a few students are able to give responses that are affirmed and written on the board. Two differences from junior primary are that the text is now no longer used for identifying features; rather, students must select responses from their imagination or memories of the text (Slct), and students are now well and truly socialized into their positions in the literacy hierarchy. Weaker readers have two options in class activities that are aimed only at the successful students: either they can sit at the back of the class and disengage, hoping not to be singled out for questioning, or they can assert their autonomy by challenging the teacher's authority or the value of the activity. These kinds of responses are evident in 'A man', which the teacher ignores, and 'A dog', which is explicitly admonished.

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By junior secondary school, the pacing of the overt curriculum has accelerated so that weaker readers are left well behind, with little hope of catching up. Since they have rarely experienced the rewards of teacher affirmation in primary school, they will have had little opportunity to develop the self-motivation associated with a successful learner identity. For most Indigenous students in Australia this will be the end of their formal education, usually by Grade 9 or 10, unless they are able to access adult education later in life. The failure of early primary schooling to give them what middle-class parents teach their children, and the relentless sequencing of the hidden curriculum and negative evaluation which follows, ensures that they will not succeed with the demands of secondary schooling, and that they do not expect to do so. They experience secondary schooling, not as an entry to adult life, but as a waste of time.

Alternative practices: *Learning to Read: Reading to Learn*

There is no need for this self-perpetuating injustice to be an inevitable outcome of schooling. The *Learning to Read* project has demonstrated that primary and secondary teachers can build reading into their curricula in ways that can enable the whole class to engage actively at a high level, and the weakest students to become successful readers and writers across the curriculum. The basis for this is the scaffolding interaction cycle, and an awareness of the patterns of meaning in the texts we are working with, derived from functional linguistics (Martin and Rose 2003).

Exchange 4 illustrates these possibilities with a group of junior primary students with low literacy, learning to read a modern history text on the Western Front of the First World War (Engwerda *et al.* 1998). It begins with the teacher preparing by explaining a complex, highly metaphorical sentence with a commonsense paraphrase, ‘people dreamed they could succeed quickly’, and then asking students to identify the first words, *Dreams of early successes* (1). All students are able to find and mark the words, one student identifies them orally, the teacher affirms, and then elaborates by explaining the metaphor. The scaffolding cycle is then repeated as the meaning of the sentence is ‘unpacked’ and discussed in steps (2 to 7), leading to a discussion about the futility of war (8 to 12).

Exchange 4

T:	There was a long line of trenches all the way from Belgium through Germany. But it starts off <i>Dreams of early successes evaporated as both the central powers</i> (which is Germany) <i>and the allies</i> (which is France and Britain) <i>dug in a long line extending through Belgium to France and finishing in the south of Germany</i> . So it starts off by saying ‘people	Prep	1
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	dreamed they could succeed quickly'. Can you see the words that mean 'people dreamed they could succeed quickly'? Have a look there.		
All:	[Look.]		
T:	What's the words that say that?		
St:	<i>Dreams of early successes.</i>	Ident	
T:	Very good, that's great, <i>Dreams of early successes.</i> Let's all do (highlight) that.	Affm	
All:	[Mark wordings.]		
T:	So that means they were all dreaming, it was just a dream. It's like they were dreaming and their dreams just evaporated into thin air.	Elab	
T:	Then it tells us 'when' they evaporated. Can you see 'when' they evaporated?	Prep	2
All:	[Look.]		
St:	<i>As both powers.</i>	Ident	
T:	That's right.	Affm	
T:	'What kind' of powers were they?	Prep	3
All:	The <i>central powers</i> .	Ident	
T:	And what was the 'other side'?	Prep	4
St:	<i>Allies.</i>	Ident	
T:	<i>And the allies.</i> Let's all do <i>central powers</i> (which was Germany) <i>and the allies</i> .	Affm	
All:	[Mark wordings.]		
St:	<i>And the allies.</i>		
T:	Germany and Austria, they were on one side, and the allies were on the other.	Elab	
T:	Then it tells us what they 'did'. Can you see what they 'did'?	Prep	5
All:	[Look] <i>Dug in a long line.</i>	Ident	
T:	OK. Let's just do <i>dug in</i> .	Affm	
All:	[Mark wordings.]		

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T:	Dug in means they 'dug trenches', right?	Elab	6
St:	Yep.		
T:	Then it tells us 'where' that line extended from.	Prep	
All:	<i>Belgium to France.</i>	Ident	
T:	OK, <i>Belgium to France.</i>	Affm	7
	And it kept going.	Elab	
T:	'Where' did it keep going to?	Prep	
All:	<i>South Germany.</i>	Ident	
T:	The <i>south of Germany</i> , OK.	Affm	8
	Right through, so right through those three countries, which you can see on your map there.	Elab	
St:	How far would that be?	Qury	
T:	1000km, so from Melbourne to Sydney.	Infm	
T:	Can you imagine trenches going all the way from here to Sydney.	Prep	9
St:	That'd take ages and ages to dig.	Slct	
St:	How long would that take them?	Qury	10
T:	Well, there's millions of guys, so they're all lined up opposite each other, shooting each other.	Infm	
St:	That's crazy.	Eval	
T:	Crazy, yeh.	Affm	
St:	Exactly how many people died in World War 1?	Qury	11
T:	About 20 million died in World War 1.	Infm	
T:	How many people are going to die in Iraq do you think?	Prep	12
St:	Hundreds of thousands.	Slct	
St:	Too much.	Eval	

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Each preparation gives students a meaning cue to identify the next keywords in the sentence, either a commonsense paraphrase such as ‘people dreamed they could succeed quickly’, or a type of ‘wh’ meaning: ‘when they evaporated’, ‘what kind of powers’, ‘what they did’, ‘where did it keep going’. Students must then reason themselves from these cues to identify the actual words in the text. This task is made far easier by giving position cues, telling them where to look next, as they mark each wording in turn (e.g. ‘Then it tells us . . .’). Actively reasoning about meanings enables students to understand the wordings as they identify them, and eventually to generalize from these to other instances, as they learn to read more texts at this level. The teacher’s elaborations explain metaphors and new concepts, define terms such as ‘dug in’ and invite discussion. Understanding and engagement with the meanings of the text open up the possibility for informed critical discussion, which begins as the students come to recognize the complex picture of trench warfare encoded by this sentence and the surrounding text. This leads to reflection on the carnage of war in general, which the Western Front epitomizes. In this stage (8–12), students ask questions (Qury), the teacher gives information (Infm), and students evaluate (Eval). Crucially, although one or more students may articulate the wording in each cycle, every student is actively engaged in finding and marking wordings from the preparation cues. Simple management strategies, such as taking turns or directing preparation cues to individuals, can ensure that all students in a class get continual practice in identifying and articulating responses successfully.

Democratizing the classroom

The scaffolding cycle can support all students to operate at much higher levels than they can independently, as Vygotsky’s (1978) model of ‘proximal development’ in social learning predicts. This means that any learner can potentially be scaffolded to read any text that is within the range of difficulty for their age or grade level, as Bernstein (1990: 79) envisioned:

It is certainly possible to create a visible pedagogy which would weaken the relation between social class and educational achievement. This may well require a supportive pre-school structure, a relaxing of the framing on pacing and sequencing rules, and a weakening of the framing regulating the flow of communication between the school classroom and the community(ies) the school draws upon.

We are now in a position to be quite specific about these requirements in relation to literacy pedagogy. First, junior primary practices need to support all students equally and explicitly to read independently, starting with strategies of one-for-one word recognition in the context of the stories they are reading. Second, the framing on sequencing of reading instruction must be relaxed so that it continues to be taught explicitly throughout all

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educational stages as part of the overt curriculum, as exemplified in Exchange 4. While this may marginally relax the pacing of the 'content' curriculum, the pacing of the underlying literacy development curriculum will be accelerated through explicit instruction, benefiting all students.

Finally, opening communication between Australian Indigenous communities, homes and schools in the past two decades has led to significant improvements in student retention and positive attitudes to schooling, but has not yet produced the same results for educational achievements (DEST 1997, 2002). In my view this might occur in two ways. A long-term strategy may be to weaken the framing regulating the flow of communication between classrooms and teacher training faculties, so that all teachers are pre-service trained to teach equally to all students in their classes, and not only the elite. However, to obtain results within this generation, we may have little choice but to bypass the entrenched class interests dominating the teacher training profession, to develop effective in-service training programmes such as the *Learning to Read* project.

Notes

- 1 Exchanges 1 and 2 are deliberately reproduced from McGee (1998: 163–4) to illustrate contrasts in pedagogic discourse between home and school that this author did not recognize.
- 2 Beginning readers must learn to recognize one written word in a text for each spoken word ('one-for-one word recognition'). Children with extensive parent-child reading experience may achieve this independently, while others require more intensive support for which teachers are not adequately trained.

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8 Decoding mathematics instruction

A critical examination of an invisible pedagogy

Sarah Theule Lubinski

Current trends towards progressive, constructivist-inspired pedagogies could have the potential to correct past inequities for low-SES students who have received more than their share of rote-based instruction (Anyon 1981; Means and Knapp 1991). However, even well-intended instructional reforms can advantage the students who are best positioned to reap their benefits, while disadvantaging others. This chapter focuses on a small group of US students' experiences with reform-minded mathematics instruction, and illuminates ways in which such instruction unintentionally privileged middle-class children.

Social class differences in child socialization

Previous research has revealed social class differences both in relations to authority and the extent to which language and meanings are contextualized. For example, Kohn (1963, 1983) observed that working-class jobs usually require obedience to authority and conformity to rigid routines, whereas middle-class occupations tend to allow more autonomy and intellectual work. Kohn argued that these differences carry over into child-rearing. Indeed, studies have found that working-class parents tend to be more authoritative, whereas middle-class parents are more likely to emphasize reasoning and playfulness when instructing their children (Duberman 1976; Heath 1983).

In addition, Bernstein (1975) argued that linguistic codes differ by social class. According to Bernstein, more privileged classes, who tend to be individualistic and have more opportunities to venture beyond local environments, have fuller access to 'elaborated codes' or language with meaning that is explicit and relatively independent of contexts. This is the language of mainstream society, including schools. Meanwhile, lower status families are more likely to use 'restricted codes' or language with implicit and context-dependent meanings. This orientation makes sense when emphasis is placed on community and common knowledge is shared.

Some researchers have used Bernstein's code distinction to examine children's thinking and language. For example, Holland (1981) found that middle-class children tended to categorize pictures in terms of trans-situational

properties (e.g. grouping foods together that were made from milk or came from the sea), whereas working-class children tended to categorize pictures in terms of more personalized, context-dependent meanings (e.g. grouping foods that are eaten at Grandma's house). Both Bernstein and Holland concluded not that children *could* not think differently, but that they had been raised with a particular orientation.

Heath's (1983) study of discourse patterns in US middle- and working-class communities brings many of these comparisons to life. She found that middle-class parents emphasized reasoning and discussing when teaching their children; they tended to ask their children questions, beginning with 'what explanations' before moving to 'reason explanations' or affective commentaries about objects or events. Through these interactions, the children 'developed ways of decontextualizing and surrounding with explanatory prose the knowledge gained from selective attention to objects' (1983: 56). In contrast, white, working-class parents focused on solving immediate problems in specific contexts. They tended to tell or show their children what to do. Working-class children learned to be passive knowledge receivers and did not learn to decontextualize knowledge and transfer it to other contexts.

Theoretical framework

Reformers in mathematics education, such as the National Council of Teachers of Mathematics (NCTM) in the USA, are promoting discussion-intensive, problem-centred instruction (NCTM 2000). New reform-oriented mathematics curricula centre around 'real-world' problems that are sequenced to prompt students to encounter important mathematical ideas and abstract them from the contexts. Teachers are to facilitate students' explorations and discussions of the problems instead of giving students formulas and procedures to follow.

With their de-emphasis on the authoritative role of the teacher and the integration of real world problems into the school mathematics curriculum, these reforms may be viewed as promoting what Bernstein (1977) referred to as *invisible* pedagogies. Morais and Neves (2001) describe invisible pedagogies as those with general weak framings and classifications, which includes masking the authority of the teacher and blurring the boundary between everyday knowledge and school knowledge. They warn that invisible pedagogies can further disadvantage marginalized students, because such pedagogies 'leave the text legitimized by the school and society invisible' (Morais and Neves 2001: 216).

Although current mathematics education reforms are intended to empower all students, researchers must consider how moving towards discussion-intensive, problem-centred mathematics instruction can remove or add new barriers for disadvantaged students. How might working- and middle-class students react differently to the teacher's role as facilitator and to their own new roles involving active exploration, analysis and discussion of mathematical

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ideas? Who might be better positioned to learn the intended abstract mathematical principles from exploring and discussing contextualized problems?

By examining closing the particular aspects of invisible mathematics pedagogies that are problematic for low-SES students, we can begin to find ways to adapt such pedagogies to further promote equity without compromising the goal of helping all students to become capable critical thinkers and actors.

The study

Several experiences brought me to conduct this study. First, having come from a working-class background, I was interested in the ways in which education can help or hinder social mobility. In addition, in my doctoral programme I worked with the Connected Mathematics Project (CMP) in both writing and pilot testing reform-oriented middle-school materials. (For more information about the curriculum see CMP 1995.) While pilot testing the sixth-grade drafts, I was generally impressed with the results. Yet I saw some disparities between the 'mathematics for all' reform rhetoric and some students' experiences that led me to question how some of the reform ideas might affect lower SES students. When I had the opportunity to pilot test the seventh-grade drafts the following year, I decided to study how the instruction might be experienced differently by higher and lower SES students.

The school

This study was conducted in a socio-economically diverse school in a medium-sized city. The school's 500 students were primarily white, with about 3 per cent Hispanic and 11 per cent African-American. The district's sixth-grade teachers had used the CMP materials the preceding year; hence the seventh-grade students in this study had one year of experience with the curriculum.

The teacher

I played a dual role of both researcher and teacher, which allowed me to design the case to be studied (Ball 2000). At the time of this study I held a Master's degree in mathematics, as well as secondary mathematics teaching certification. There were benefits and drawbacks to my dual role, and I tried to minimize the drawbacks where possible. For example, I had colleagues conduct some of the student interviews to gain information that students might be uncomfortable telling me directly. The rationale for and tensions inherent in my dual role are discussed further in Theule Lubienksi (1997).

The curriculum and pedagogy

One or two problems from the CMP trial materials provided the focus of each class period, with additional problems assigned as homework. The goal was for students to move away from the problem contexts and abstract important mathematical ideas and processes both from their small-group problem explorations of the problems and subsequent whole-class discussions. The teacher's role involved launching students' exploration of the problem (including clarifying the problem and expectations), monitoring students' progress on the problems and then drawing out and highlighting intended ideas during summarizing discussions.

Lower SES and higher SES students

Parent permission was granted for twenty-two of the thirty students in the class. I collected data on commonly accepted SES indicators – parents' occupation, education, income and reading material in the home – to gain a sense of students' social class backgrounds (Duberman 1976). Only eighteen of the twenty-two students provided clear SES data and whom I divided into two rough groups (see Table 8.1). The lower SES students' parents would generally be considered lower or working class; they held factory or service jobs (or no jobs) and had completed grade school or high school. The higher SES students had parents with college degrees and worked in professions such as engineering, teaching or social work. Sixteen of the eighteen students were white, so it is important to recognize that differences discussed here generally involve lower and higher SES white students.

Data collection and analysis

I used several surveys, an end-of-year interview, student work, teaching journal entries and daily audio recordings to document all participating students' experiences across the year. I sought to understand how students viewed our class, what they found helpful or hindering, and what they thought they were learning. I also followed a smaller group of eight target students more closely, interviewing them at the beginning, middle and end of the year. In selecting these students, I tried to include a low- and high-achieving male and female from each SES group. Through comparing student responses to survey and interview questions by SES, several patterns were identified inductively. These patterns were then examined rigorously for consistency across the variety of data collected. For further information about how the data were analysed, see Lubienski 2000a.

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Table 8.1 Participating students categorized by gender and SES^a

<i>Lower SES</i>		<i>Higher SES</i>	
<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Males</i>
Rose	Carl	Samantha	Benjamin
Anne	James	Rebecca	Timothy
Dawn	Nick	Guinevere	Christopher
Sue	Mark	Andrea	Harrison
Lynn			Samuel

Note

^a I used one-syllable pseudonyms to refer to lower SES students and three-syllable pseudonyms to refer to higher SES students. I used two-syllable pseudonyms to refer to students whom I did not categorize because I did not have clear SES data for them.

Results

Students were expected to play new roles in my classroom and almost all students complained about this at one time or another. Some differences in students' reactions fell along SES lines. While there were many aspects of reform-oriented instruction that did not seem to differentially privilege students (e.g. the use of graphing calculators, small-group work), here I focus primarily on students' experiences with an element that turned out to be more problematic: whole-class discussions.

I organize the following discussion around two types of data. First, I present portraits of six girls and then I discuss more summative data from the larger class. Focusing on only one gender allows an examination of diversity within gender/SES categories. Since this is a study of *mathematics* education, it seems especially important to understand girls' experiences, because they are under-represented in the field. In addition, the major studies of social class and education thus far give more attention to males (Weis 1988).

Portraits of six girls

Four girls were originally designated as target students at the beginning of the school year (Dawn – lower SES, low achievement; Rose – lower SES, high achievement; Guinevere – higher SES, mid-achievement (she was the lowest achieving high-SES girl); Rebecca – higher SES, high achievement. I collected intensive data on two additional girls – Sue and Samantha. I added Sue (lower SES, mid-achievement) in the middle of the year when she asked if she could be interviewed (previously, she refused to participate in my study). She represented a significant faction of lower SES girls who were hard-working but not very high achieving. The addition of Sue was balanced by the addition of Samantha (high achievement), who, at that time, was the only remaining higher SES female for whom I had permission. All the girls were Euro-

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American, with the exception of Rose, who was Mexican-American. English was the first language of all the girls. The following portraits centre around the six girls' views of, and participation in, the problem-centred classroom, with particular attention to students' reaction to whole-class discussions of mathematics problems.

Guinevere (high SES, mid-achievement). Guinevere's mother was a graduate student and social worker and her father was an engineer. Guinevere was mathematically confident, ranking herself as one of the top three students in our math class (final survey). In terms of actual performance, she turned in only 81 per cent of her homework and her test scores averaged 90 per cent. She was not consistently active in discussions but, when she did participate, she often pushed our thinking in interesting, insightful ways. Bold in voicing her disagreement with me and with others, Guinevere sometimes displayed disappointment when someone else expressed 'her' idea first or when we ran out of time for discussion (e.g., Journal 9/30, 12/1). When asked if she participated much in discussions, she said she did because discussions allowed her to learn more and to be heard: 'I like it that we can get into arguments like that because it helps you actually understand what's happening. . . . It helps you know why it's wrong . . . I like to have my ideas heard' (First interview). However, she became frustrated with discussions at times, saying the 'teaching style is slow', and she had little patience for classmates who 'start arguments just for the heck of it' (final interview).

Guinevere enlightened me with her view of my role in providing 'hints' to guide discussions:

TEACHER: How does the class figure out which ways are right and wrong?

GUINEVERE: Hints.

TEACHER: Like what do you mean?

GUINEVERE: You say, 'Well I don't know if that would work.'

TEACHER: So do I tell you who is right or wrong?

GUINEVERE: Not usually, you just hint.

TEACHER: Why do you think I do that?

GUINEVERE: So we don't learn the wrong thing and think it's right.

TEACHER: Why don't I just tell you she's right and he's wrong?

GUINEVERE: So we can figure it out.

Guinevere seemed to understand my intentions as a facilitator of mathematical discussion: I wanted to help students figure things out for themselves but I did not want them to flounder too much and end up learning 'the wrong thing'.

Samantha (high SES, high achievement) lived with her mother, a counsellor working on her Master's degree. Samantha turned in virtually all **home-work** assignments, and her test scores averaged in the high 90s. At the end of the year, most students (including Samantha) ranked her as a 'big arguer' in the class as well as one of the 'top three maths students in the class'.

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Samantha participated confidently in class, making and justifying her own conjectures and agreeing or disagreeing with others' ideas. I sometimes worried that her arguments were difficult for other students to grasp. Discussions often began with an idea grounded in the context of the problem. Some students seemed content to leave the discussion at that level, but she was one of several students who pushed the discussion to more abstract levels.

Whole-class discussions seemed comfortable for Samantha and she could take on the teacher's facilitative role when working in smaller groups. Yet her interaction style seemed to conflict with what other, particularly lower SES students, desired. For example, one day her group mates were stuck, and she prompted them: 'Remember that thing we did yesterday, it was part of our homework? . . . Just think about it – it's really easy.' James impatiently replied, 'Just shut up and tell us!'

In her final interview, Samantha explained:

SAMANTHA: I like having discussions in class, 'cos then you can hear what other people have to say, 'cos sometimes there's more than one way to figure out a problem, so if you're just thinking one way you can find out another way.

TEACHER: Do you ever get confused in discussions?

SAMANTHA: Not really.

Like Guinevere, Samantha mentioned that when the class was stuck I gave 'clues', such as 'I think this idea would make more sense'. Her use of the word 'clue' along with Guinevere's use of the word 'hint' made me think twice about my role in the discussions. I wondered if my 'clues' were guiding only certain students who understood my discourse norms and were able to pick up on my 'clues'.

Rebecca (high SES, high achievement). Rebecca's parents both held graduate degrees. Her father was an environmental biologist and her mother was a teacher. Rebecca consistently completed her homework and earned As on quizzes and tests. She and her mother both said Rebecca had struggled with traditional maths in previous years but that she had started to excel in mathematics once the school began using CMP – 'It's easier than normal maths', Rebecca explained. She confidently ranked herself among the top three maths students.

Rebecca was generally active in class discussions. Most of my journal entries about her refer to her many solid contributions, such as 'on the ball, participating a lot' or 'volunteered some key answers' (Journal 1/12, 2/28). Rebecca was often more focused than Guinevere or Samantha on providing correct answers to my questions as opposed to sharing new insights, but she also revealed that she was comfortable with abstracting mathematical ideas from contextualized problems. For example, she used an algebraic argument to address a question about the volume of a cylinder and expressed frustration with classmates who did not understand her decontextualized

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proof. She wrote on her assignment, 'I don't know what everyone's problem is . . .' (1/5).

Rebecca appreciated discussions, 'because then if I don't know the answer, then someone can explain it to me' (Second interview). In addition, like Samantha and Guinevere, she had the mathematical confidence necessary to evaluate conflicting ideas.

TEACHER: Did you learn from our [whole-class] discussions?

REBECCA: Yeah, I think it helps me learn more things. Instead of just like doing it on your own, I can know everybody's opinions and take it into consideration.

TEACHER: Do you find it confusing when you have all those different opinions?

REBECCA: Not really . . . some of 'em aren't true, and some of 'em are, and I can figure out which ones are true and which ones aren't and stuff.

For Rebecca, discussions were generally helpful, and she was confident in her abilities to understand and judge others' arguments.

Rose (low SES, high achievement). Rose's father had a grade school education and worked in a factory. Her mother had a high school diploma and worked as a cashier. Rose was hard-working and high achieving. Although nine of her classmates ranked her among the top three mathematics students in the class, she did not rank herself so highly. In addition, despite her high mathematics grades, she sometimes exhibited what mathematicians would consider faulty logic.

Rose participated regularly in discussions. She often made solid contributions, especially answers to my questions or asking questions about how to do something, but she rarely provided new insights. I often made comments along these lines in my journal: 'Rose had her hand up on every question today. . . . She is usually correct, but not digging deeply into things' (2/22).

Rose sometimes drew conclusions from one example and did not seem to distinguish between that and a more general proof (e.g. Journal 1/21). In addition, at times she did not distinguish between an opinion-based question versus something that could be determined mathematically. For example, on a probability question asking on which colour a spinner was most likely to land, she said that since different people have different guesses, it is just an opinion question (Journal 3/8).

I recorded several examples in which Rose's 'real world, commonsense' reasoning took precedence over finding the solutions to problems as the CMP authors and I intended. In one such discussion about finding the best buy for popcorn, Rose argued that because the prices go roughly in order of size, we need only to choose which size we really need.

TEACHER: Now, this costs \$3.50, the cone costs \$2.50 and the cylinder costs \$3.75. Now what do we do? Which one is the better buy?

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ROSE: I put 'it depends'. Because the one with the less volume is cheapest, and the one with the most volume is the most money. So it depends on how much popcorn you want.

Rose's reasoning was certainly sensible, because she was using the real-world context to decide how accurate she needed to be. Yet she missed the intended experience of comparing unit prices. She also differed from other high-achieving students in that she showed little intrinsic interest in the problems or discussions. She complained regularly that she did not want to have class discussions. For example, she often asked if the class could just turn in the homework without having to discuss the problems. She asked this even if she had questions about the homework problems (e.g. Journal 9/23, 1/26). She said she did not like maths class much because 'we spend too much time correcting things'. For her, discussions about previously solved problems were viewed as 'correcting' the work instead of sharing mathematical ideas. In her final interview, Rose explained that the discussions were boring when she already understood what was being discussed, and at other times discussions were confusing because it was difficult to sort out conflicting ideas. 'Everybody's saying like "this is the answer", and "that's the answer".'

Rose did not view discussions as a forum for offering conjectures or clarifying ideas. Rather, she seemed to view class discussions in a more traditional way as consisting of questions and (hopefully correct) answers.

Sue (low SES, mid-achievement) lived with her mother, an administrative assistant with a high school diploma. Sue completed over 90 per cent of homework assignments, although her test scores (typically in the 70s) did not reflect her strong efforts. She regularly contributed to discussions, her participation usually in the form of asking questions when she was confused about how to do a problem, volunteering to read a paragraph from the book, or answering a basic question. She occasionally offered an opinion or made an argument, usually involving a 'real-life' situation, drawing from what might be described as 'commonsense' reasoning, as in the following example: 'For a problem asking if Volvos are safer cars, since their death rate is lower [...] Sue said that people with a four-door Volvo probably have families and drive better' (Journal 2/25).

As in the Volvo example, Sue showed she was capable of reasoning insightfully about mathematics problems set in real-life contexts. Through interviews, I learned that she was sometimes teased by peers outside of class for voicing her confusion during whole-class discussions. In her final survey she said, 'I feel stupid when I get an answer wrong during class'. As the year progressed, Sue expressed a desire for a more didactic style of teaching. At the end of the year, she said she preferred learning from just the teacher because 'when everyone is there [in whole-class discussions], they give their opinions and stuff, and it may not be right, and I mix those two up, and it just confuses me . . . I understand more without all the people.'

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Dawn (low SES, low achievement). Dawn's father was an unemployed high school graduate, and her mother, who had completed some high school, worked as a house cleaner. Dawn made some effort to complete her homework regularly (about 80 per cent) but usually did poorly on tests and quizzes (averaging about 63 per cent).

Dawn rarely contributed to whole-class discussions. She explained that she was 'shy – like my mom'. Despite her limited participation in discussions, Dawn said she liked maths class this year more than last, 'Because you aren't as boring and you don't write everything on the board' (First survey). Still, throughout the year, she voiced consistent preference for small-group work, as well as strong teacher guidance.

She expressed confusion about the pedagogy and curriculum, saying that she often felt unsure of what she was supposed to be learning until she took the test, explaining that, during class discussions, she became 'confused 'cos you don't know if this is right or this is right 'cos they don't agree'. I asked her what happens when people disagreed:

DAWN: They like, explain how their reasoning is, and usually you say, this reasoning is OK.

TEACHER: Do I flat out say it, or. . .

DAWN: No, you say like, 'I think this reasoning is more likely to be in the real world' or something.

TEACHER: Why do you think I don't just say you're right and you're wrong?

DAWN: Because it might hurt their feelings.

Dawn's statement that I was cryptic for the sake of sparing feelings stood in contrast with views expressed by several higher SES students who seemed to better understand my intentions to help students figure things out for themselves.

Table 8.2 Six girls' answers to the question 'Do you participate much in class discussions? why or why not?' (from final survey)

<i>Student</i>	<i>Response</i>
<i>Higher SES:</i>	
Guinevere	Yes, because I need to get my point across.
Samantha	Yes, because I want other people to understand my ideas. I like arguing.
Rebecca	Yes, because I do.
<i>Lower SES:</i>	
Rose	Yes, If I know what I'm talking about. But if I'm confused I just listen.
Sue	Sometimes, only if I know I've got the right answer.
Dawn	No, because I don't like to be wrong in front of a whole group.

Summary of six portraits and data from the larger class

Table 8.2 summarizes the six girls' views of their participation in discussions. Although Guinevere, Samantha and Rebecca said they contributed to discussions, Rose, Sue and Dawn did not give the same unqualified 'Yes' to the question. The patterns in the data for the six girls are consistent with the larger class. Across students' interviews and surveys, seven students consistently said a lack of confidence in their abilities kept them from participating in whole-class discussions. All seven were lower SES students, two males and each of the five lower SES females participating in the study. The higher SES students rarely voiced fear of being wrong.

The three higher SES girls talked about discussions as a place to share ideas or make a point, whereas Rose, Sue and Dawn focused on whether answers were right or wrong. Again, data from the whole class revealed that most higher SES males and females said that discussions offered beneficial exposure to different ideas and that part of their role was to analyse those ideas. In contrast, lower SES students talked about their roles as obtaining or giving correct answers. More lower SES students said they preferred a teacher-directed style: they wished I would just 'show how to do it' or 'tell the answer'. The lack of teacher directives seemed to create confusion for more of these students. Seven lower SES students, including all five of the lower SES girls, consistently said that having a variety of ideas proposed in discussions confused them. In contrast, six of the seven students who consistently said the discussions were helpful to them were higher SES.

Although I took primary responsibility for guiding our conversations, I tried to avoid being *the* person who decided if ideas were sensible. I had talked with students on several occasions about wanting them to learn to think for themselves but I did not talk specifically about how my pedagogy was supposed to help them with this. More higher SES students revealed an understanding of my intended role. For example, whereas Dawn thought I refrained from evaluating students' ideas because I 'didn't want to hurt their feelings', Guinevere explained that I gave 'hints' because I wanted students to figure things out for themselves. My insertions of information into the discussions might have been more helpful to higher SES students, who were more attuned to my intentions.

Although I focus in this chapter on whole-class discussion, students' reactions to the relatively open, contextualized curricular problems paralleled these trends (for more information see Lubienski 2000b). Many lower SES students longed to return to worksheets with clear directives to follow. Higher SES students felt more comfortable with the open nature of the curriculum, and they were more likely to focus on the intended mathematical point of the problems, as opposed to focusing on the problems' contexts of pizza parlours, popcorn or cars.

Discussion

Many factors influenced each student's experiences in this discussion-intensive classroom. One might wonder if SES-related patterns in the data are actually attributable to differences in previous achievement. Yet the case of Rose and others suggests that previous achievement is not a complete explanation.

The literature on class-cultural differences suggests another explanation. As the teacher, I was a facilitator who asked guiding questions instead of an authority figure who told students what to think and do. Lower SES students seemed to be more fearful of saying or believing the wrong thing; they desired more specific direction from the teacher and texts. Higher SES students were more comfortable with the open pedagogy, feeling confident to make sense of ideas being debated in discussions. Higher SES students moved more often from a focus on specific contextualized situations towards the intended generalizable, mathematical principles.

I wanted my classroom to be one in which all students' ideas and ways of thinking were respected. It seemed reasonable to believe that open discussions in which a variety of methods and ideas were considered, along with open-ended problems which could be solved in a variety of ways, would communicate to all of my students that I valued their ways of thinking and communicating. In addition, given Bernstein's work on codes, it seemed that lower SES students in particular might benefit from mathematics problems set in real-world contexts.

However, the classroom data and the literature suggest that the very nature of a classroom in which students are expected to share, puzzle over and make sense of mathematical ideas conflicted with some of the beliefs and norms my lower SES students brought to the classroom. In addition, lower SES students' orientation towards contextualized meanings might have made it more difficult for these students to abstract the intended mathematical principles from the contextualized mathematics problems and our discussions of those problems.

This study illuminates some of the difficulties that lower SES students may encounter with invisible pedagogies in which the authority of the teacher is downplayed, the official discourse of the classroom is not made explicit, and boundaries between everyday and school knowledge are diminished. However, the conclusion to be drawn is not that we should revert to drill-oriented practices for lower SES students while giving more privileged students access to higher level mathematical skills, as has occurred in the past (Anyon 1981; Means and Knapp 1991). In fact, one could argue that lower SES students have the most to gain from instruction that explicitly includes problem solving and mathematical communication as part of the curriculum. The question becomes how the intended benefits of such instruction can indeed be gained by lower SES students.

How can teachers add, in Bernstein's terms, more *visible* pedagogical elements without compromising the goal of students to become mathematically

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confident problem solvers instead of passive recipients of others' knowledge? Morais and Neves (2001) help to move us beyond simple dichotomies of visible versus invisible pedagogies. They argue that teachers must use their authority to make evaluation criteria explicit, while also weakening the hierarchical nature of the teacher–student relationship. In this way students learn the privileged text of schooling, including privileged discourse norms and curricular content while also becoming critical thinkers who can question authority. Building from Bernstein's work, they argue for a 'mixed pedagogy' (Morais and Neves 2001: 215), as well as for continued examinations of exactly how various visible and invisible elements should be 'mixed' (e.g. strong or weak framings of curricular selection, sequencing, pacing, evaluation criteria, hierarchical rules).

Work by Fuson *et al.* (2000), Boaler (2002), and Lubienski and Stilwell (in press) suggests some ways in which teachers can make expectations explicit and can provide scaffolding to help low-SES students learn what is intended in reform-oriented mathematics classrooms. However, such adaptations can be fraught with dilemmas. As the teacher in this study, I often think about what I might have done to make the intended classroom norms explicit, as well as to ensure that low-SES students were, indeed, learning the intended mathematical ideas. However, I also grapple with questions about what kinds of explicitness and structures could be added without lowering mathematical expectations of students. For example, ensuring that students see intended mathematical relationships might require focusing problems and questions in such a way that students cannot miss the mathematical point. Yet such focusing could reduce the complexity of tasks. Such tensions seem particularly tricky in *mathematics* classrooms, where contextualized mathematical problem solving is viewed as both a means of learning generalizable, abstract mathematical ideas and an important end in itself.

In summary, this chapter illuminates ways in which lower and working-class students can struggle when learning mathematics in discussion-intensive, problem-centred classrooms. This chapter highlights the usefulness of Bernstein's theories regarding social class differences in access to the regulative and instructional discourses used in academic settings, particularly when invisible pedagogies are employed. This study also points to the importance of work by scholars, such as Morais and Neves (2001), who have begun to delineate ways to mix visible and invisible pedagogical elements in order to provide marginalized students with access to privileged codes and curricular content, while also preparing them to think critically and to question authority. Subject matter specialists should continue to build upon this work, examining applications of these ideas in classrooms, while taking the nature of their particular disciplines into account.

Acknowledgement

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9 Gendered learning identity in two modalities of pedagogic discourse

*Harry Daniels and Angela Creese
with Valerie Hey and Diana Leonard*

The theoretical base of the study on which this chapter is based is grounded in post-Vygotskian psychology and Bernstein's sociology of cultural transmission. It provides a description of the social organization and pedagogic practices of schools that may be related to the gendering of learner identity. This sets it apart from many post-Vygotskian studies which, as Wertsch (1985) has argued, fail to articulate a concern for the school as an organized institution. Vygotsky's approach lacks a theoretical framework for the description and analysis of the changing forms of cultural transmissions that Bernstein explicitly set out to provide: 'I wanted to develop a different approach which placed at the centre of the analysis the principles of transmission and their embodiment in structures of social relationships' (Bernstein 1977: 3).

A model of cultural transmission based on Bernstein

In order to compare school effects a model of description was generated, based on the general model of cultural transmission proposed by Bernstein (1981), designed to relate macro-institutional forms to micro-interactional levels and the underlying rules of communicative competence. Bernstein (1977) focused on two levels: structural and interactional. The structural level is analysed in terms of the social division of labour it creates by the strength of the boundary of its divisions with respect to the degree of specialization. Thus the key concept at the structural level is the concept of boundary, and structures are distinguished in terms of their category relations. The interactional level is analysed in terms of the form of social relation it creates in regulating transmission and acquisition between teachers and taught; it refers to the pedagogic context and the social relations of the classroom, or their equivalent.

Bernstein (1981) used the concept of classification¹ to determine the underlying principle of a social division of labour and the concept of framing² to determine the principle of its social relations, attempting to integrate structural and interactional levels of analysis in such a way that both levels might be seen as varying independently. Thus power is manifested in category

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relations and control is their communicative realization. Power may be spoken of in terms of classification that is manifested in category relations, which themselves generate recognition rules and control in terms of framing which is manifested in pedagogic communication governed by realization rules. The distribution of power and principles of control differently specialize structural features and their pedagogic communicative relays.

Daniels (1989) used the distinction made by Bernstein (1977) between instructional and regulative discourse. The former refers to the transmission of skills and their relation to each other, and the latter to principles of social order, relation and identity. Both these aspects of pedagogic discourse may be described in terms of classification and framing concepts, and a variety of pedagogic structures may be generated according to their organizing principle; that is, in terms of their underlying code. The form of the code (its modality) contains principles for distinguishing between contexts (recognition rules) *and* the creation and production of specialized communication within contexts (realization rules).

Bernstein provides a semiotic account of cultural transmission that is avowedly sociological in its conception.³ In turn, the psychological account that has developed in the wake of Vygotsky's writing offers a model of aspects of the social formation of mind which is underdeveloped in Bernstein's work.

A general model of description outlined in Figure 9.1 was developed under the following headings:

- 1 Theory of instruction;
- 2 Classroom practice;
- 3 External school relations.

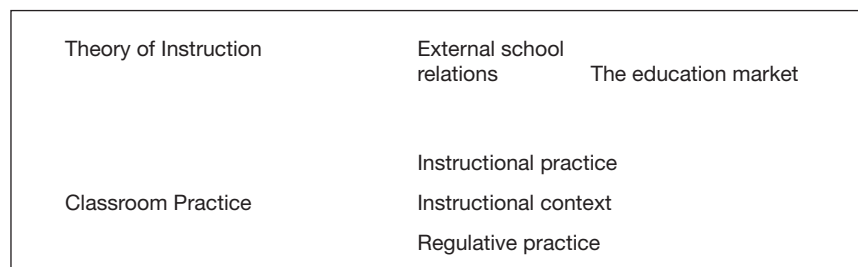


Figure 9.1 Model of description

As Bernstein (1985: 14) states:

The theory of instruction is a crucial recontextualized discourse as it regulates the orderings of pedagogic practice, constructs the model of the pedagogic subject (the acquirer), the model of the transmitter, the model of the pedagogic context *and* the model of communicative pedagogic competence.

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Allowance was made for the existence of a distinction between the official theory of instruction of a school and the theory of instruction of a particular classroom. Local variation is more likely to develop when there is a low degree of central control over pedagogic practice in a school. Variation between teachers' practice in schools with weaker values of framing regulating teacher practice is to be expected, but the classes studied and reported here were taught by teachers who did adhere to overall, official school practice. The material presented is a small section of a larger study⁴ of year six classes (10- to 11-year-olds) in twelve schools in two metropolitan areas of England. This project started from a concern with learning and gender and the currently much discussed topic of boys' 'underachievement' (Epstein *et al.* 1998). It focused on how children are constituted by their classroom experiences, particularly through performing learning and gender identities while working in formal learning and friendship groups. We recognized that masculinities and femininities are highly diverse, as are the relations between and within each gender (Connell 1995; Warren 1997) and that constructing gender identity is an ongoing process (Cameron 1996, 1997).

Methodology and research design

The overall research design drew on both quantitative and qualitative approaches. In a first phase we analysed the 1995–96 and 1996–97 Key Stage 2 standard achievement test (SAT) results for two local education authorities (LEAs) at pupil and school level, cross-tabulated by gender, ethnicity, free school meal eligibility, English as an additional language (EAL) and special educational needs (SEN). On this basis we selected twelve schools which were consistently either 'high' or 'low achieving' and where there seemed to be clear gender disparities, with either boys or girls consistently doing better, that is to say, one sex out-performing the other.

In a second, qualitative phase we visited each school for approximately ten full days to investigate teaching, learning and communicative practices in group and whole-class teaching and collected a variety of data comprising:

- 1 headteacher interviews – audio recorded;
- 2 observations, photographs and field documents;
- 3 teacher interviews – audio recorded;
- 4 pupil interviews – video recorded;
- 5 tasks (verbal and non verbal) – video recorded.

Table 9.1 summarizes the means that we employed. It is important to point out that the arguments made in this chapter emerged from analysis of all ten schools over the year-long data-collection period. The particular extracts presented here are interpretive accounts from an ethnographic approach that sought to triangulate its arguments through the interaction of a variety of interviews, tasks and observations.

126 *Harry Daniels and Angela Creese**Table 9.1* Research methods across ten participating schools

<i>Research method</i>	<i>Research participants</i>	<i>Research tool used</i>	<i>Analysis</i>
Observations	Two full weeks in nominated KS2 classroom	Participant observations and fieldnotes	Analytic vignettes shared across research team
Interviews	Two interviews with headteacher who also nominates KS2 teacher	Semi-structured and ethnographic interviews, audio-recorded	Thematic discourse analysis
	Two interviews with KS2 teacher	Two interviews with KS2 teacher	Thematic discourse analysis
	Friendship interviews (nominated by teacher)	Semi-structured, video-recorded	Discourse analysis and micro-ethnographic analysis
	One Boys' group One Girls' group		
Research task group	One 'average ability' literacy hour learning group (nominated by teacher)	Structured interviews	Discourse analysis and micro-ethnographic analysis

The material presented below comes from the two highly 'successful' schools in one LEA. On the basis of past performance we anticipated boys doing better at Millbank School and girls doing better at Cityscape. Both schools were located in districts with a high proportion of professional, middle-class parents. In other words, we have selected two schools where the majority of boys and girls were known to have achieved very high results, with the aim of showing what happens when the orientations brought to school by two sets of girls and boys from similar backgrounds meet classroom pedagogic cultures. Taking each school in turn, drawing on several sources of data, we can see how different pedagogies expose boys and girls to alternative discourses and greater diversity of identity positionings, and how they draw on interactional resources differently and in gender-specific ways. Classroom cultures impact on these gendered performances, allowing children to take up different identity positions.

Millbank School

INT: Do you think girls and boys learn the same or learn differently?

OSCAR: I reckon that girls learn differently, because what they do is, when they get a piece of work they. . . .⁵

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SHAUN: They seem to rush it.

OSCAR: Yes, they sort of put it into their book, like paraphrasing it, so they have their own reference to a piece of information they've been given, but with boys they get that information and they sort of mould it, they sort or reshape it, so its in different form, and they put different ideas into it. . . . You could say that girls have a tendency to learn like people would probably learn in the late Victorian times, and boys learn like most people would learn now.

[Interjections confirming this thesis.]

OSCAR: I think there's two ways of learning really, there's sort of copying and getting information into your head. . . .

BRENDAN: And getting it right.

OSCAR: And getting it right . . . Yeah, and um . . . staying within the perimeter, you could say. And then the other type is sort of learning, taking information, and then putting it down in a different form and then sort of piecing it together like a puzzle.

(Boys' friendship interview, Millbank)

This extract has many of the characteristics of boys' talk (Coates 1995, 1997; Edelsky 1981). The group operates on a one-at-a-time basis with Oscar dominating the length and number of moves throughout the interview. He presents his arguments within a discourse of expertise and the other boys defer to his knowledge. So, for example, his assertion that boys are original and creative goes hand in hand with his views on helping his peers. Here we have evidence of strong classification.

Ralph, one of their teachers, describes his role as follows:

The vocation of being a teacher, I mean you choose the vocation because of the fact you can bring your character and your interests into the classroom and teach the way you do because you like doing it that way and you think you are getting something out of the children. Whereas if it becomes prescriptive, as it is at the moment, then if that is going to go out, I might as well just put my suit and tie on and just, you know, stand at the board and leave the tape-recorder on or something.

(Teacher interview, Millbank)

These views characterize his pedagogy in part. He has a high degree of control in his teaching over sequence, pace and criteria of evaluation. Framing is very strong. There is little group work in the classroom. Children sit at three large tables with approximately nine at each table. These are not learning groups. Children sit with their friends unless this interferes with their learning, in which case they are moved. Children work primarily on their own or in pairs. The only opportunity for 'group' work which we observed was during sports, which is given great importance, teams competing to win a weekly trophy. In class, however, Ralph places himself at the centre of the children's learning.

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He relies on himself as an important pedagogic agent in developing children's interest. His pedagogic values and preferences have much in common with those of the headteacher. She places the school in a discourse of resistance and protest, and the theory of instruction witnessed throughout the school was characterized by a variety of different audiences, including her LEA, teachers, other heads in the authority, parents and ourselves as 'maverick' and 'different'. We have noted elsewhere (see Daniels *et al.* 1999) that less successful schools tend to operate more compliant discourses. External framing is strong. This head's resistance to official policy is authorized by her school's success. She can afford to protest current policy from the security of being a successful school. Our analysis of these and other data suggests that the head, the teacher and at least some of the boys in the class foreground a discourse of difference and uniqueness and self-confidence. This group of boys, we argue, use a discourse of expertise which not only mirrors their teacher's and head's way of talking but also supports other accounts of gendered performance as offered by the literature.

However, our data also offer examples that do not exemplify the typical patterning of gender identity positions but reflect children's communicative competence within this classroom setting. We found that all the children in this class had difficulty collaborating with one another in mixed learning gender groups. This is not surprising given that they were not offered practice in or encouragement for successful group practices. Hence, when they came to the research task that we set them, they were unable to read the contextualization cues (Gumperz 1972) for successful group work. The children in this learning group ignored, refused or did not notice the cues for moving the task forward (Gee 1999; Goffman 1959; Gumperz 1972). The research-task 'clues' which were provided for them to engage in the rituals and routines of collaborative group work were not taken up. Given their classroom culture, we would argue that this is not surprising. In fact, the children's communicative competencies are very much in keeping with what is expected in their particular classroom/speech community (Hymes 1974).

Reaching consensus in the group was not easy for these children; taking up central positions and 'playing by the rules' were. Their language is about commands and imperatives. They are frustrated with one another. They do not build on each another's ideas or mirror and echo each another's thoughts. There is little consolidation of ideas. The children's gendered identity positions are flexible, they are not set in stone. However, these positions are greatly affected by their local cultures and what it means to perform being a learner in that context. The pedagogy developed by Ralph allows children to take up these discourses more easily than others. The middle-class boys are already comfortable with such ways of talking. The question is whether other children in the class can develop their communicative competence in similar ways.

There are other winners in this class. High-achieving middle-class girls were able to extend their range of discourses safely. Their teacher encouraged

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them to compete with the boys, to be expert girls, to be different and maverick. The teacher's description of Bella, for example, is 'self-consciously different and eccentric'. Our observations of this class showed these middle-class girls as being able to compete confidently in the class, to occupy solo and expert floors, while also retaining collaborative practices. In our notes we recorded evidence of girls finding ways to be collaborative in this individualistic classroom.

There are also losers in this class. We show below how other groups were not included in the highly competitive pedagogy on offer. These included working-class girls and low-ability 'non-sporty' boys. Working-class girls were characterized by the teacher as 'nice' and 'salt of the earth types'. There was no pedagogic space in which their 'uniqueness' was allowed to shine. They worked in pairs closely with one another but rarely occupied central positions in the class. They continued to keep quiet, to help others and one another, and were characterized as working hard but doing dull work. It is likely that performing a 'unique' identity was not a desirable position for these working-class girls.

If working-class girls were subordinated by this teacher's pedagogy, another category of children were also severely marginalized. Three middle-class and one working-class boy were neither good at learning nor good at sports and had nowhere to go in this highly performative classroom. These boys were literally silenced by the discourse of expertise. Moreover, they did not collaborate with one another, unlike the girls. We now turn to how learning culture and the performance of masculinity and femininity is played out in another school.

Cityscape School

In Cityscape the same question was put to Millbank boys as to whether boys and girls learn the same or differently:

INT: Do you think boys and girls learn the same or learn differently?

BILL: No, they're a different species to us.

ARTHUR: Yeah their brains are completely different. I mean I read a book, I've seen this in a newspaper somewhere, and it showed you the bits inside the brain that tell you to do different things and a girl's brain looks completely different to the inside of a boy's.

CHRIS: That was probably in The Simpson's thing.

ALI: Yeah that was probably on The Simpson's.

ARTHUR: Oh yeah it was!

[Laughter.]

BILL: So you use The Simpsons as a guide to life!

INT: Ha, ha, ha, oh fabulous.

CHRIS: No that just shows, that just shows, girls are cleverer.

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ARTHUR: But you're a boy.

CHRIS: But I can insult myself.

(Boys' friendship interview, Cityscape)

As well as the different arguments used by the boys in the two schools, including at least one child persuaded by popular culture's representation of biological differences in the brain, versus differences in learning strategies, there are also differences in the way boys communicate with one another. Again, these are founded on the communicative practices built upon by the teacher, pupils, their parents and the headteacher.

The class teacher, Rebecca, foregrounded the importance of teaching listening skills in her pedagogy, engendering an aspect of framing that was much weaker than in Millbank:

I mean that has been one of my big concerns this term [listening skills] and actually I've felt that I've put that really kind of to the back boiler a bit, because of OFSTED but that has been a concern.

(Rebecca, teacher interview, Cityscape)

While observing, we were struck by her 'facilitative talk'. She gave very few orders, even when she was irritated with students. Her language constructed co-learners and facilitators of students' learning. Children stayed on task and were helpful to one another. The class was used to working in groups, some of which were mixed ability and mixed gender. Boys took an active part in them and often hurried along girls when they were not completing a task quickly enough. Both boys and girls were confident about giving their opinions and about disagreeing respectfully with one another. Children appeared to have more control over means and modes of communication than in Millbank. Framing was weaker between teacher and pupil concerning the criteria of evaluation. Children could define that which they felt was appropriate and also defend their views. Classification was also weaker in the instructional context, and this was witnessed in staff statements that were obtained concerning the theory of instruction. The school, through its participants, has created a culture of listening, debate and respect for difference.

Respect for diversity and difference was very much part of Cityscape's headteacher's discourse, respected in the dominant pedagogies of the school. She took a different, reflective approach to national educational policies rather than the confrontational stance of Millbank's head. She was concerned with developments in new policy but chose to look at how they might impact on her teachers and pupils. She debated rather than dismissed them. External framing appeared weaker than in Millbank, not exerting strong control over communication outside the pedagogic context entering pedagogic communication within that context.

As at Millbank, there were a group of girls at Cityscape who were very successful learners. From our fieldnotes we make the following observation:

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The three girls are very good friends. They are star girls, like the girls in Millbank, they are middle class, beautiful, articulate, intelligent and confident. They are destined for success – it is very difficult to imagine anything else in life for them.

(Observational fieldnotes, Cityscape)

However, they differed from the middle-class girls at Millbank in an important way. Whereas middle-class girls at Millbank are constructed by the boys as difficult, problematic and unhelpful, the girls at Cityscape are seen as the opposite. The boys at Cityscape describe the girls as very helpful. The concept of helpfulness is something that deeply concerns this group of girls. The following extract shows the girls debating their role as helper.

TABITHA: I find that sometimes, only sometimes because most of the time they [boys] will work it out for themselves, but occasionally if you're sitting next to a boy and you've been put next to him, they'll say 'Oh I don't know this question. Can you do it for me?'

WYN: Yeah, it's like. . . .

GRACE: That's not true.

TABITHA: Only sometimes.

WYN: Only sometimes.

GRACE: They will ask you to help them, I'll ask them to help me, but they don't ask you to write it down on paper.

TABITHA: Not write it down, but give them the answer.

WYN: Yeah, they do, they do. If they can't be bothered they will ask you.

TABITHA: I'm not saying that they are saying 'to do' it exactly, but they, if they are in . . . sometimes, I mean this happens very rarely, but they will sometimes say 'Can you just tell me the answer?' Say they're behind on their work or something.

GRACE: They don't do that.

(Girls' friendship interview, Cityscape)

What the girls are debating here is their identity as learners. Their positioning as helpers by the boys in the class is very much in keeping with their teacher's, who attempts to develop all the children in her class as helpers. We interpret this as taking up an equality position where she attempts to shift identity positions and challenge normative male gender behaviour. Indeed, we would argue that she is very successful at shifting boys' behaviour so that they have access to peers as a learning resource.

We can also see here one of the girls attempting to manage dissent. Tabitha hedges her comments in an attempt to make it easier for Grace to find a consensus position but Grace refuses to adopt this. What Tabitha and Wyn are perhaps reacting to is the default position of girls as helpers which is often uncritically assumed in learning contexts. On the other hand, it could be argued that Grace refuses to accept her role as helper as described by her

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friends, because she is operating within the equality discourse their teacher has established where all children should help one another. There appeared to be no major losers, as in Millbank. Apart from one boy, the children in this class seemed to benefit from its collaborative pedagogy.

In contrast to Ralph at Millbank School, however, Rebecca does little explicitly to expose girls to discourses of expertise. Whereas boys in Cityscape learn to shift their positions radically, girls rely on more 'traditional' feminine positionings. This serves them well within the primary school classroom with its emphasis on group work. Whether it will be sufficient in future, more competitive contexts is an open question.

Discussion

In this chapter we have presented data from demographically similar but pedagogically different primary schools. We used group work as a site for looking at how children produce, reproduce and modulate gender/learning positions. Participants in schools and classrooms are seen as creating an ever-emerging speech community which is able to reshape its cultural representational resources – language and other symbols. Language 'gets recruited "on site" to "pull off" social activities and social identities' within group work (Gee 1999).

The coding of each school in terms of specific classification (strength of category relation) and framing (social relation) values was based upon observation and interview data, together with agreed statements from which each school's theory of instruction could be reliably inferred. It cannot be overemphasized that assigning a value to a function was in the nature of a hypothesis. For the purposes of this chapter the general positions outlined in Figure 9.2 suffice to provide a general indication of school modalities.

The pedagogies in both schools gave children the opportunity to take up both traditional and non-traditional gender identity positions. We do not wish to argue that boys speak in one way and girls in another across all contexts. We believe that boys and girls perceive it befitting to draw on some linguistic resources over others (Johnson 1997) at certain times, and our argument, like Cameron's (1996, 1997), is that some discourses are more accessible and culturally appropriate to boys and girls and to different social class positions.

In the two classrooms, the performance of being a girl or a boy in each context is very different. Teacher pedagogy and their classroom cultures create radically different classrooms with contrasting communicative practices for the actioning of learning and friendship work which the children adopt, transform or challenge. Our interest is making the link between classroom cultures and the expansion of discourses available to boys and girls that, in turn, have the potential of improving their learning opportunities. Pedagogy as social practice creates new communities of learners with the possibility of expanding, limiting and maintaining the range of communicative

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Instructional practice Discursive rules		
	Millbank	Cityscape
Teacher-pupil relation	Stronger framing	Weaker general framing
Pupil organization	Isolated individual	Group or whole class
Discipline	self (internal)	Skills of cooperation and negotiation
Teacher-pupil relation	Positional/personal	Personal
Hierarchical rules Regulative practice		

Figure 9.2 Model of school modalities

practices and gender identification linked to these learners (Kenway *et al.* 1996, 1997; Walkerdine 1987, 1990). If we see masculinity and femininity as multiple and context dependent and, in part, constructed through pedagogies, we can look at how micro-contexts impact upon which positions boys and girls take up and give up. A focus on classroom talk through the use of cultural, ethnographic and discourse analysis can help us better understand how pedagogy as social practice legitimates certain discourses and not others.

Middle-class girls in Millbank moved easily into discourses of expertise and difference, while middle-class boys in this school were unable to shift their position and extend their identities to be more collaborative players within this speech community (Hymes 1968). A successful group of middle-class boys were comfortable with the speech community's dominant discourses, but 'others' were losers in the school. Being 'ordinary' and 'nice' were marginalized and subordinated positions in this school that classroom winners helped to produce through their own discourses. This was not countered by the teacher, who did not teach explicitly how to 'do' a discourse of expertise. Framing over these tacit rules was weak in a context of generally strong framing. Some children found it easier to shift to the preferred discourse than others.

At Cityscape the explicit teaching of collaborative skills created a respect for difference as diversity. Children were taught how to be tolerant towards one another and to build on group ideas. Children did not ignore the 'other'. They were very much aware of children not fitting into the school culture

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because this culture was made clear and explicit to them. Within it, they were able to live with multiple narratives and accounts of their worlds.

However, at Cityscape as at Millbank there was the danger that certain categories of children did not have opportunities to develop other discourses beyond the predominant facilitative, communicative competence of their classroom. Whereas boys were given opportunities to extend their range of identity positions at Cityscape and to participate fully in group work, there were concerns, particularly expressed by the headteacher, that girls' identity was not being expanded beyond collaborative practices which could potentially hinder their learning when friendship and learning groups overlapped too closely. She noted that girls often lacked the confidence to speak out away from their friends. How much learning and friendship groups do overlap around gender and their impact on learning needs further investigation but is beyond the scope of this chapter.

The acquisition of socially desirable attitudes and values may predominate as priorities in some forms of schooling. The dilemma which this study suggests relates to the consequences of Bernstein's notion of the relative embedding of instructional and regulative discourse. Daniels (1989) provided some evidence that weak values of classification and framing give rise to pedagogic practices in which social and moral values are privileged in transmission. This study suggests that strong values of classification and framing are likely to be associated with effective participation in specialized gendered discourses. Thus the form of embedding of instructional and the regulative discourses may be seen to condition the development of specific and typical competences that reflect institutional arrangements. Different modalities of educational transmission have different consequences. It follows from this position that questions of effectiveness must be predicated by questions concerning purposes or motives.

This study has attempted to connect the institutional structure with group and individual effects. The suggestion that different types of schooling give rise to different types of effect carries with it questions of structural fitness for purpose. The analytic tools of some forms of social and educational psychology are blunted by their inability to investigate socio-institutional effects. Similarly the gaze of sociologically inspired policy studies is averted from effects on individuals. The development of a socially extended post-Vygotskian model offers the possibility of understanding the consequences of specific policy developments at the level of individual effects. Differences in the structure of pedagogic practices constitute differences in contexts that are of semiotic significance. Bernstein both theorizes the semiotics of the transmission and provides a language with which differences in structure may be brought to the focus of empirical studies of individual acquisition. Bernstein (2000) asks both how a dominating distribution of power and principles of control generate, distribute, reproduce and legitimize principles of communication and also how such a distribution of principles of communication regulates relations within and between social groups. This study

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provides limited evidence that differences in the distribution of power and principles of control give rise to practices that offer differences in the possibilities for gendered learning identities. Development of Bernstein's thesis offers the potential for an appropriate form of socio-cultural theory to the post-Vygotskian enterprise.

Notes

- 1 When there is strong insulation between categories (i.e. subjects, teachers), each is sharply distinguished, explicitly bounded and has its own distinctive specialization, classification is said to be strong. When there is weak insulation, categories are less specialized and their distinctiveness is reduced, classification is said to be weak. School subjects or teachers may be more or less specialized and thereby differ in their classificatory principle.
- 2 Framing refers to the regulation of communication in social relations through which the social division of labour is enacted. Two features of the pedagogic relation are distinguished by Bernstein (1981): an interactional and a locutionary feature. Interaction refers to the selection, organization (sequencing), pacing and criteria of communication, whether oral, written, or visual, together with the position, posture and dress of communicants.
- 3 Harker and May (1993) position Bernstein's theory in a structuralist mode of their own making which Bernstein has decisively rejected in his response to their paper (Bernstein 2000).
- 4 Daniels 1999.
- 5 Indicates a pause.

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10 The framing of pedagogic encounters

Regulating the social order in classroom learning

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Sociologists of education, especially social reproduction theorists, according to Bernstein (1990), rarely turn their attention to the analysis of the intrinsic features constituting and distinguishing the specialized form of communication realized by the pedagogic discourse of education. Pedagogic discourse has often been understood as 'a medium for other voices: class, gender, race' (Bernstein 1990: 165):

The discourses of education are analyzed for their power to reproduce dominant/dominated relations external to the discourse but which penetrate the social relations, media of transmission, and evaluation of pedagogic discourse . . . what is absent from pedagogic discourse is its own voice.

If pedagogic discourse was seen as only a relay for patterns of discourse external to itself, arguably its form has no consequences for what is relayed. Did the nature of pedagogy actually matter? Are pedagogies 'somehow bland, neutral as air?' (ibid.: 168). As Bernstein pointed out, 'theories of culture reproduction are essentially theories of communication without a theory of communication'. His theory of the 'inner structure of the pedagogic *is* such a theory of pedagogic communication' (ibid.: 170–1). It is unique in formulating connections between the organization and structuring of knowledge, the means by which it is transmitted and the ways in which acquisition is experienced.

Central to this project is the concept of *framing* which carries with it many of the central arguments about the reproduction of social inequality.¹ Initially the concept of framing was used only to refer to the degrees of control which teachers or pupils had over the mode of transmission (Bernstein 1971: 89). In subsequent writings, Bernstein developed the concept of frame so as to focus on teacher–pupil relationships and their role in 'creating the pedagogic arena, game or specific practice' (Bernstein 2000: 180), involving 'rules which distinguish . . . the *particular* interactional practice and its *specific locational and communicative realizations*' (ibid.: 102). His last definition was that '(F)raming is concerned with how meanings are to be put together, the forms

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by which they are to be made public and the nature of social relationships that go with it' (ibid.: 12).

Framing regulates two systems of rules. Using a Parsonian distinction, Bernstein (2000) differentiated between expressive and instrumental orders. He distinguished between the rules governing the moral order of the classroom regulating interaction and the rules underlying the instructional order and curricular knowledge. This distinction developed into his concepts of *regulative discourse*, the forms which human relations take in pedagogical relations including expectations about conduct, character and manner, and the rules of the discursive order and *instructional discourse* referring to the selection, sequence, pacing and criteria of knowledge. The framing rules for each can vary independently of each other. Using them, Bernstein could analyse shifts in educational policy and examine complex social messages within pedagogic discourses and practice.

Bernstein's (2000) analysis of contemporary, visible, performance-based pedagogies in the UK exemplified how instructional and regulative discourses can be strengthened externally by the state and internally through tighter controls by the teacher over pupil learning. The distinctiveness of such pedagogical practice is associated with its 'selective class-based acquisition' controlled by those fractions of the middle class located within the field of economic production (entrepreneurial professions). Although not dependent upon such pedagogies for their privilege, this group has won opportunities for its own reproduction and advancement. Bernstein argued that:

social class may play a crucial role. Where the *external* framing is strong it often means that images, voices and practices the school reflects make it difficult for children of marginalized classes to recognize themselves in the school.

(Bernstein 2000: 14, emphasis added)

The strengthening of *internal* frames is also likely to have major consequences for social inequalities. In England, for example, the strengthening of instructional discourses (particularly the selection, sequencing and criterial rules) has been evident in the introduction of subject programmes of study and the normative assumptions built into the Qualifications and Curriculum Authority's lesson schemes and sequencing rules (what is to be learned in which order) that have been applied through national assessments and public examination syllabuses. Pressure is added to such sequencing and criterial rules through the use of performance bench-marking and publication of national league tables based upon success in terms of performance targets. Compulsory, external (OFSTED) inspections put pressure on schools to tighten their pacing rules, the quality of their practice judged, in part, in terms of the pacing of their lessons.

This analysis of shifts in educational policy is central to our project on the social conditions of learning where we employ Bernstein's concept of framing

to explore pupils' participation in their learning and to reflect on the social consequences of contemporary pedagogic practice. We use pupils' verbal articulation of their classroom experience to explore the ways in which different groups of male and female, higher and lower achieving pupils from different social and ethnic backgrounds currently experience tightly framed learning. Of special concern are the different degrees of control which learners have over pedagogic communication, and the relationship between the new instructional and regulative discourses.

Research design

Our project involved working closely with two secondary schools (and two of their primary feeder schools). Greenfield Comprehensive had grammar (selective) school traditions with strongly framed instructional and regulative discourse masked by discursive mythologies of individualization and independent learning. Its professional middle-class students meant successful results. Mandela, with a predominantly working-class and multiracial student body, had a traditionally weakly framed regulative discourse informed by egalitarian concerns. However, this was challenged by external controls that had become stronger. Both schools, from very different starting points and trajectories, had 'tight frames'.

Using Bernstein's framework, we elicited pupil voices as exemplars of pedagogic practice. Although Bernstein (1977: 7) did not describe the 'arabesques of classroom interaction', he recognized that pupil voices represented the realization of the structure of pedagogic communication. They could illuminate the organizing principles underpinning schooling (Bernstein 2000: 174). Their voices are shaped by the 'intrinsic stratification' features of schooling – the same class values that structure the transmission and acquisition of knowledge, mobilizing particular social identities, evoking some and ignoring other pupil voices and groups. The mechanisms by which schools attempt to create the notion of 'the pupil' (rather than admit to creating and maintaining socially differentiated groups) can mystify these interconnections. Our strategy was to hear the collective voices of groups of pupils using categories often relayed through pedagogy (see Reay and Arnot 2003).

With the help of form tutors and class teachers, we set up discussions with groups of 14- to 15-year-old male and female, higher and lower achieving pupils from different ethnic and class backgrounds. In each secondary school, all pupils in one tutor group² participated in two group discussions. Sixty-two children were involved in a total of twenty-four discussion groups. Five lower achieving pupils were observed in Maths and English classes and were interviewed individually.³ In Stage 2 of the project we asked the form tutors and maths and English teachers to build strategies of pupil consultation into their lessons and we evaluated these initiatives (see Reay and Arnot 2003; Arnot *et al.* 2003).

Our discussions with pupils explored Bernstein's (2000: 6–7) three 'democratic pedagogic rights' – *enhancement* (the right to achieve 'critical

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understanding and a sense of possibility', 'the confidence to act'), *inclusion* (the right to be included whether 'socially, intellectually, culturally or personally' as an individual and a member of a group) and *participation* ('the right to participate in the procedures involved in construction, maintenance and transformation of order').

Here we focus specifically on what Year 8 pupils revealed about their experiences of strong framing in relation to the theme of 'participation'. We asked pupils to comment on the degree to which they felt able to control the pace and content of their learning and the rules of the pedagogic encounter. For example:

- Are pupils consulted about how they learn? Should they be?
- Do teachers respect pupils' views about how they learn?
- Can pupils tell teachers if they are going too fast or too slow?
- Who controls what to learn?
- Do families support what is taught in schools?
- Are pupils ever consulted about what to learn? Should they be?

While the controls over the selection of knowledge are demonstrably important to student motivation, the data we elicited support the view that the framing of pacing rules is indeed the 'economy of the pedagogy' (Bernstein 1990: 76), the key point at which regulative discourse frames the instructional,⁴ with consequences for social inequality.

Fighting for attention: strong frames in Mandela

In Mandela, control over pedagogical practices appeared to be heavily shaped by the social relations of the classroom. Instructional discourse was deeply embedded in regulative discourse – the rules of the social order – with differential consequences for different social groups. Higher achieving girls, for example, seemed to be operating with weaker framing than other groups in the class, hoping to sustain individual control over their learning despite the strong framing of learning created by a centralized curriculum and a dominant, centralist performance ethic. At the same time, they made continual complaints about being held back by 'slower' students in the class. Their own high achievement collided with too low a level of demotivating. 'Other people' disrupted, got in the way of and undermined the possibilities of challenge, the 'right' level of pacing and more positive relationships to knowledge. Moreover:

It's the boys who slow everything down. If the teacher goes through it a hundred times then they'll get it and then they'll do it. But like they wait for the teacher to spell it out to them.

(Lisa)

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Middle and lower achieving girls felt it was impossible to get boys to change. Sharmaine suggested adapting better to the boys' disruptive behaviour while Fran suggested returning to ability grouping, as in primary school, though Emma thought these groups were '*just mean*' and unfair:

Emma: Like in primary school they put you in groups of cleverness.

Fran: The red group, blue group, orange group or whatever. And each group would be the cleverer one, the next cleverest and then the people who find it more difficult. And that would be so much better.

Some of these girls appeared to have some control over the pace at which they worked: '*sometimes we zoom and sometimes we just take our time*' (Emma). At times they could claim a positive, active relationship to knowledge that required opportunities for initiative and autonomy:

Emma: They should let you work it out for yourself instead of telling you the answer all the time. It's so boring.

In contrast, black and working-class Sharmaine and Sarah found it uncomfortable to ask teachers for help if they were stuck, found work too hard or the pace too fast, preferring to voice their concerns at home. As with others, getting help from teachers, even if they asked for it, was highly dependent on the behaviour of boys whose work-avoiding strategies were effective in controlling the pace of teaching and learning both in subjects they enjoyed and did not enjoy. Their manipulative behaviour employed dramatic strategies of disaffection, indifference and illness: Lisa describes how boys manipulated teachers' attention: 'When the teacher doesn't come to him, he just puts his head down and says he's ill.' When boys' demands succeeded, they asked for more grammar, 'verbs and stuff', which pupils had already covered in primary school, 'things we already know, it's boring' (Sharmaine).

This sense of boredom was shared by higher attaining boys in Mandela although, on the whole, they had little to say about the pacing of learning apart from 'it's fine'. They would not be drawn further, though all four mentioned difficulty with motivation, being 'just left lazy' (Jamahl) and bored. But none complained about being held back or wanted setting or streaming. At the same time, the majority of male working-class students thought that learning was something beyond, rather than within, their control. Teachers' control of pacing was vividly described: 'They write down their own little timetable about what they are going to do in the lesson. And they time it, likely they say "you've got three minutes to do this . . . it's not enough time" – teachers should wait for pupils.'

At the same time, some working-class boys were happy to report that they were able to have teachers adjust the pace of lessons to fit their needs. However, 'getting stuck' was endemic, particularly in English and maths,

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and being unable to get sufficient support from teachers, or getting it as regularly as the girls, brought learning to a halt. The disincentive that resulted from being given work at an inappropriate level or asking for help publicly could be compounded by teacher sarcasm, being shown up, for Jack 'making me look stupid and then I didn't want to learn'. Not trying before signalling 'being stuck' and repeated too hard or too easy work all presented 'problems'. But mostly boys put their energy into avoidance strategies simply because they 'just can't be bothered', though protesting that challenge was what they 'really' wanted.

While girls viewed boys as instrumental in maintaining pace and challenge at too low a level, boys perceived them as 'zooming' through the curriculum. Gendered seating arrangements were implicated:

Bobbie: If it's boy girl pairwork then you go quite fast because you want to get it over and done with.

Within the visible performance pedagogy, pupils talked of not being in complete control over their learning though some middle-class, higher achieving pupils appeared able to experience a certain degree of autonomy. Disruptive pupils may have dented others' aspirations to control events but it was time, pacing and speed in pedagogical practice which played the most crucial part in reinforcing social inequalities.

'Keeping up': strong frames in Greenfield School

The problem for Greenfield pupils appeared to be more about adjusting pace of learning to the expected learning speeds for different sets. Strong pupil classifications made pupils aware that they had relatively little control over knowledge selection, pacing and sequencing. However, pupil strategies for dealing with the institutionalized differential pace of learning were as diverse as in Mandela: often more a matter of 'keeping up' with the strongly framed pace of teaching rather than in trying to control it themselves; accepting individualized responsibility for learning; and respecting those teachers who listened and offered individual help. Pupils considered the price and effectiveness of letting teachers know they could not keep up or wanted to go faster. For the middle band of girls, agency was understood as finding the means to communicate with teachers. Control of the pace of learning was minimal for those pupils having most difficulty with it. Most of the lower achieving, working-class boys were repeatedly concerned with public embarrassment as slow learners and resisted rather than worked with the strong framing of their learning.

Most girls in the Greenfield focus group sought ways of communicating better or more subtly with teachers. But even the 'boffs', the higher achieving, upper-middle-class girls did not favour speaking out to control the pace of learning. As Alice said:

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If they're going too fast then you're then thinking Owwww! They're going to think I'm really dumb! . . . If they're going too slow you don't want to criticize them.

Adjust or get moved was a possible strategy for higher to middle achieving girls:

Louise: If they are generally going too fast, like too fast for your knowledge, I think you should tell teacher or your form tutor and maybe you could get moved down to a lower group.

These girls' experience of strong framing led them to attempt to reshape the pedagogic relationship with 'really strict' and 'nice' teachers rather than their own relationship to learning. Even lower ability girls saw the value in saying something and started seeing how it might be done – 'being polite' when asking teachers to 'hurry up a bit', 'go a bit faster'. It was harder to suggest that teachers slowed down since if you did not keep up you might miss out on your education (and the test). In contrast, the three Muslim girls were more committed to the idea of teacher control over their learning than any others; teachers' professional responsibilities involved finding the right way to teach:

Asma: Sometimes they just try and make you hurry up and it's like complicated to learn.

Qu: Can you tell the teacher if that's happening?

Sunara: Yeah. Well I am not really one of those persons who just blabs everything out because like it's embarrassing and all the class is just staring at you like that.

As in Mandela, working-class boys appeared to have the least control over the pace of learning, despite the high levels of reported disruption and 'mucking about'. Their anger about the pacing of learning was clearly in evidence. Teachers' failure to listen to them was interpreted as a sign of little respect. Low-achieving boys saw little opportunity for communication or consultation with teachers and, even if offered more opportunity to control the pace of their learning, were unlikely to take it. The culture of resistance was so ingrained that it could not be broken easily. As Adam pointed out, when teachers 'asked you to do something, these boys did the opposite', even if asked by teachers to say if they were going too fast for the pupils. Not only did teachers not listen and expect to be listened to, they gave confused messages: teachers said 'don't smoke', yet were seen smoking outside the school. Strongly framed pacing defined the nature of pedagogic communication and enhanced the relationship of pupil non-co-operation and opposition with teachers. Working-class boys lacked the resources to make teachers listen or to control their own learning.

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Higher achieving, upper-middle-class boys at Greenfield believed that while some teachers were helpful, others ignored requests for help and were prone to anger or annoyance. When asked, some would slow down or speed up, others would not. Some teachers respected their ideas about how they learned but did not 'necessarily do anything about it'. They could get 'very moody', especially with disruptions and pupils shouting, raising the level of aggression in the classroom. Asking teachers to slow down the pace of teaching in high ability sets was less fraught with danger but teachers were inconsistent in their response to pupil intervention – in command but, when challenged, responding emotionally.

In sum, higher attaining girls understood some teachers to be trying to listen, but they too were experiencing strong framing of their work by the government: the teachers 'would want to keep to their schedules'. Teachers were in control of pupil learning and were seen as not necessarily wanting to change that. The external and internal framing of pacing was experienced more directly through the strongly classified pupil grouping.

Valuing educational knowledge

Bernstein (1977: 99) argued that the framing of knowledge may be viewed from another perspective. Educational knowledge is 'uncommonsense knowledge' freed from the particular and the local forms of 'commonsense knowledge, every day community knowledge of the pupil, his family and his peer group'. Greenfield and Mandela Year 8 pupils appeared to accept that what they were being taught was in the hands of the school and, in particular, teachers. There was evidence of an instrumental desire for 'useful knowledge', defined in class and gender terms, fuelled by parents' expectations.

The three middle-class girls in Mandela valued school knowledge, especially in contrast with boys. For many girls, the inability of boys to engage independently with the curriculum, to keep up with the pacing of learning or to be in more control of their own pace of learning resulted from the low value they placed on knowledge and school-based learning.

A number of working-class boys at Mandela were already switched off from seeing themselves as learners. They distinguished between enjoyable activities which satisfied their preference for bodily active work, such as drama, short, discrete tasks, and an element of competition – and book-based learning that was unanimously described as 'boring'. However, these students were talking about learning in the social context of a focus group with pressure from their peer group to appear 'cool'. Boys who transgressively paraded their valuing of school-based knowledge could suffer censure.

In Mandela, only French seemed to have broken the mould for boys by 'always letting us play a game' (Malachi). Competition was important for boys but had to be disarticulated from serious study and converted into less threatening 'fun and games'. It is almost as if school-based learning was only acceptable in disguised forms. There are resonances here with Hey *et al.*'s

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(2000) analysis of learning constituted for boys as a competition they have to win, posing problems particularly for working-class, low-achieving boys, risking 'can't win, won't win and don't want to play'. Except for the most able boys, pupils' accounts reveal ambivalence towards school-based knowledge and learning.

At Greenfield, the strong classificatory principle underlying the National Curriculum, taught in sets within the core subjects, constrained both teachers and pupils. Pupil success was recognized as having important implications for the public image of the school and its ability to attract pupils. Social class, gender and ethnicity shaped complex responses to this strong framing of the selection of knowledge. Both higher attaining boys and girls considered that they had discretion in terms of whether they intended learning a topic, rather than in choosing the subject matter. While they generally agreed that teachers should keep control about what was worth learning, it ought to be related to pupils' interest levels. Three Muslim girls were even more teacher focused, reporting parental and sibling pressure to work and revise. Generally, school knowledge was valued instrumentally and assumptions made about university-level education. Backed by parental assertion, maths, English and IT were considered relevant to jobs in the future. Like the boys, girls also related school knowledge to 'later life', and school appeared to be preparing them inadequately for high technology worlds.

When asked who controlled what they learned, girls at Greenfield, such as Alice, replied: 'The government I guess'. As Jemima points out, 'cos you're the one doing the work and they're the ones who're like telling you what to do and you're like the one whose writing it down and everything.' Caroline suggested: 'it's generally like they just say what do you think about it? What's . . . but you know you can't really ask to learn about something.' These girls believed that they should be asked about what they should learn, implying that the standard of work was too low, repeating as it did the teaching of their rather successful primary school.

The tension between pupil agency and external controls over the selection of knowledge was recognized by middle-class, mid-achieving girls such as Kelly: 'Nobody made our lives . . . it's your own mind.' They described controlling what they learned by co-operating or not with the school agenda. The reality of strongly classified ability grouping, however, was juxtaposed with a belief in the principle of choice:

You're allowed to think what you want but I do agree, you don't say 'Oh I am allowed to do this today!' Like you're a queen and you have stuff done at your feet 'cos nobody does.

If teachers had nothing planned for the lesson, they might offer pupils choice over activities. Yet these moments of weaker framing were illusory since, as Claire commented: 'If we have to choose A, B or C, we don't have a choice obviously in the work, its just A, B and C.' However, it was not clear to these

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girls how it would work if pupils were given the opportunity to choose what to study. History, geography, even German and French were not necessarily needed in practice. This cynical view of school knowledge was also reflected in some parents' attitudes. On the whole, these girls did not report high family commitment, talking in different ways about a separation between the values of the home and of the school. School was a different place from home and parents were involved only sometimes. Claire's mum said: 'What the heck are you learning about that for, you don't need that.' Another's father said: 'You don't need history, just sit here and watch Discovery channels. My Dad doesn't like RE . . . he thinks it's stupid learning about RE.'

Carry summed up her view:

I think school's . . . the school and home's home. It's completely different. At home I don't think anybody even wants to talk about school. I mean parents don't want to talk about work.

Lower achieving boys at Greenfield recognized the importance of a strongly framed curriculum. Not only were the teachers in command of their education but, even when teachers asked them what they would like to do that day, far more was at stake than just choice of topic. Opportunities to choose what to learn were really false options. Discretion was given not about what to study but about how to complete the work that was set: 'Sometimes they say, "You can finish this off or you can start this and then finish that off in another lesson"' (Sean). Even if they were consulted, they would be inclined to say 'nothing'. These boys shared a view of the general instrumentality associated with school knowledge with upper-middle-class boys.

The lack of working-class boys' control over what they learned was reflected in comments about how teachers interpreted their homework:

Sean: He gives you this like little sheet and it has got 'What can you say about this bloke?' It's got like 'He's got a beard'. Sorry Sean detention. You have just put 'he has got a beard'.

Or their families' abilities:

Carl: And the next day . . . [the teachers] say 'Well then they [the parents] must have been stupid or something like that'.

The boundaries of commonsense and uncommonsense knowledge confirm class-based forms of communication. Craig comments:

Like your parents give you like different methods of learning and then, when you come into school, they say something different and you get confused and then you mix it like together and then you get it like wrong because you get confused.

Conclusion

This limited evidence hints at the significance of framing as the ‘inner logic or a pedagogy’ (Bernstein 1990: 63). We have focused on what pupils thought controlled the speed, level and nature of what they learned. Year 8 pupils in two contrasting English secondary schools suggest that strong framing of educational knowledge is experienced differentially and that working-class pupils, especially boys, experienced pacing as a form of overt control. It ensured their disengagement from learning. Schools’ expectations as to the rate of learning privileged those, predominantly middle-class, students who are able to work with rather than against them. As Bernstein (1977: 133) observed:

Middle class family socialization is a hidden subsidy in the sense that it provides both a physical and psychological environment which immensely facilitates in diverse ways school learning . . . Because of this hidden subsidy, there has been little incentive to change curriculum and pedagogy for the middle class child is geared to learn. . . . *In this way, even the pacing of educational knowledge is class based. It may well be that frame strength, as this refers to pacing, is a critical variable in the study of educability* [italics in original].

In Mandela, higher attaining, middle-class girls were able, in turn, to work with concepts of individual property, strong sequencing and pacing norms, and to suggest a desire for more control over their learning. They worked with notions of individual choice in terms of when to co-operate, when to slow down, speed up (or zoom) through their work. They could work independently but also make considerable demands on their teachers to deal with their needs for extension work. The only ones who professed to feel in control of the pacing, sequencing and valuing of knowledge were these girls, for whom the failure of teachers to recognize or meet their learning needs due to the demands and dependencies of lower achieving working-class pupils (especially boys) was also important. The threats to these girls’ academic control of their learning were lower attaining boys who used disaffection, endless demands for attention, disruption of the rules and requests to repeat work from earlier stages. Some girls requested setting, while black working-class girls suggested a change in their own attitudes to try and understand the boys.

Notwithstanding this, higher achieving middle-class boys spoke little about the pace, difficulty and ease of their work while working-class boys experienced strong framing where teachers controlled the pace, sequence and content of their learning and even their seating. Teachers were perceived as responsible for getting it right. In the context of an inner-city, multiracial school, working-class male pupils appeared to consider their learning as largely the teachers’ responsibility.

As we have seen, strong frames relay the notion of *difference* among pupils (Bernstein 2000: 75). Our data suggest that assumptions about learners underlying the strengthening of pacing in visible pedagogies (such as that found in UK schools) is more likely to be met by middle-class children who can 'exploit the possibilities of pedagogic practice' (Bernstein 1990: 74). Some of their working-class counterparts may show greater dependency on teachers and oral forms of discourse. In Greenfield, highly segmented setting by achievement in particular subjects sent strong messages to pupils about how their learning was to be controlled and how it reflected, at least in principle, their abilities. Pupils' control of their own learning was strongly circumscribed by the social dynamics of the classroom. Ability, gender and ethnicity thus worked in complex ways to shape the perception that they were *not in control* of their learning. While Muslim girls were prepared to delegate responsibility to their teachers, higher achieving, white upper-middle-class boys and girls found small, discretionary spheres in terms of co-operation, working with their own interests and being successful within their homogeneous attainment groups or 'sets'. Lower attaining pupils talked of strategies to gain more control of the pace and sequencing of learning: boys through disruption and non-co-operation, unless teachers were felt to respect and listen to them; girls through trying to talk politely to the teacher about pace.

Our data suggest the ways in which regulative discourse shapes and is shaped by instructional discourse and its social consequences. Even within tightly framed, strongly segmented pedagogic environments with hierarchized knowledge structures, higher achieving middle-class girls can experience weaker frames over the pacing and sequencing of knowledge, increasing the possibilities of their own agency. In contrast, pupils in lower achieving sets are deeply constrained by the structure of pedagogic communication which relies upon particular classroom *communicative competence* (Bernstein 1977). In Greenfield and in Mandela, despite their different structures, some pupils, especially those from disadvantaged or 'marginalized' classes, could not speak the expected legitimate text of the independent learner. They did not appear to possess the recognition or the realization rules that were expected to be a common form of pedagogic communication between teacher and taught (Bernstein 2000: 17). Hearing pupil voices we glimpse the linguistic shifts which Bernstein hypothesized – namely that strong framing would change the inner logic of communication in such a way as to privilege non-linear forms of analysis rather than linear narratives of everyday life. Bernstein argued that the modality of classroom communication associated with strong framing would emphasize a *syntactical pedagogic code* (which assumed relationships, processes and connections more typical of the middle-class child) over the *lexical pedagogic code* typical of marginal working-class groups (short sentences, relaying facts, skills) (Bernstein 1990: 79). The voices of pupils from different social classes talking about their learning is suggestive of these differences and the problems which result in relation to communicating their learning needs to teachers.

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Of central importance to this discussion was the value which pupils ascribed to the forms of school knowledge. Most pupils in Greenfield sought instrumental value in the relevance of the school curriculum to adult life and a changing world. There was distinct interest in more modern subjects, such as IT and a number of challenges to the relevance of the National Curriculum. As in Mandela, working-class boys challenged the value of school knowledge, its relevance for adult work and the barriers between school knowledge and everyday knowledge. The gap between school and home was painfully recorded, with some wishing to draw into the classroom the worlds that they knew and others recognizing that these were two different worlds. In contrast, middle-class girls and boys tended to recognize but be able to work with and negotiate the curriculum as given. Bernstein argued that strong framing and particularly strong pacing rules requires two sites of acquisition – the school and the home. The curriculum ‘cannot be acquired wholly by the time spent at school’ (Bernstein 1977: 4). Middle-class homes tend to provide an effective second site of acquisition with effective official pedagogic context and support, while domestic pedagogic work may not always be supportive of the modes of acquisition used by the school. Homework here is not supplementary to the pacing of acquisition; it is integral to strongly framed pedagogies, such as the market-oriented ones established in English secondary schools. In terms of knowledge, we have also seen how pupils experiencing strong frames will be constrained by the boundary-maintaining procedures of the classroom which tend to classify and keep things apart. Pupil voice by its very nature challenges (through its associations with everyday knowledge and familial discourses) the boundaries between school knowledge and commonsense knowledge.

The data from these two school settings, illuminated by more than thirty years of empirically backed Bernsteinian theoretical development, suggest that we need to examine for whom and to what extent a positive pedagogic identity is achievable in the current strongly framed visible pedagogies. Consulting pupils about their learning is unlikely to make a difference unless we clarify much more meticulously possible variations in code strength and relaxation in combinations such as those elaborated by Morais and Neves (2001) and their co-workers.

Acknowledgements

The data reported here are part of a larger ESRC funded project on Pupil Consultation. We are grateful for the funding and would also like to acknowledge the help of Beth Wang and Julia Flutter, the two schools and the editors of this volume.

150 *Madeleine Arnot and Diane Reay***Notes**

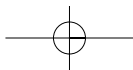
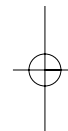
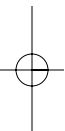
- 1 Bernstein (1990: 88) focused especially on the social class assumptions of framing.
- 2 The tutor group consisted of twenty-eight and thirty-four children in Mandela and Greenfield, respectively.
- 3 A similar design was followed in the two primary feeder schools, with approximately 120 children involved in the study overall.
- 4 Bernstein sees instructional discourses as normally embedded within regulative discourse, the latter being the dominant discourse within the framing of educational knowledge.

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Section 3

Aspects of teacher education



11 Towards a sociology of teacher education

Paula Ensor

Introduction

Teacher education has emerged as a primary research focus of those interested in the sociology of pedagogy only relatively recently. From the time of the early socialization studies of Lortie (1975) and Lacey (1977), for example, relatively little attention has been paid by sociologists to how we produce and reproduce pedagogy through the ways in which we induct novices, or to how teacher education articulates (if at all) with classroom teaching. Notable recent studies include Solomon and Tsatsaroni (2001), those which have appeared in Portuguese (Morais and Neves 2001), and those published in this volume (Neves, Morais and Afonso).

Bernstein himself said little about teacher education or the profession of teaching. In an appendix to Chapter 4 of Bernstein (1990), a chapter devoted to a discussion of the *trivium* and *quadrivium*, he suggested that 'it is possible to see the organization of knowledge in the training of teachers as a structural homology of the organization of knowledge in the medieval university' (ibid.: 161). The organization of knowledge in teacher education, he argued, involved a separation between two different discourses: 'a general discourse concerned with a body of knowledge called "education" and specific discourses called professional subjects' (ibid.: 161). These, Bernstein suggested, were isomorphic with the *trivium* (introjective, and concerned with the 'inner') and the *quadrivium* (projective in orientation, and concerned with the 'outer'). In his view, teacher education had over a number of years witnessed the erosion of specialized education and professional discourses in favour of a largely technical discourse associated increasingly with training in schools.

While Bernstein did not devote much attention to teacher education, his theoretical corpus provides the means to establish what a sociology of teacher education might address, be able to describe and the language it might use to do this. Mapping out such a sociology is a significant and complex undertaking, addressing, as it would need to, three aspects: 'relations between', 'relations within' and 'relations to'. 'Relations between' points to the relationship between teacher education and other social activities and its modes of

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external regulation, especially by the state apparatus. 'Relations within' refers to the nature of pedagogic discourse and its internal structuring, while 'relations to' refers to how pedagogic discourse is distributed to different groups of acquirers (student teachers). These three aspects reflect the three levels of the pedagogic device – its distributive, recontextualizing and evaluative rules.

In the discussion which follows I am largely interested in 'relations within' and 'relations to', and with how teacher education pedagogic discourse is structured, transmitted and acquired. This chapter is intended to serve as an initial contribution towards a discussion on what might constitute a sociology of teacher education. This it does by generating possible modalities of teacher education discourse and considering the ways in which these might shape differential access to recognition and realization rules. It exemplifies one such modality through an empirical study of a pre-service, secondary mathematics teacher education method course. Finally, it provides an initial map of student positioning in relation to teacher education pedagogic discourse. Focusing upon these issues rather than, say, state regulation of teacher education discourse, has occurred due to residual issues emerging from a previous study (Ensor 1999)¹ which will be discussed below. This chapter does not spring from an empirical project developed within a classical Bernsteinian frame but, rather, attempts to extend previous work in order to engage with the requirements of a sociology of teacher education.

Actual and virtual discourses – teacher education pedagogic discourse and the production of 'best classroom practice'

Bernstein defines pedagogic discourse as the embedding of one discourse, the instructional, within another, the regulative. Following on from this, but in a different sense, teacher education pedagogic discourse entails a double embedding. It entails, in common with any pedagogic discourse, the situating of instructional within regulative discourses but also the embedding of a discourse intended to be elaborated within schools (a projected, virtual discourse), within a discourse actually elaborated within a teacher education setting. In this sense, teacher education pedagogic discourse becomes a relay for something other than itself. Of interest is the nature of both the carrier and the message that is carried. Both may be thought of as teaching repertoires, where a teaching repertoire refers to the set of practices from which teacher educators (and teachers) draw in the elaboration of their pedagogic practice in lecture halls and classrooms. Repertoires are constituted through a selection from reservoirs of potential resources (Bernstein 1996).²

Any form of teacher education, whether in-service or pre-service, is concerned to a greater or lesser extent with the transmission of a privileged teaching repertoire for implementation in school classrooms. In other words, it constructs an image of what ideal classroom practice should look like, and how this should be put into practice. Any specific modality of teacher

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education constitutes a privileged repertoire for classrooms by making a particular selection of curriculum content, of pedagogic resources for the production of instructional tasks and arranging these into lessons. Such a privileged repertoire also includes features of classroom arrangement, the regulation of teacher–pupil communication and the deployment of appropriate forms of assessment. Thus a privileged repertoire constitutes (and is constituted by) a notion of ‘best practice’ which depends on the particular teacher education programme under consideration. This repertoire is constituted from past practices in order to be practised in the future in schools. That is, ‘best practice’, derived from the past, is pedagogized in the present, for application in the future. For it to be pedagogized in the present, it needs to be embedded within the privileged teaching repertoires constituted by teacher educators *qua* teacher educators.

There are two layers to the story, then. One is the privileged repertoire of the teacher educators themselves, the sets of principles upon which they put together their own pedagogic discourse. The second is the privileged repertoire to be practised by teachers in schools, which is nested within the former. Dominant ideologies shape the selection of both. A sociology of teacher education is interested in how ‘best practice’ is constituted and transmitted and whether, and to what extent, student teachers are apprenticed into privileged forms of practice; that is, provided with access to its recognition and realization rules.

In the discussion which follows I attempt to outline a configuration of such modalities for school teaching and for teacher education, illustrating how both vary according to classification and framing values. Data taken from a previous study are used to illustrate key contemporary modalities of teacher education discourse, in the South African setting in particular.

A modality of teacher education discourse

A particular modality of teacher education discourse may be illustrated by using data from a two-year longitudinal study (Ensor 1999) which focused on the structuring of a pre-service secondary mathematics method course, how it was transmitted and acquired, and how beginning teachers recontextualized from the course in their first year of teaching. The study was therefore interested in three analytic moments: transmission by teacher educators, acquisition by student teachers, and transmission by beginning teachers in secondary school mathematics classrooms.

Framing relations

The following extract is taken from the beginning of a session on the mathematics method course devoted to the teaching of geometry. The lecturer introduced the session by saying that she wanted to focus on a particular part

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of the school curriculum, geometry, from the perspective of developing learners' skills of visualization. She commented:

Extract 1

OK, so we are going to talk about visualization and to start looking at that I just want to say that it seemed to us that within mathematics there are two kinds of polar points, that of real abstraction and that of intuition and they can kind of be seen as edges of the continuum . . . at the level of abstraction we often have the crystallization of logical relations, very systematic, very orderly. Intuition focuses more on the immediate grasp and the concrete meaning of relations . . . [pointing at transparency] this is often where maths starts, OK, at the level of intuition . . . if you look at quotes by mathematicians and there are quite a lot of quotes by mathematicians in this book [referring to reader on geometry teaching], when they talk of how new mathematics starts developing in their minds it is very often at this level [intuition] so the material gets created here but by the time it appears in the mathematics journal or mathematics textbook it is very much formalized . . . OK at the level of abstraction and formal set out work.

(Extract from transcript, Session 8)

Abstraction and intuition were related, she argued. Without the latter the former could not occur – 'it seems like the beginning of it all' – and yet the emphasis in school 'is placed very much at the end'. 'So while mathematicians appear to begin with intuition and end up with formalized maths, at school we have largely, not completely, suppressed the intuitive. . . . The creativity of mathematical activities has been banished and what's left on the whole are algorithms and rote memorization.'

In this activity, the teacher educator began to set out her privileged repertoire for school classrooms by differentiating between two forms of practice: one which starts deductively from definitions and teaches children to operate with algorithms and rules (strong classification of mathematical discourse³ and strong framing of hierarchical and sequencing rules)⁴, and another which uses children's intuitive understanding of space and shape, and works inductively with these resources in order to develop geometric understanding (strong classification of mathematical discourse and weak framing of hierarchical and sequencing rules). The latter pedagogic approach is explicitly privileged over the former, and in this way the teacher educator made her criteria of evaluation explicit to the students (strong framing of evaluation rules).

Later in the same session, the lecturer asked students to make three geometric shapes using a piece of equipment comprising pegs on a board, termed a geoboard. The students succeeded in producing two of the shapes, but not a third. Once it became clear that they did not know how to proceed, she did not tell them how to do so.

Extract 2

Student: Why can't we make a trapezium?

Jenny: A trapezium, you can make a trapezium.

Student: Show us.

Jenny: No I won't show you, I'm just telling you you can by a different combination of geostrips.

Rather than tell the students how to solve the problem before them, the teacher educator gave them another task, using other manipulatives (thin strips of plastic called geostrips), completion of which would enable them to finish the original construction task. The pedagogic style was thus inductive, working from a range of empirical instances (weak framing over sequencing and hierarchical rules) towards the generation of a set of mathematical principles relating to quadrilaterals and their properties.

The activities described above highlight the relationship between the teacher educators' own privileged repertoire, and that projected for use in classrooms. The tasks presented were not intended to teach geometry to student teachers, although it seems to have achieved this for most students. Rather, the tasks were intended to convey to student teachers a particular, privileged way of teaching mathematics to school students, namely inductively, from instances to the principles that generate them.

This pedagogic pathway, from instances to the principles that generate them, is associated with strong classification and weak framing and forms extant 'best practice' in much school mathematics education, rhetorically at least. Pedagogy moves across instances in order to specialize concepts and the language within which they are expressed, and this approach was modelled by the teacher educator for her students. She provided them with a series of tasks which constituted instances of properties of quadrilaterals and, from there, showed them how these could be formalized using a mathematics register. She not only presented the tasks, but also showed the students how these tasks could stand as 'portals' into abstract mathematics.

This image of good classroom practice was discussed and exemplified over a number of sessions of the method course. 'Best practice' was discussed explicitly, in direct presentations such as in Extract 1, or exemplified through tasks such as that discussed in Extract 2. Twenty-two such tasks were presented over 100 hours of the course. All pointed to a mode of mathematics classroom teaching that prioritized weak framing of hierarchical, sequencing and pacing rules, but strong framing over evaluative and selection rules. What, then, can we say about the teacher educator's own pedagogic discourse (in contrast to that projected on to classrooms)?

The two episodes described above were used along with others to establish the contours of best classroom practice. Tasks were presented and the teacher educators demonstrated how these could be used to generate conceptual understanding of mathematics. These episodes, as well as others presented on the course, indicated strong rules of selection of material for the course.

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While there was weak framing of communication in sessions, and students were encouraged to share personal narratives that could be used as pedagogic resources, they exercised very little control over the selection of material. This strong framing over selection made the course distinctive, and was associated with strong teacher educator identities.

Although framing over selection was strong, that over sequencing was relatively weak. The section on geometry, discussed in part above, had a clear intended sequence but this could be varied according to the needs of the students. Likewise, while there was an intended ordering of the topics presented on the course over the year, this was not a necessary ordering in the sense that one section of the course built logically upon those coming before it. In this respect the course took on a segmental character. Framing of pacing was also weak. The teacher educator sought, in a mirror-image approach to teaching classroom mathematics, to provide students with a range of exemplars from which generalized concepts about teaching could be extracted.

Classification, specialization and framing of location

While the teacher educators attempted to align framing relations in teacher education discourse with that privileged for mathematics classrooms, it was not possible to align strength of classification of pedagogic discourse. Mathematics is strongly classified and highly context independent,⁵ incorporating abstract systems within a specialized register. Mathematics is, in Bernstein's terms, a singular with a very strong grammar. In contrast, mathematics teacher education is an aspect of a region, within which horizontal, singular-type structures of great volatility tend to emerge, exhibiting a much weaker grammar.⁶ Mathematics teacher education does not commonly take the form of a specialized discourse into which students are inducted. As Lortie (1975) has commented, teacher education discourse in general lacks a 'technical vocabulary'. Thus while mathematics exhibits very strong discursive classification, the pedagogic discourse designed to teach student teachers how to teach mathematics to school students does not, either in terms of content or mode of expression.⁷ The 'carried' is more specialized than the 'carrier', in this case. The teacher educator described above was able to talk about preferred ways of teaching by using a relatively weakly classified *professional argot*,⁸ referring to, for example, visualization and intuition as a gateway into formal, conceptual mathematics and the privileging of 'relational' understanding over 'instrumental' understanding.

Teacher education discourse is not only less specialized than mathematics, it is also more context dependent. The rules of selection, sequencing and evaluation which constitute 'best practice' may be expressed using a professional argot, as illustrated above, but only partially. There is always some aspect of teacher education discourse that is tacit, unable to be grasped in language and which can only be presented via demonstration and modelling.

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Degrees of context independence and specialization of discourse have implications for pedagogic site and the location of pedagogic agents. Discourses such as school mathematics, which are highly specialized and largely context independent, can be made available to learners in face-to-face or distance mode. The selection of site is relatively arbitrary (the insistence that children gather each day in school classrooms for the purposes of instruction is a regulative rather than an instructional requirement). Discourses such as teacher education, which require an element of modelling or demonstration in order to make available rules of selection, evaluation and so forth, are more dependent on site for successful pedagogy. Strength of *framing over location* therefore becomes a significant factor in discussing modalities of teacher education.

The dilemma of the teacher educator in the study described above was how, in presenting exemplary tasks to students, she could make available to them the rules of selection and evaluation she used in producing these tasks. Only in this way could she provide students with access to the potential to generate similar tasks in future. Expressing these criteria linguistically is problematic because much of this knowledge remains tacit and, insofar as it can be expressed in language, the professional argot available for this purpose is not highly specialized. Its relative context dependence renders it potentially ambiguous in terms of what it signifies. Successful induction of students into her privileged repertoire required weak framing over location – allowing her to move between university and school classroom sites in order to model best practice for students and to allow them to put their own practices up for evaluation.

In the case of the teacher education course described above, however, framing over location was strong. Because of the way in which the teacher education programme was structured, teaching of student teachers could only take place within the university context, and not in schools. Students were therefore given restricted access to tacit rules of evaluation; they did not see what teaching ‘relational’ and ‘instrumental’ mathematics looked like in classrooms, nor were they able to have their own practices evaluated.

The foregoing has described a modality of teacher education discourse, weakly classified in comparison to mathematics (and indeed, weakly classified in comparison to most secondary school subjects), with strong framing over selection, evaluation and location, but weak framing over hierarchical, sequencing and pacing rules. In the following sections of this chapter I want to discuss other possible modalities for teacher education discourse, which vary according to the degree of classification and framing relations (see also Ensor 2004, in press). Then I want to link potential modalities with apprenticeship, which, in Bernstein’s terms, means gaining access to recognition and realization rules.

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Classification, framing and the apprenticing of novices

Bernstein defines recognition and realization rules in the following terms:

Recognition rules create the means of distinguishing between and so *recognizing* the speciality that constitutes a context, and realization rules regulate the creation and production of specialized relationships internal to that context. [emphasis in original]

(Bernstein 1990:15, emphasis in original)

For the present discussion, we are interested in the conditions that enable apprenticeship to occur in two contexts – the school classroom (where learners learn school subjects), and the teacher education course (where students learn to become teachers). We can surmise that most teacher education courses wish to induct student teachers into sets of practices that will facilitate the apprenticeship of school students into the school curriculum. To what extent does this successful induction depend on the successful apprenticeship of student teachers into teacher education discourse? I want to tease out the implications of this, continuing to take as examples school mathematics, and mathematics teacher education.

Since school mathematics is highly classified, both in relation to content and mode of expression, very many children experience difficulty with it. As mentioned above, two common strategies are adopted to induct novices into abstract mathematics. One is to provide a set of definitions, which are then exemplified either in relation to everyday life or some other setting. Alternatively, pedagogic action can provide a range of instances from which mathematics is inductively derived. These two strategies may be used in relation to the study of science, history, languages and so forth. In the case of mathematics and science (which have strong grammars), one can speak of mastering generative principles (Dowling 1998). In relation to literature or history (which have weaker grammars), we are more interested in the mastery of canonical texts and associated modes of interrogation. Learners have access to recognition and realization rules when they demonstrate that they can differentiate an appropriate response, and can produce an appropriate utterance or performance. Providing access involves the deployment of appropriate pedagogic strategies in order to give acquirers access to recognition and realization rules – apprenticing strategies that generalize and specialize, pulling a discourse away from the specificities of time and place, achieved via differences in strength of framing relations.

In the context of teacher education, recognition rules refer to the ability of a student teacher to be able to describe and evaluate teaching practice, and appropriately privilege particular forms of teaching practice over others. Recognition also involves access to rules of selection – what goes into the repertoire and what stays out. Access to realization rules enables student teachers to put ‘best practice’ into practice in school classrooms.

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Different modalities of teacher education discourse may be generated on the basis of varying strength of classification and framing, in every case associated with different access to recognition and realization rules. In South Africa, for example, teacher education in Afrikaans-speaking universities and teachers' colleges was in the past relatively strongly classified and framed, and projected a view of best practice that embodied the same relations. Due to the close alignment between teacher education and school teaching, gaining access to recognition and realization rules did not surface as an educational problem in the past. Since the mid-1990s, educational policy has attempted to shift practices in both teacher education and classroom teaching to allow for a weakening of framing relations (classification has probably weakened along with this). Furthermore, teacher education has been regarded by policy makers as a central pivot for changing classroom practice away from the authoritarian rote learning practices of the past. Because teacher education is perceived to hold this transformatory potential, access to recognition and realization rules now sits firmly on our educational agenda, even though the issue is seldom expressed in these terms.

The link between teacher education modalities and access to recognition and realization rules can be usefully illustrated by outlining three different, contemporary modalities of teacher education discourse and relating access to recognition and realization rules to these. The first modality is the one described above, which exhibits relatively strong classification of content and mode of expression (although weak in relation to mathematics), and strong framing over selection, evaluation and location of instruction. This means the teacher education discourse is relatively coherent, albeit segmentally organized, and a privileged repertoire is presented which students are to acquire. This is consistent with a performance mode of pedagogy. Due to strong framing over location of instruction, images of classroom teaching are 'filled out' to a limited degree within the context of the university setting, and the rules of selection and evaluation are made available only partially. Students potentially gain some access to recognition rules, but limited access to realization rules. They were provided with a professional argot to discuss a particular approach to mathematics teaching and learning, to describe such practices as 'visualization', 'promoting intuition', 'promoting relational over instrumental understanding' and 'non-algorithmic teaching'. This argot was illustrated with respect to certain forms of practice in the university site. Students were thus provided, potentially, with access to recognition rules, the means to recognize 'best practice'. On the other hand, there were few opportunities for students to produce their own tasks and subject these to evaluation. Consequently they were provided with limited access to realization rules, the means to put 'best practice' into practice.

A different modality may be generated with the same classificatory values, with either strong or weak framing over location but weak framing over selection and evaluation. The effect of these weak framing values is to loosen the links between different aspects of a teacher education course so that it is

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presented as an array of resources, a reservoir for potential recruitment. Tasks, such as those described above, might be presented as exemplars of good practice but not positioned explicitly as 'portals' into abstract mathematics. Crucially, weak framing of selection and evaluation means that students are able to recruit selectively from the array in terms of their own criteria, which are individual and contingent. This is consistent with a competence mode of pedagogy. Much in-service work for teachers in South Africa takes place within this modality. Access to recognition and realization rules here means little more than reproducing in classrooms the exemplary tasks made available on the course. Not surprisingly, this modality has had little impact on extant classroom practice.

A third modality can be generated with strong classification of teacher education discourse, strong framing over selection and evaluation but weak framing of location. This would in many ways be similar to the first modality but with greater flexibility with respect to pedagogic site. Teacher educators would have the opportunity to model teaching within school classrooms and thereby assist student teachers to gain access to principles for generating the privileged repertoire. This modality is most likely to provide access to recognition and realization rules, the ability to differentiate practice, and put the privileged repertoire into practice.

Variation in the specialization of teacher education discourse and in framing relations with respect to evaluation, location, selection and sequencing, as described above, produces different modalities of teacher education discourse. Some modalities are associated with weak recognition and realization rules and present 'best practice' as a series of instances from which student teachers may select according to their own criteria. Others have strong recognition and realization rules, and present 'best practice' as a discourse to be acquired. When framing over selection, sequencing and evaluation rules is strong, access to realization rules entails in large measure the acquisition of the generative rules of the privileged repertoire. When framing over selection, sequencing and evaluation is weak, realization is likely to be partial and fragmented, relating to aspects of the privileged repertoire that are selectively recruited.

In the remaining section of this chapter I want to develop a map to describe how students might position themselves in relation to any modality of teacher education discourse.

'Relations to' – positioning of students in relation to a privileged repertoire

The foregoing discussion has focused on the structuring of teacher education discourse, and the extent to which this potentially provides access to recognition and realization rules. A further step is to account for the potential responses of students to the pedagogic discourse that is offered to them. A series of positions are generated by significantly adapting a scheme developed

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by Bernstein (1977). Three aspects of student positioning are of interest here. The first is the orientation of the student to the teacher education discourse. This can vary from strong identification to a negative positioning, resulting in possible challenge. The second aspect is the extent to which a student has access to recognition rules and the third is the extent to which a student has access to realization rules. In discussing student orientations to the privileged repertoire of teacher educators I present extracts from data collected and analysed in the study described above (Ensor 1999). The schema described below was not used to undertake this analysis but is broadly consistent with the analytical tools used.

The first category of orientation towards the privileged text is that of *commitment*, in terms of which a student may identify strongly with the teacher educator/s and their privileged repertoire. The following extract from a student journal, produced as a requirement on the mathematics method course described previously, is an example of such an orientation.

Extract 3

This has been the most worthwhile, stimulating and challenging course of my year so far. I have looked forward to each Tuesday and seen it as the highlight of the week. It is the course in which my thinking has been most seriously challenged and I have been confronted with issues related to what to teach, how to teach it and how pupils learn.

(Mary's journal)

Mary strongly endorsed the privileged repertoire of the teacher educator. In contrast to this strong affiliation, another student, Geoffrey, stood more detached, distancing himself and acting selectively upon the repertoire offered to him on the teacher education course. As a 'selective recruiter' Geoffrey constituted the privileged repertoire as a reservoir for potential recruitment rather than as a repertoire to be acquired. The following extract, taken from his journal comment on the geometry session described above, is an example of this positioning.

Extract 4

'Tell and Drill' [deductive approaches to teaching associated with strong classification and framing, an approach which the method course had explicitly eschewed] is a sure way of getting results – this exploration method [inductive approaches associated with weak framing] is much more hit-and-miss. Teaching is a conservative profession by nature and prefers a method that produces sound (if small) profits. And there's a lot to be said for it. . . . Maybe the best thing would be to teach mostly by the old methods and either occasionally teach – or rather let them learn – like this or reserve it for the 'brighter' students, for whom this approach

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is most likely to succeed, and for whom the biggest benefits are likely to be evident.

(Geoffrey's journal)

Geoffrey grasps the distinction between 'best' and 'poor' practice discussed by the teacher educator in the geometry session (and elsewhere on the course) but declares that this is not universally appropriate. The 'old' methods, in his view, produce results, so the privileged repertoire should be used selectively, either occasionally with all students, or more regularly with 'brighter' students. This orientation of selective recruitment may be described as a position of *detachment*.

A further category of student response is to defer commitments or involvement to the future and 'watch the state of play' (Bernstein 1977: 45) – a response of *deferment*. Such an orientation was exemplified by a number of students in my study who used their journals to describe events on the course without evaluating them either positively or negatively. For them, judgement about the efficacy of the course lay in its applicability to classroom teaching, to be resolved in the future when they became teachers.

Estrangement refers to a category of response where students are unable to make an appropriate orientation to the teacher educators' message as they do not understand what is expected of them. The following is an extract from the journal produced by a student, Thabo, commenting on one of the sessions on the mathematics method course, which he did not think he had mastered.

Extract 5

The only problem I had was that at times I felt like my role in a given group was just to 'warm' the desk on which I was seated. Maybe this could have come as a result of the pace with which issues are thrashed out and I felt like being left behind. At times I felt that the university's policy of affirmative action for students from underprivileged backgrounds was not being done justice to (I however would not like to be a product of affirmative action).

(Thabo's journal)

Alienation refers to an oppositional position, in which the student potentially challenges the message of the teacher educators. The following extracts are written by a student, Edward, who disliked writing a reflective journal (Extract 6) and disliked those sessions with a strong affective or therapeutic component (Extract 7).

Extract 6

Aside: I hate self-assessment.

Extract 7

????? + *Some mathematics* [The title of Edward's entry after one of the sessions]

What a total waste of time. Relevance? Meaning? Awareness? Why? Point?

Thank goodness for prisoners [the name of a mathematical problem]. At least 20 min was not wasted.

(Edward's journal)

The categories described above refer to students' orientation to the privileged text offered to them on the teacher education course. A particular orientation sometimes meant that a student had gained access to recognition and realization rules but not necessarily so. Mary was committed to the privileged text and gained access to recognition and, partially, to realization rules.⁹ Another committed student, Sandra, did not gain such access, commenting in her journal as follows: 'I didn't get the message all the time, but I know I am not leaving this course without taking some of the seeds sown to plant in me for growth and hopefully fruitful outcomes' (Sandra's journal). As Extracts 6 and 7 show, it was possible for one student, Edward, to be able to recognize the privileged text but to exhibit hostility to it. Estrangement, however, was commonly accompanied by difficulties in gaining access to recognition and realization rules, as Thabo's comments in Extract 5 above indicate.

The foregoing discussion is summarized in Figure 11.1 on page 166.

Conclusion

Teacher education is a complex domain, encompassing the training of teachers for primary and secondary schools, for different subject areas, in 'theory' and 'method' courses, in pre-service and in-service provision, in modes which vary in the extent to which they involve schools and higher education institutions in instruction. Developing a sociology of education is therefore a complex undertaking, one which needs to concern itself with activities within, but also with regulation from without.

The foregoing discussion has made two moves towards developing a sociology of teacher education. It has used classification and framing values to generate different modalities of teacher education discourse and linked these to different potential for students to gain access to recognition and realization rules. It has also suggested how Bernstein's typology may be used to identify differential positioning of student teachers in relation to the privileged repertoire. Giving greater delicacy to researching recognition and realization rules is an important issue for further research. Beyond this, we need to construct a model that shows the potential variation in teacher education discourse as a whole and its different aspects.

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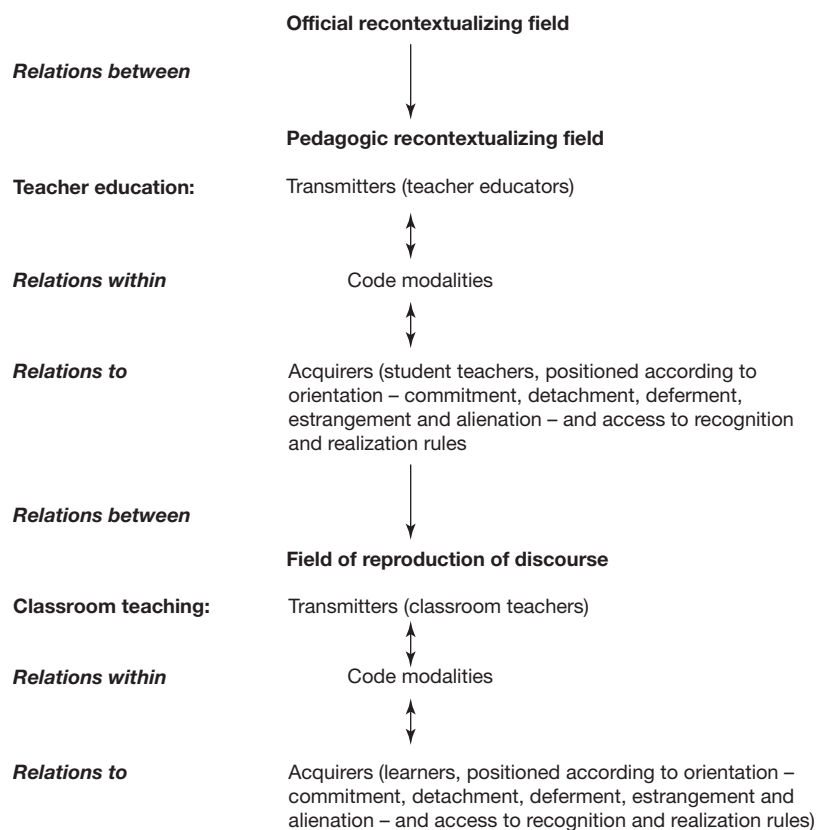


Figure 11.1 Teacher education and classroom teaching – a sociological map

Notes

- 1 The study referred to benefited greatly from Bernstein's insight but was developed from Dowling's work rather than directly from Bernstein. This chapter is a redescription.
- 2 Bernstein (1996) uses these concepts to describe the circulation of practices within horizontal discourse. I am using them here to refer to the practices which are selected to comprise teaching repertoires, and the universe of resources (reservoirs) from which such selections are made.
- 3 Strongly classified discourse may be elaborated in terms of principles or procedures, as Dowling (1998) points out.
- 4 My application of framing in this way has benefited greatly from Morais and Neves (2001).
- 5 This context independence is achieved through what Dowling terms 'high discursive saturation'. Discursive saturation describes the extent to which a discourse is graspable in language. Mathematics exhibits high discursive saturation, craft activities such as pottery exhibit low discursive saturation.
- 6 Teacher education as an arena is located within official and pedagogic recontextualizing fields. In general, teacher education exhibits the characteristics of a

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region within which singular-type specialization has, in the past at least, occurred. This has taken the form, for example, of educational psychology, philosophy, sociology and so forth. These singular-type structures are differentiable from traditional singulars such as sociology, psychology, philosophy and so on, from which they are derived through recontextualizing. These structures are similar to singulars in that they take on a similar horizontal organization, but appear more volatile, subject to more rapid substitutability, and in general exhibit a very weak grammar.

- 7 Dowling (1998) usefully distinguishes between strength of classification of content and mode of expression, to allow one to describe mathematical statements, for example, that vary in strength of classification within a strongly classified discourse.
- 8 The notion of an argot was drawn initially from Gamst (1989).
- 9 As explained above, access to realization rules was necessarily partial because of the strong framing over location.

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12 Teacher training contexts

Study of specific sociological characteristics

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Introduction

This study is part of a broader project, developed by the ESSA Group (Sociological Studies of the Classroom), which involved the training and analysis of the professional development of primary schoolteachers (Afonso 2002) and the influence of their pedagogic practices on children's scientific development (Pires 2001). It further explores the relations which occur in contexts of in-service training (Rocha and Morais 2000), following an action-research methodology. Its main objectives were to investigate the reasons underlying the performances of teachers with diverse experiences and life histories and to analyse how these performances may be influenced by training contexts with given characteristics. We wanted to ask:

- 1 What is the extent to which the personal, social and professional characteristics of teachers relate to each other and influence their teaching performance?
- 2 Which modalities of teacher training have the potential to lead teachers with diverse experiences, life histories and school performances to implement pedagogic practices favourable to a higher scientific achievement among children of different social backgrounds?
- 3 Which aspects of pedagogic practice do teachers feel are more difficult to change and/or implement in the classroom and why?
- 4 To what extent are teachers' professional development and teaching performance related to the acquisition of recognition and realization rules requisite to the implementation of pedagogic practices with a given scientific and pedagogic profile?

This chapter centres on the modalities of teacher training developed in the project. It describes how sociological relations can be characterized in teacher training contexts and extends our model for its analysis based on the same concepts that characterize our analysis of relations within classroom contexts of teaching-learning.

Theoretical framework

Conceptual frameworks of teacher training and professional development are largely based on psychology and epistemology. Sociological literature is rare and quite superficial. Liston and Zeichner (1993) and Wilson and Berne (1999) advocate that trainers and researchers in these fields should focus on teaching as contextualized practice, highlighting its social and political contexts, paying attention to the dynamics of gender, race and social class. Focus should be upon the *what* of teacher learning and *how* teaching knowledge is held, assessed, evolves and enables practice, using clear conceptual frameworks which identify the relation of teachers' learning to their teaching and children's achievement. We agree with authors such as Anderson and Mitchener (1994) who assert that many studies have neither a consistent nor deep conceptual framework, tending to neglect school and system contexts in which teachers move and act.

Given the complexity, multiplicity and interdependence of the factors involved, we used Bernstein's (1990, 2000) model of pedagogic discourse which, with its strong, internal language of description, contains conceptual instruments applicable to distinct levels of analysis and their interrelations. It was also possible, through the concepts of classification (power) and framing (control), to use Bernstein's theory to analyse and describe distinct processes of action-research and also to discuss their significance in teachers' development and performance.

We therefore start from the idea that teaching-learning processes in classrooms and teacher training involving action-research processes both represent given modalities of pedagogic practice. It is possible to use the same characterization of the power and control relations that regulate the instructional and regulative contexts of classrooms in analyses of teacher training.

We started from the assumption that power relations between teacher trainers and teachers are characterized by strong classification, given that the trainer has a higher status. Their interaction is limited by their control of communication in both instructional (discursive rules selection, sequence, pacing and evaluation criteria) and regulative contexts (hierarchical rules). Framing characterizes distinct control relations. In the case of discursive rules, strong framing values indicate a training modality centred on teacher trainers (the transmitters), and weak values indicate a training modality centred on teachers (the acquirers). In the case of the hierarchical rules, strong framing indicates communication controlled by teacher trainers and weak framing indicates more open communication where teachers have some form of control.

The nature of the discourses present in teacher training (involving intra-disciplinary and inter-disciplinary and academic and non-academic relations) must also be analysed. Inter-disciplinary relations refer to integration of the various areas of knowledge usually present in the pedagogic and scientific training of teachers (psychology of education, sociology of education,

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epistemology of natural sciences, science methods). Intra-disciplinary relations refer to integration of the various contents and this reflects the level of conceptual demand required in the training process. 'Academic and non-academic' knowledge relates to the knowledges that teacher trainers present to teachers and that which teachers already have from their everyday practice. Classification will be strong whenever boundaries between discourses are well defined and will be weak whenever they are blurred, as will the relations between teacher trainers'–teachers' spaces and teachers'–teachers' spaces.

The characterization of the teacher training context should also consider power and control relations between teachers, the presence of distinct statuses between teachers, translating the legitimation of distinct 'voices', representing strong classification, their absence a weak one. With respect to hierarchical rules, communicative relations based on positional forms of control represent strong framing, and open, personal forms of control, weak framing.

Bernstein's concepts and theory were complemented by Vygotsky's ideas in order to ground the options taken in the conception and concretization of the teacher training modalities. Vygotsky's (1978, 1992) ideas (Hasan 1995) about the importance of social interaction in the social construction of knowledge, together with Bernstein's theory, point up the importance of the social relations between teacher trainers and teachers and the need to create social contexts favourable to them. Jones *et al.* (1998) suggest the importance of working in a Vygotskian manner in the direction of teachers' level of potential development to obtain higher degrees of competence.

Vygotsky's ideas are also congenial to teacher training following an action-research approach. Schon (1988) and Crawley (1998) defend the promotion of human relations which manifest creativity, critical spirit and capacity for group integration in which action-research processes serve as a continuous and dialectical experience of spiral learning where participants discover, rediscover, exchange viewpoints, learn and teach because they investigate.

Planning teacher training

The study involved four female teachers in two primary schools located in two country towns in Portugal. Their fourth-year classes (age 9 to 10) were socially heterogeneous in terms of gender and social class. Training was undertaken by two researchers, one in each school. We had intended to develop a joint training in order to control the variables 'researcher' and 'scientific contents and competences to be developed' but were unable to do so. However, the researchers had followed similar academic paths in their initial and in-service training, had similar academic positions¹ and jointly developed, analysed and discussed a training plan (the *what* and the *how*).

The implementation of the plan was preceded by a selection of themes/contents for exploration (the *what* of training) and by definition of the modality of the pedagogic code underlying the training context (the *how*). In terms of themes/contents, training included the learning of both scientific

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content and investigative processes and the learning of pedagogic contents of the fields of epistemology, psychology and sociology, particularly Bernstein's theory. All these procedures were discussed with teachers.

Earlier studies of the ESSA Group concerning modalities of training and teachers' performance (Rocha and Morais 2000, 2001) and pedagogic practice and children's learning (Morais and Neves 2001; Morais *et al.* 1993, 2000) revealed the existence of parallels between the teacher training modalities most favourable to professional development and those of pedagogic practice most favourable to the scientific and socio-affective development of children from differing social backgrounds. Since one of the objectives of the research was to lead teachers to develop practices shown to be favourable to children's learning, it was important to arrange training processes with such characteristics to facilitate transfer of knowledges, competences and attitudes. We used the same conceptual and methodological structure in the conception and analysis of the training modality and of pedagogic practice.

Our theoretical profile of the training was similar to that of the pedagogic practice to be implemented by the teachers, entailing a model of both weak and strong classification and framing. Many action-research protagonists value only the former.

This reflected also the importance we give to theorizing and jointly constructing common languages and conceptual frameworks with teachers. The difficulty of communication between teachers and researchers has been pointed out by many authors (e.g. Broadfoot 1992; Fullan 1994; Fullan and Hargreaves 1992). We believe it is crucial that researchers start by sharing knowledges with teachers so that, later on, they can 'speak' the same language in the exploration of subjects, themes and problems.

The training took two years and involved two stages, more structured and intensive in the first year and more flexible and extended in the second. In the first stage we piloted the pedagogic practice to be implemented by teachers in a science teaching unit. In the second stage the teachers implemented the practice over two science teaching units (state changes and experiments with air), the first at the beginning of the year and the second at the end.

The theoretical profiles of the modality of pedagogic code which characterized the first and second stages of teacher training are presented in Figures 12.1 and 12.2 for instructional and regulative contexts, respectively. Power relations refer to a two-degree scale of classification (C^+ and C^-) and control relations to a four-degree scale of framing (F^{++} , F^+ , F^- , F^{--}). We intended teachers in the second stage to have greater control over the selection and sequence of scientific and pedagogic themes/contents. We believed that we could not expect them, at the beginning, to have enough knowledge to intervene in them. In the second stage, after a period of implementing, discussing and reflecting on practice on the basis of theoretical frameworks newly accessed, we expected macro selection and sequence to be controlled by teachers also in ways that met their motivations, interests and particular needs. In summary, then:

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- 1 Researcher/teacher trainers would have higher status than teachers, defining the characteristics of the instructional and regulative contexts of training.
- 2 In the first stage of training, teacher trainers would select the themes, sub-themes, activities and materials for each session, exploring them in a previously determined order. Teacher discussion would give some control at the level of micro selection and sequence. On a four-degree scale, these discursive rules would be characterized by a very strong framing (F^{++}) at the macro level and by a weak framing (F^{-}) at the micro level.
- 3 In the second stage of training, more control would be given to teachers in the selection of themes, sub-themes, activities and materials for each session and in the order which these would follow, thus meaning a weakening of framing of these themes;
- 4 During the entire process of training, researchers would respect the pace of learning of each teacher by not setting time limits.
- 5 Researchers would explicate evaluation criteria throughout training processes, making clear the knowledges to be acquired through discussion and detailed explanation, illustration and co-construction with teachers.
- 6 Themes across all training sessions would be interrelated, and works and activities would involve broad conceptual knowledges.
- 7 Knowledges of diverse fields studied would be equally valued and interrelated and articulated during realization of the diverse tasks.
- 8 Teachers' theoretical and practical knowledges would be systematically related and articulated with the scientific and pedagogic theoretical knowledge to be learned in the training process.
- 9 During discussion of texts and activities and consequent processes of co-construction of knowledges, an open relation of communication between researcher and teachers would be established.
- 10 All teachers would be regarded as having equal status and participation in the pedagogic relation, establishing open relations of communication between them.
- 11 Researchers' and teachers' spaces would be organized with no boundaries between them.

Characterization of the teacher training context

Instrument of analysis

The instrument was developed following a constructive research methodology that started with observational data collected in the teacher training context and kept a dialectical relation between these data and our conceptual framework. We constructed indicators for each one of the relations to be

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analysed, with respective descriptors. Some indicators were reformulated and others created to achieve the most detailed analysis possible, selecting those most in evidence and appropriate across the analysis of the various relations. We are aware that the development and selection of observational instruments involved underlying assumptions about teaching-learning processes and about those aspects selected for analysis. We agree with Stodolsky's view (1990: 175) that '[P]rocedures are not neutral. . . . It is better to explicitly recognize these choices' than court false objectivity.

The indicators may be grouped in terms of the relations they measure:

- 1 Researcher-teacher relations concerning discursive rules (selection, sequence, pacing and evaluation criteria): learning contents; doing tasks; exploring texts/materials; assessing teachers' lessons.
- 2 Intra-disciplinary and inter-disciplinary relations and relations between researcher's and teachers' knowledges: exploring/discussing themes under study; doing tasks.
- 3 Researcher-teacher and teacher-teacher relations concerning hierarchical rules: communicating with others.
- 4 Relations between researchers' and teachers' and teacher-teacher spaces: organizing space; organizing materials (e.g. books, lab material); using space during activities; using materials (e.g. books, lab material).

Indicators were scaled for classification or framing by two or four relative values.

We illustrate the instrument² with extracts for both instructional and regulative contexts. Each is followed by excerpts from real situations that occurred in the training context where it is indicated what degree of classification or framing was attributed to them. They may illustrate several indicators and/or several relations but should be read in the concrete context that is being evidenced.³

Instructional context

Table 12.1 Discursive rules – selection

<i>Indicator</i>	<i>F ++</i>	<i>F +</i>	<i>F -</i>	<i>F --</i>
Learning contents	Researchers indicate the aspects to be studied in each session	Researchers give the contents considered to be most important, accepting teachers' suggestions	Researchers make a list of contents that may be studied, without referring to priorities and asks teachers to make a selection	Researchers ask teachers to suggest contents to be studied

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Excerpts

F⁺⁺ At the beginning of the session, the researcher states that in following sessions they are going to study various aspects of scientific processes and the competences associated with them, such as observation, experimental planning, experimenting, control of variables, formulation of problems and hypothesis, prediction. . . . She begins the theme of the first session about 'observation'. . . .

F⁻⁻ Start of the second year. The researcher begins by telling teachers to indicate themes/subjects/materials/texts which they would like to explore, which may be focused on new subjects or material that they would like to see clarified or broadened. Teachers say that they are going to think about themes/subjects and will then inform the researcher.

Instructional context

Table 12.2 Discursive rules – sequence

Indicator	F ⁺⁺	F ⁺	F ⁻	F ⁻⁻
Doing tasks	The realization of tasks follows a rigid order determined by researchers	The realization of tasks follows an order determined by researchers but which can be altered in minor aspects	The realization of tasks follows an order planned by teachers with researchers' guidance	The realization of tasks follows an order planned by teachers

Excerpts

F⁺⁺ Tasks and questions were explored according to an order planned by the researcher. On the basis of a text previously given to them, *Which Science in the Primary School?*, teachers answered some questions in small groups before carrying out two tasks, namely identifying and observing the fluctuation of objects in water. After the tasks were finished, the concepts involved were clarified and their adequacy to primary school children was discussed.

F⁻ Using Bernstein's concepts, teachers characterize the relations present in the teacher training context by filling in a table given to them. During the general discussion the teachers intervene, comment and justify various aspects of the characterizing they had

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made. The researcher allows the teachers to intervene when they wish but guides the discussion so that space relations are first discussed, then discourse relations and, finally, subject relations.

Instructional context

Table 12.3 Discursive rules – pacing

<i>Indicator</i>	<i>F⁺⁺</i>	<i>F⁺</i>	<i>F⁻</i>	<i>F⁻⁻</i>
Exploring texts/materials	The time planned for the analysis of texts is rigorously adhered to	Researchers indicate the time for exploring texts, but may accept justified extensions	The time needed in exploring texts is determined by teachers, but the researcher presses them to finish the work	No time determined in the exploring of texts; time depends on teachers' pacing and there is no pressure from the researcher

Excerpts

F⁺⁺, F⁺, F⁻ Did not occur.

F⁻⁻ Teachers were required to read *Which Science in the Primary School?* in advance and answer questions. However, before discussion started they asked for and were given time to revise and clarify some points. During the discussion they presented doubts, discussed divergent opinions, reflected on their pedagogic practice, gave examples. . . . The researcher did not try at any time to accelerate the pace of activities.

Instructional context

Table 12.4 Discursive rules – evaluation criteria

<i>Indicator</i>	<i>F⁺⁺</i>	<i>F⁺</i>	<i>F⁻</i>	<i>F⁻⁻</i>
Learning contents	Explanations/discussions are very detailed and illustrated. Teachers take notes on all aspects	Explanations/discussions are detailed and illustrated. Teachers take notes only on main aspects	Explanations/discussions are not very detailed or illustrated and teachers take some notes	Explanations/discussions are not detailed and illustrated and teachers do not take notes

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Excerpts

F⁺⁺ One of the teachers experienced many difficulties in correcting and classifying assessment test questions. Teachers and researcher met to analyse them. The discussion started with the classification of each of the questions in A (Acquisition of knowledge) and U (Use of knowledge). This was followed by reading the directions that had been given to teachers about answers considered to be complete and correct. For various test questions, researcher and teachers discuss the information more and less relevant and the mark which should be given to each one of children's possible answers. The researcher gives out a text about school assessment, so that teachers can consolidate and broaden the ideas discussed.

F⁻⁻ The session starts with a reflection to be continued in following sessions about the issue of school success/failure. Before starting work, teachers had read Bernstein's *Code and Social Class*, presenting a number of his concepts and exemplifying the concepts of code and recognition and realization rules that would be used in the sociological exploration and grounding of causes of children's success/failure experienced by teachers throughout their professional life. Discussion of the issue of school success/failure occurs but without clear reference to Bernstein's theory and concepts. Teachers did not take any notes.

Instructional context

Table 12.5 Relation between discourses – intra-disciplinary relations

<i>Indicator</i>	C ⁺	C ⁻
Exploring/discussing themes under study	Subjects are studied in a non-interrelated way	Subjects are studied in an interrelated way

Excerpts

C⁺ Did not occur.

C⁻ The session was intended to lead teachers to a broader analysis of the reasons for school success/failure and to look for lines of action to lead to the school success of all children. To do so, new concepts were introduced, such as specific coding orientation and recognition and realization rules. However, to reach an effective analysis and discussion, it was necessary to bring to the discussion other concepts such as classification, framing, teachers' conceptual

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demand, science, simple cognitive competences and complex cognitive competences studied in former work sessions.

*Instructional context**Table 12.6* Relation between discourses – inter-disciplinary relations

<i>Indicator</i>	<i>C⁺</i>	<i>C⁻</i>
Doing tasks	Tasks involve a single, specific area of knowledge	Tasks involve the articulation of distinct areas of knowledge

Excerpts

C⁺ Did not occur.

C⁻ Teachers analysed syllabuses and textbooks in order to apply ideas developed during various work sessions and to broaden their ideas about distinct fields of knowledge (sociology, psychology, philosophy), using specific instruments.

*Instructional context**Table 12.7* Relation between discourses – researcher's knowledges – teachers' knowledges

<i>Indicator</i>	<i>C⁺</i>	<i>C⁻</i>
Exploring/discussing themes under study	There is no relation between the teachers' practical knowledge and the new knowledges to be learned	Teachers' practical knowledge is frequently related with new knowledges

Excerpts

C⁺ Did not occur.

C⁻ The researcher starts the work session by asking teachers to 'Reflect on the science teaching they had promoted along their professional career', suggesting: 'Refer to aspects you have valued and how you have valued them in science teaching. Why do you consider it important or not important to teach science? What is the status you give to science when compared with other areas of knowledge, for example, Portuguese and mathematics? What is

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the extent to which your pedagogic work has contributed to the promotion of learning of scientific knowledges by children of distinct social groups?’

Regulative context

Table 12.8 Hierarchical rules – researcher–teachers

<i>Indicator</i>	<i>F⁺⁺</i>	<i>F⁺</i>	<i>F⁻</i>	<i>F⁻⁻</i>
Communi- cating with others	Privileges a vertical and unidirectional relation of communication	Privileges a vertical and unidirectional relation of communication, with some interaction between researchers and teachers	Privileges an interaction between researcher and teachers although a vertical relation also occurs	Privileges a permanent interaction between researcher and teachers

Excerpts

F⁺⁺ Teachers and researcher analyse the subject of school success/failure. The researcher shows a transparency containing three graphs and teachers follow their description attentively.

F⁻⁻ Teachers are doing experiments they are going to use in the classroom. They talk with each other and with the researcher, commenting on results: ‘The candle is very high’; ‘a straight balloon may give a better result’; ‘it is difficult to work with the clip’. ‘I am not sure if they [the children] will be able to open it’. They also ask questions: ‘Why is it that it functions better with some funnels than with others?’ ‘There are water drops still falling down – is it well sealed?’; ‘Will the rubber be ruined by the heating of the balloon?’ They also ask the researcher for more material: ‘This knife does not cut well – is there another one?’; ‘Are there lower tripods? They may work better’.

Teacher training contexts: a study 179**Regulative context***Table 12.9* Hierarchical rules – teacher–teacher

<i>Indicator</i>	<i>F⁺⁺</i>	<i>F⁺</i>	<i>F⁻</i>	<i>F⁻⁻</i>
Communicating with others	Some teachers polarize and dominate the talk	All teachers may intervene but only the interventions of some are valued	All teachers intervene but interventions of some are more frequent	There is an open and intense communication between teachers

Excerpts

F⁺⁺, F⁺, F⁻⁻ Did not occur.

F⁻ The two teachers participated systematically but Inácia's interventions are more frequent than Rita's.

Regulative context*Table 12.10* Relation between spaces – researcher–teachers

<i>Indicator</i>	<i>C⁺</i>	<i>C⁻</i>
Organizing space	Clear boundaries between the spaces of researcher and teachers, evident by a different and separate working table for researcher	Blurred boundaries between the spaces of researcher and teachers, evident by a researcher's working table similar and next to teachers'

Only *C⁻* situations occurred.

Regulative context*Table 12.11* Relation between spaces – teacher–teacher

<i>Indicator</i>	<i>C⁺</i>	<i>C⁻</i>
Organizing materials (books, lab material, etc.)	Each teacher has her materials in a space of her own	Teachers have their materials next to those of their colleagues

Only *C⁻* situations occurred.

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The modalities of teacher training implemented

We measured teachers' performance at the ends of the first and second years of training on the basis of the observation records completed by the researchers during the whole process of training. They were validated by two other researchers.

Researchers' characterizations of the teacher training context were cross-checked with teachers' characterizations and with teachers' opinions.⁴ On the basis of these data we characterized the training processes which actually occurred. Figures 12.1 and 12.2 show, for each set of two teachers (Rita-Inácia and Dulce-Céu),⁵ across the various relations analysed, the characteristics of their training contexts, by instructional and regulative dimensions, derived by these means and set against the theoretical profiles previously defined.

Space precludes our drawing attention other than to discrepancies between planning and actuality. In the instructional dimension (Figure 12.1), in the second stage, selection and sequence did not achieve the weak framing values planned. Despite researchers' efforts, teachers had difficulty selecting subjects, activities, materials and identifying problems to be explored and in sequencing their training paths. These aspects contradict, to a certain extent, some lines of action-research which see teachers as practice professionals, totally autonomous, protagonists of their own research, controlling their options, determining in an efficient way their own choices and training routes and managing without the support of external persons. We believe that, at least in the initial stages, particularly with respect to selection and sequence, values should be relatively strong to avoid long periods of discouragement and indecision. Our data value the role of the researcher, particularly in the initial stage of action-research, when teachers considered it important to select the subjects to be learned.

With respect to the regulative dimension (Figure 12.2), in the case of Rita and Inácia, power and control relations were different from those intended in either training stage. Inácia evinced higher status than Rita through the frequency of her interventions and the knowledges she displayed. The action-research literature makes no reference to the possible effects of distinct teacher social statuses evident here. This was at least partially responsible for Rita's inferior positioning, less positive socio-affective dispositions and her greater difficulty in producing the pedagogic practice planned in the theoretical profile (Pires 2001).

Final considerations

In any plan of teacher training, variations in power (classification) and control relations (framing) may be present, giving teachers greater or smaller degrees of control of their professional development. The modality we implemented represented mixed pedagogic practice, as has been shown to be favourable

RELATION BETWEEN SUBJECTS (Researchers-teachers) (Ci Fi)					RELATION BETWEEN DISCOURSES (Cie)			
Power relations					Intra-disciplinary Knowledge		Researcher knowledge-teacher knowledge	
Control relations (Fi) – Discursive rules					Intra-disciplinary Knowledge		Researcher knowledge-teacher knowledge	
(Ci)					(Ci)		(Ci)	
Selection					(Ci)		(Ci)	
Sequence					(Ci)		(Ci)	
Pacing					(Ci)		(Ci)	
Criteria					(Ci)		(Ci)	
THEORETICAL MODEL					C ⁻		C ⁻	
Rita – Inácia					C ⁻		C ⁻	
Dulce – Céu					C ⁻		C ⁻	
1 st stage								
THEORETICAL MODEL					C ⁻		C ⁻	
Rita – Inácia					C ⁻		C ⁻	
Dulce – Céu					C ⁻		C ⁻	
2 nd stage								
THEORETICAL MODEL					C ⁻		C ⁻	
Rita – Inácia					C ⁻		C ⁻	
Dulce – Céu					C ⁻		C ⁻	

RELATION BETWEEN SUBJECTS						RELATION BETWEEN DISCOURSES (Ci)	
Researcher-teacher (Ci Fi)			Teacher-teacher (Ci Fi)			Space researcher- teacher	Space researcher- teacher
Power relations (Ci)	Control relations (Fi)	Hierarchical rules	Power relations (Ci)	Control relations (Fi)	Hierarchical rules		
1st stage						C ⁻	C ⁻
THEORETICAL MODEL	C ⁺	F ⁻⁻	C ⁻	F ⁻⁻	F ⁻⁻		
Rita - Inácia	C ⁺	F ⁻⁻	C ⁺	F ⁻	F ⁻	C ⁻	C ⁻
Dulce - Céu	C ⁺	F ⁻⁻	C ⁻	F ⁻⁻	F ⁻⁻	C ⁻	C ⁻
2nd stage						C ⁻	C ⁻
THEORETICAL MODEL	C ⁺	F ⁻⁻	C ⁻	F ⁻⁻	F ⁻⁻		
Rita - Inácia	C ⁺	F ⁻⁻	C ⁺	F ⁻	F ⁻	C ⁻	C ⁻
Dulce - Céu	C ⁺	F ⁻⁻	C ⁻	F ⁻⁻	F ⁻⁻	C ⁻	C ⁻

Figure 12.2 Actual characteristics of the teacher training context in the regulative dimension (first and second stages) and comparison with the theoretical planned model

to the learning of children from socially varied backgrounds. It was characterized generally by weak framing and classification except for very strong framing of evaluation criteria and macro selection and sequence. This modality allowed teachers to evolve, more or less, in terms of their acquisition of recognition and realization rules requisite to the implementation of pedagogic practice favourable to their children's learning (Moraes *et al.* 2004).⁶ These results lead us to question some current ideas on action-research processes which, in terms of Bernstein's theory, would imply training contexts characterized by weak classifications and framings. Our research suggests that this idea needs to be rethought.

Contrary to what some action-research approaches contend, strong classification always characterizes the researcher-teacher relation. Researchers and teachers perform distinct social roles, they are part of distinct institutions, they have distinct knowledges and these aspects are intrinsic to the training context. It is the participative, collaborative and reflexive nature of action-research which corresponds to a researcher-teacher interaction characterized by open relations of communication (weak framing at the level of hierarchical rules) that masks existent hierarchies, making power relations implicit or invisible. Analysis of action-research processes that considers Bernstein's concepts of classification and framing calls attention to the crucial importance of the distinction between power and control.

The idea that teachers should have control over all aspects of their training fails to consider the distinction between its instructional and regulative components, leading to a lack of clarification of the distinction that may exist in researcher-teacher relations between discursive and hierarchical rules. If a weakening of framing at the level of the hierarchical rules seems to be clearly favourable to teachers' performance (in discussing and confronting ideas, giving opinions and so on), at the level of the discursive rules, evaluation criteria and even selection (at least at the macro level), it leaves teachers without an understanding of the legitimate text to be produced, making difficult the acquisition of a specific coding orientation to that text. We conclude that control should be centred on teachers in some aspects of teacher training (e.g. pacing and hierarchical rules) and teacher trainers in others (e.g. macro selection and evaluation criteria).

We also believe that our instrument of analysis of the modality of teacher training has conceptual and methodological potential for analysis of other training contexts, based, as it is, on other instruments constructed to analyse pedagogic practices in the classroom at various levels of education. It highlights the value of a research methodology based on a constant, dialectic relation between the theoretical and the empirical, and reinforces the applicability and transference of the theory on which our research has been based.

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Acknowledgements

We acknowledge the financial support of the Gulbenkian Foundation and the Institute for Educational Innovation for the project of which this study is a part.

Notes

- 1 Both researchers had done their initial teacher training in the same university, taking the same degree and Master's course. Their dissertations used Bernstein's theory in relation to scientific learning. Both are teachers at colleges of education.
- 2 The whole instrument is available in Afonso 2002.
- 3 When we present an excerpt, for example, on discursive rule selection, we are focusing on this alone, although it could be analysed from another perspective.
- 4 We could give many examples of teachers' opinions that illustrate support for the characterization by researchers of the relations analysed, drawn from researchers' records unless otherwise stated:

'Yes, I think we had the time we needed . . . in fact, the pace was ours.'

Rita on pacing

'I think it was quite clear what was intended in each session . . . in the observation . . . in scientific rigour . . . in classifying leaves was it not quite clear what was intended? . . . Sure, it was!'

Inácia on evaluation criteria

'We are always coming back . . . we have just done it . . . it is what we have been doing! For example, now . . . we were always coming back . . . when we talked about teachers' conceptual demand we related it with the level of demand the teacher sets, for example, with planning and doing experiments . . . it is not "to pour some drops" . . . it is not "to observe anything".'

Inácia and Rita, first stage, on intra-disciplinary relations

'In analysis of the competences to be developed by children in the context of scientific learning, aspects are discussed related to psychology (Which competences require a higher level of abstraction? Are children in the concrete stage able to produce a higher level of reasoning?). With sociology (are children of lower social groups able to attain high level objectives? And children of higher social groups? Why? Which are the modalities of family and school pedagogic practices more favourable to children attaining objectives at a higher level of abstraction?). With scientific contents and processes (classification of competences and concepts involved in some of the questions which were part of the work sheets of the first experimental teaching unit).'

Second stage, inter-disciplinary relations

'Many examples were given, we introduced examples in all sessions . . . when we talked about that child with difficulties in learning a play by heart . . . those student-teachers who come to the classroom and accept everything children say, do not reformulate or add anything.'

Inácia, first stage, relation between researchers' and teachers' knowledges

Researcher: Why is it that in the relation . . . between you two teachers and the researcher you indicate a weak framing? Why?

Teacher: I think we got on very well . . . each of us said what she thought.

...

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Researcher: We got on very well . . . yes . . . but how were communication relations?

Teacher: Very open.

Researcher: Do you think there was or there was not a predominantly unidirectional vertical relation or was it an open relation of sharing ideas?

Teacher: A sharing . . . yes, a sharing.

Dulce, second stage, interview, hierarchical rules – researcher–teachers

Interviewing Dulce, Laurinda [researcher] asked her how she would classify the relation between the spaces of participants in the training process.

Teacher: There was no isolation, as there is not now. We are at the same level, it was always like this.

Researcher: Were the materials also used by everybody?

Teacher: Exactly.

Dulce, second stage, interview, trainers – teachers space

‘It is also weak [classification], we all have exactly the same space . . . even the working table is the same!’

Inácia, first stage, teacher–teacher spaces

‘I think you know more than I do, I only know how to be a teacher . . . you surely know much more than I do. . . . Your work at the college [of education].’

Rita, first stage, researcher–teachers power relations

5 The names of the teachers are fictitious.

6 As part of the broader research in which this study is located, Morais, Neves and Pires (Chapter 6, this volume) show that whenever teachers’ pedagogic practice approximated the theoretical profile, children’s learning improved.

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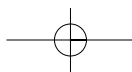
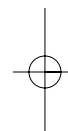
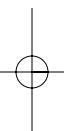
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Section 4

Knowledge and differentiation in vocational and higher education



13 Retrieving the general from the particular

The structure of craft knowledge

Jeanne Gamble

Introduction

The argument put forward in this chapter is based on a research study concerned with the traditional form of trade apprenticeship where the criteria of evaluation of practice reside with the transmitter or 'master'¹ and where the knowledge on which the transmission rests is uncoded and tacit. While it now appears that the asymmetrical relationship between master and apprentice carries within it connotations of 'discipline' and hierarchical authority inimical to self-directed lifelong learning, it is precisely this mode of transmission that has long been the bedrock of vocational education and training (VET). Young (2001) suggests that fundamental epistemological issues have been ignored throughout the history of VET. Going back on the transmission track to look for clues to pedagogies of the future is thus not nostalgia for bygone days but a search for an adequate concept of vocational knowledge that can inform contemporary debates.

The first part of this chapter positions Bernstein's depiction of craft as knowledge structure as the central question to be investigated. In the second part a conceptual framework is developed that illuminates and extends Bernstein's limited references to the transmission of manual practice. The findings of a case study of cabinet maker apprentices in a trade school in Cape Town are introduced at the point where empirical investigation informed the development of the framework.

Bernstein on craft

The pedagogic discourse of craft as a manual practice, understandably, does not feature centrally in Bernstein's work. In the last note on the final page of *Class, Codes and Control, Volume IV* he refers to manual pedagogic discourse as a way of testing whether the rules of the pedagogic device may be applied to pedagogic discourses that fall outside what he calls 'official pedagogic discourse of the European modality' (1990: 217–18). Referring to medieval guild-regulated acquisition of manual skill he notes how, in the university and guild of the medieval period, the distributive rules select those

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who produce the discourse and who regulate the 'unthinkable'. Those who produce the discourse are also the recontextualizers who control the pedagogic discourse of transmission and regulate the content and stages of apprenticeship. They also regulate the evaluative rules of the pedagogic practice.

In his later distinction between two fundamental forms of discourse subject to pedagogic transformation, craft is given as an example of 'tacit' transmission where showing or modelling precedes 'doing'. Craft is depicted as a:

modality of *Vertical discourse* and is characterized as a *Horizontal Knowledge Structure* weak grammar, tacit transmission. This knowledge structure is the nearest to *Horizontal discourse* emerging as a specialized practice to satisfy the material requirements of its segments.

(Bernstein 2000: 169, emphasis in original)

In his 1996 discussion of horizontal and vertical discourse Bernstein elaborates on craft as a horizontal knowledge structure:

'Crafts' are clearly specialized knowledges with their own mode of transmission. I would regard any one craft as horizontal in structure. The various styles could be regarded as analogous to the set of languages within any one academic horizontal knowledge structure. 'Craft' knowledge is a practical mastery over materials according to a functional concept or image entailing shaping or carving some form of skilled manipulation. Clearly the label given to such an activity depends upon the classificatory procedures of a given culture. 'Crafts' are often acquired through apprenticeships where mastery is more a tacit achievement than a consequence of an explicit pedagogy. This suggests from the point of view of this paper that 'crafts' could be regarded as *tacit* horizontal knowledge structures.

(1996: 181, fn. 5, emphasis in original)

I quote Bernstein at length on tacit knowledge structure, as well as tacit transmission, in order to establish a clear distinction between these two phenomena. Dowling's depiction of craft, displaying what he calls 'low discursive saturation' (1998: 30), explains why craft is transmitted through modelling rather than through explicit teaching but not why craft is attributed with having a knowledge structure. Craft seems to belong in horizontal discourse. Even though it is a specialized practice it is clearly context dependent in both its transmission and its realization. One cannot acquire a craft other than by 'doing'. However, craft's positioning in vertical discourse signals the presence of a recontextualizing principle that comes from outside a specific object or context. In that sense craft meanings must be context independent. This is the puzzle that places craft as 'knowledge structure' in need of investigation. The question, put more directly, is: Why is craft a vertical discourse when it seems to belong in horizontal discourse (Figure 13.1)?

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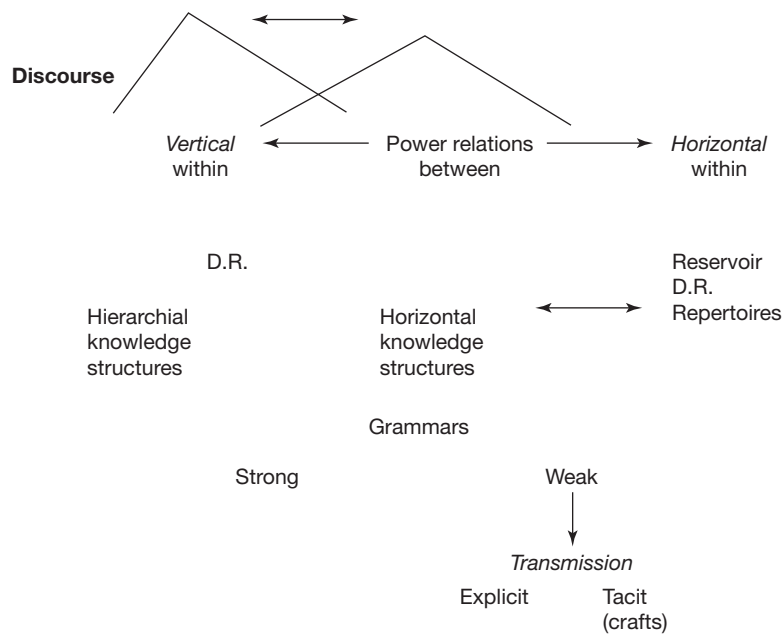


Figure 13.1 Bernstein's distinction between horizontal and vertical discourse

Source: Bernstein 2000

In order to tackle this question I move away from Bernstein's language of description. Specialized academic languages in sociology (his main example) within a broader structure of discourse are simply too far removed from the labour of the hand to enable easy transposition or 'analogy'. Craft needs to be removed from the realm of 'words' where it clearly does not belong and be placed in its own setting – on the manual side of the structural divide between the labour of the head and the labour of the hand that extends throughout the history of society. It is from this vantage point that Bernstein's positioning of craft as vertical discourse must be considered.

Craft as knowledge structure (1)

What I try to do in this section is not to usurp Bernstein's language of description but to redescribe it in a way that is conceptually consistent with the structural division between the horizontal and the vertical, yet allows me to introduce the findings of my research study on its own terms. I make use of network analysis (Bernstein 1996; Brown and Dowling 1998) to establish a relation between concept variables. The logic applied here has also been influenced by Abbott's argument that cultural and social structures in general have what he calls 'a peculiar property' in common, namely that of self-similarity. He argues that 'no matter at what level we inspect them we find

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the same pattern repeated'. For Abbott, self-similarity is a 'fundamental modality of structure in human affairs' (2001: xv). Using historical-empirical data to set up one side of the network I then employ Abbott's logic of self-similarity in fractal distinctions to set up the other side, using some of the findings of my own study to flesh it out.

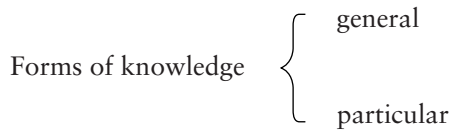
Bernstein's language of description is premised on a structural distinction between the empirical and the non-empirical, or context-dependent and context-independent meanings. In this he expresses Durkheim's fundamental distinction between worlds sacred and profane (Durkheim 1995; Muller 2000; Young 2002). For my purposes, I choose not to use the terms 'context dependent' and 'context independent' explicitly. Given the marginal role of language in craft apprenticeship (Dowling 1998; Nielsen and Kvale 1997), these terms are related too closely to Vygotsky and Luria's understanding of the relation between language and thought not to evoke somehow a conception of deficiency regarding the absence of the spoken and written word in craft. It is not that I reject what the terms signify but, rather, that the question of what counts as 'context' has become too controversial for these terms to serve an expository function.

I therefore turn to Sohn-Rethel (1978) who traces, in historical materialist terms, the emergence of abstract thought and the conceptual foundations of science, or what he calls the division between intellectual and manual labour. He, too, sets the everyday and the esoteric apart as being fundamentally different in kind when he poses mathematics as invented by the Greeks in the sixth century BC as the dividing line of intellectual and manual labour. The manual operation of measurement as approximation was present in the Bronze Ages when the 'harpedonapts', the field measurers of Pharaoh's tax officials, used a rope to measure out the repartitioning of the soil when the River Nile subsided after the yearly floods, for the purpose of determining the peasants' tributes for the coming year. This exercise in 'geometry' produced highly accurate approximations, but approximations nevertheless. It was the Greeks who subordinated manual operations of measurement to an act of pure thought 'which was directed solely towards grasping quantitative laws of number or of abstract space' with their conceptual content 'independent not only from this or that particular purpose but from any practical task' (Sohn-Rethel 1978: 102). The geometry of measurement became something quite different from measurement itself. The manual 'skill' of measurement could be carried out only by 'those apprenticed to do it and practised in it and only at the particular spot where the need for measurement arose. Divorced from this it had no point' (1978: 101). Geometry, on the other hand, was 'a deductive thought structure . . . committed to nothing but itself' (1978: 103). Sohn-Rethel argues that 'pure mathematics' became the unbridgeable dividing line between mental and manual labour.

The historical evidence presented by Sohn-Rethel allows me to pose the fundamental structural distinction between forms of knowledge as the

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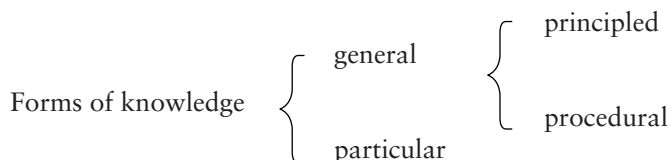
distinction between the 'general' and the 'particular', with craft located on the side of the particular:



For Sohn-Rethel the later technical division of labour between what he calls the 'technical and organizational intelligentsia and the manual work-force' (1978: 157), which established managerial authority over the monopolistic labour process, is not to be confused or assumed identical with the fundamental division dating from classical antiquity. This division radically divides the intellectual character of mathematically based thinking, founded on mathematical concepts of a non-empirical nature, from manual practice.

In order to make the second fractal distinction I again turn to history, this time to Zilsel's (2000) study of the genesis of science as a sociological phenomenon. Zilsel argues that comparison of analogous phenomena is virtually the only way to investigate complex intellectual constructs, both sociologically and causally. He picks up the story in the period 1300 to 1600, with the emergence of early capitalism in Europe, when three strata of intellectual activity could be distinguished: university scholars, humanists and artisans. At this time, the two components of scientific methods were separated by a social barrier; logical training was reserved for upper-class scholars (professors and humanistic literati), while experimentation, causal interest and quantitative method were left to lower-class artisans. Science was born when, with the progress of technology, the social prejudice against manual labour was eventually overcome and the experimental method was adopted by rationally trained scholars. Deductive and inductive methods of investigation were positioned in a collateral relationship.²

This historical exposition allows me to introduce the next fractal distinction on the side of the general. Instead of talking about knowledge produced through deductive and inductive investigation I use the terms 'principled' and 'procedural' to describe collateral knowledge relations:³



Abbott's principle of self-similarity now logically allows me to repeat the same fractal distinction on the other side of the network. Corroboration of this move in empirical terms comes from some of the analytical findings of my own study. Before presenting an account of the knowledge patterns

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that occur in manual practice I will briefly outline the conditions that led to the establishment of the 'trade school'⁴ in which I observed apprentice cabinet makers being inducted into the trade by an artisan-trainer. Trade school practice may be characterized as a kind of backward recontextualization, with the trade school as residual 'medieval workshop' where the asymmetrical relationship between master and apprentice is still implicitly taken as the basis of craft transmission and the trade is conveyed as the inalienable property of the craftsman, not of the factory boss or foreman. Apprentices are not 'students' or 'learners'; they are cabinet makers-to-be. Craft as pedagogized discourse and craft as practice are almost indistinguishable.

Craft as non-science

The dilution and fragmentation of craft practices brought about by the mechanization of handcraft, as argued by the 'de-skilling' theorists (Braverman 1974 and others), also affected the traditional transmission of manual craft practice at the point of production. McKerron (1934) shows how the introduction of modern machinery, increasing specialization and the speeding up of work processes greatly limited the apprentice's experience of different branches of a craft under the tutelage of an artisan. The resolution seemed to lie in supplementing limited practical experience with some general theoretical training that would develop an understanding of the scientific principles underlying various crafts. The development of a system of industrial and continuation education in Germany under Kerschensteiner in the late 1800s marks the beginning of an educational move that found its way to many other countries, including South Africa, where the system of technical education evolved from Britain. Layton (1984: 21–35) notes that the 'alternative' technical education route for artisans as constructed in England in the late nineteenth century was, in practice, not greatly different from liberal education as far as it concerned science education. The 'pure science' ideal, as it was constructed in a research context, was transferred to teaching contexts in schools and universities in the late nineteenth century. The reasons for this were partly linked to knowledge traditions in the training of scientists and partly attributed to the liberal education model that prevailed at the time: 'The educative qualities of science as a school subject were thought to reside in its ability to discipline the mind, rather than in its utility and practical problem solving potential. Science had to be justified in the curriculum in the same terms as classics and mathematics were justified, if it hoped to make any inroads' (Layton 1984: 24). The definition of technical education incorporated into the English Technical Instruction Act of 1889 thus defined technical education as being 'limited to instruction in the principles of science and art applicable to industry and *not* to include teaching the practice of any trade or industry or employment' (1984: 25, emphasis in original).⁵ This definition fitted well with the requirements of professional scientists who were teachers and examiners in the new system, but there were

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also other reasons. One was that industries did not want their trade secrets opened to public teaching. A second was that state-aided instruction in the practice of any particular industry could also be seen as a direct subsidy by government, considered unacceptable in the *laissez-faire* economic regime of the time.

Gaye, in a historical recovery of the details surrounding the founding of the City and Guilds of London Institute for the Advancement of Technical Education in 1878, notes the hybridity of the times. The guilds, in an effort to come to terms with a modernizing world through scientific and technical education, were strongly supportive of technical education aimed at artisans and apprentices. The professors, on the other hand, were anxious to introduce advanced technical instruction and research into technical fields. One of the Institute's honorary secretaries actually resigned because he felt that the Institute 'needed to proceed much further in the direction of providing technical education of a lower grade for the rank and file of our industrial population' (Gaye 2000: 390). The main offering of mathematics, chemistry, physics and mechanics, with third-year specialization in pure or applied research, was aimed at the typical first-year student – a 17-year old with a 'special aptitude for mathematics and science' and at those training as technical teachers (*ibid.*: 393). On the other hand, plumbers, electricians and other artisans, as well as older people who were already employed in industrial or technical occupations, attended special courses, evening classes and summer schools. It seems that, right from the start of technical education, the ideal of combining general scientific principles directly with manual practice did not work out as envisaged, at least not for artisanal work.

Going much further back in history we also learn that in the sixteenth century Albrecht Dürer attempted, and failed, to combine workmen's practice with Euclidean geometry in order to make available to artisans mathematics as a means of preserving the unity of hand and head. Despite all his efforts, the mathematical understanding demanded from the apprentices and craftspeople of his time fell too far outside their ways of comprehending and doing (Sohn-Rethel 1978: 113–16).

The modelling principle in craft

The 'scientific' definition of technical education, as developed in Britain, was adopted in South Africa around the turn of the last century. A theory–practice distinction developed which required technical colleges to provide the 'theory' part of apprenticeship training while the workplace provided practical work experience. In 1990 the Manpower Training Amendment Act devolved responsibility for apprenticeship to each industry sector. In the furniture industry, where trade theory had always resided under the building industry, much of the theory taught was deemed inappropriate for furniture makers and was dropped. One fairly low-level course in trade theory remained as a compulsory prerequisite to the trade test. In lieu of trade theory a five-phased

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practical and theoretical training component was introduced to compensate for the restricted practices of mass-production furniture factories.⁶

What distinguishes the trade school from any factory is that apprentices are expected to become adept in the full cycle of the production of a free-standing item of furniture: from rough sketch, to scale drawing to full layout; selection and lamination of wood to make pieces long enough and wide enough for particular items; production of every individual part; assembly and finishing; and, last but not least, cleaning up their work benches and surrounding areas. Elsewhere (Gamble 2001, 2002), I present more detailed accounts of the transmission practices observed. Here I want to refer to one of the conclusions, namely that *visualization* is both the purpose and the outcome of tacit pedagogic transmission. Visualization signifies a relationship between part and whole, which carries within it the notion of the 'ideal'. The adept 'sees' both what is there and what is not there. There is always an awareness of a proportional whole, even though the craftsperson may be working on separate parts of the item. This knowledge is made manifest through rough drawing and not through words. The presence of the 'whole' production cycle rather than only parts of it is a necessary condition for the transmission of such embodied knowledge which, because it can be grasped only through visualization, can never be expressed in words.

Pye (1978: 22) calls this part-whole relation an 'embodied principle of arrangement' which is present in all design and workmanship as the extension of design. He gives the following everyday example to explain a complex phenomenon:

It is really rather remarkable that, while anyone can tell whether a thing is a pocket-knife, because, presumably anyone can recognize the principle of arrangement which constitutes the similarity between all pocket-knives, no one can visually abstract that arrangement. We recognize it when we see it embodied, we can describe it disembodied, but we cannot visualize it disembodied.

(Pye 1978: 22)

Each article produced embodies an essential principle of arrangement, which constitutes similarity at the level of 'type' and not at the level of 'token' or 'instance'. The essential principle of arrangement is what is discovered by invention. The principle is thus a generalization that constitutes a class of system. The designer prescribes a particular embodiment of that principle in relation to particular results, materials and sources of energy, and the maker gives realization to the principle in the construction of the particular item or device. For the maker the principle is grasped through the act of visualization. As we can never visualize anything other than what is particular, the abstract nature of the principle is not manifest. It is grasped in the particular even though it operates at the level of generalized 'type'.

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Craft thus operates at the level of principle, but it is *principle in the particular*. Once it becomes procedure in the particular, as found in mass-production processes, the principle no longer operates. Principled knowledge is destroyed when craft becomes diluted and fragmented into discrete operations, performed by separate workers. This explains why there are many apprentices who are perfectly capable of performing most of the operations required for the making of a piece of furniture but, in the eyes of the master-trainer, they will never be cabinet makers themselves. They do not have access to the principle, albeit one which is neither stated nor explained. The master-artisan cannot explain the principle, since he himself does not hold the principle in discursive or disembodied form. He can only model the principle and point to particular instances of 'right' or 'wrong' proportion.

Should a principle of arrangement be described it might be worded as follows:

If you have a wheel, and if at any place except the centre you fix to it a pin standing at right angles to the plane of the wheel, then (provided always that a system is properly designed) the wheel can be turned by the piston rod of a reciprocating engine. It must be linked to the piston rod by a connecting rod, which is longer than the distance from the wheel to the crank pin. One end of the connecting rod must be hinged to the piston rod so that it is free to swing, and the other end must be pivoted on the pin so that the pin can rotate freely in it.

(Pye 1978: 21)

Principles can be described but it will never be an explanation, such as the one above, that will be used in craft transmission or execution. The explanation will always be given as a diagram, and a diagram is always a description of one particular embodiment of a principle of arrangement. Apprentices neither talk nor act with an explicit awareness of the principles embodied in the piece of furniture they are making.

Craft as knowledge structure (2)

The findings of the empirical investigation allow the distinction between principled and procedural knowledge to be repeated on the 'particular' side of the epistemological network. A further lower-order distinction may also be made between principles that are explicated in words or numbers and embodied principles of arrangement (see Figure 13.2).

Embodied principles are recognized through the act of visualization and realized through regulated workmanship, where the 'achievement appears to correspond exactly with the idea' (Pye 1968: 22). Tacitness as a feature of the transmission of criteria for the recognition and realization of embodied principles, through modelling, finds its explanation in relation to the particular nature of 'embodied knowledge'.

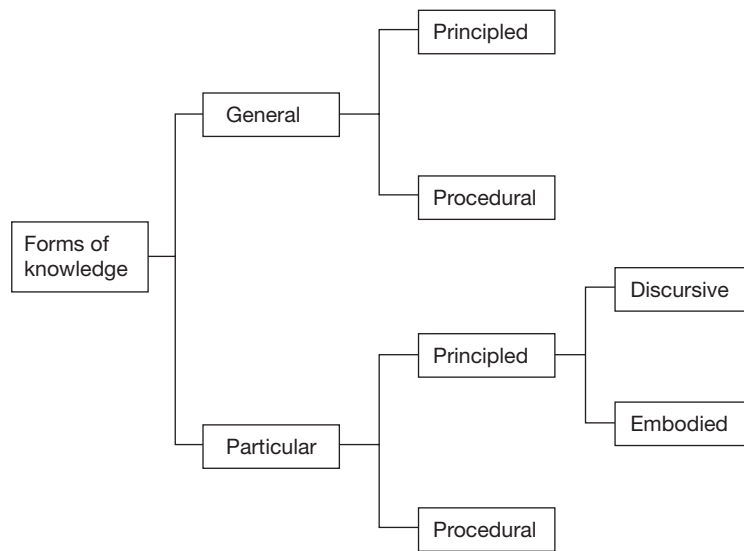


Figure 13.2 Distinction between general and particular forms of knowledge

What I hope I have succeeded in doing, through the explicit elaboration of this conceptual framework, is to show why Bernstein is able to position craft within vertical discourse and how it is that principled knowledge which, by virtue of its operating at the level of 'type', always constitutes the abstract, can manifest as 'particular' knowledge in the case of craft.

It is the same principle of arrangement to which Polanyi (1958: 88–9) refers in the following extract:

The medical student first learns a list of bones, arteries, nerves and viscera, which constitutes systematic anatomy. This is hard on the memory, but mostly presents no difficulty to the understanding, for the characteristic parts of the body can usually be clearly identified by diagrams. The major difficulty in the understanding, and hence in the teaching of anatomy, arises in respect to the intricate three-dimensional network of organs closely packed inside the body, of which no diagram can give an adequate representation. Even dissection, which lays bare a region and its organs by removing the parts overlaying it, does not demonstrate more than one aspect of that region. It is left to the imagination to reconstruct from such experience the three-dimensional picture of the exposed area as it existed in the unopened body, and to explore mentally its connections with adjoining unexposed areas around it and below it. . . . [Once this topographic understanding is achieved, the medical student] could derive an indefinite amount of further and new significant information from his understanding, just as one reads itineraries from a map. Such processes

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of inference, which may involve sustained efforts of intelligence, are ineffable thoughts.

What craft shares with other kinds of principled knowledge is that its procedures can only be understood if 'interpreted' through a principle. Procedures on their own turn into algorithms, as shown by Dowling (1998) for mathematics and Hodson (1992) for science. This is what has happened to much of the knowledge derived from job and task analysis as a basis for the specification of performance standards in countries where standards-based approaches to curriculum have been adopted, resulting in either over-specification at the procedural level of 'underpinning knowledge' (in Britain), or 'essential embedded knowledge' (in South Africa), or the assumption that the only knowledge which counts is that which may be seen in performance (Barnett 2002). Young (2001: 9), for instance, argues that 'underpinning knowledge':

often takes the form of lists of topics which either amount to little more than what anyone would know after a few weeks in a workplace (as in the case of sectors like retail and distribution), or include a combination of everyday workplace knowledge (what tools are needed or where to find a file) together with some scientific or highly technical topics such as lenses or transistors with little idea as to what depth they should be studied.

Having said this, however, it does not follow that because it can be shown that a principle of arrangement may be transmitted and acquired through 'doing' rather than through discursive and intellectual activity, that this is the case with all scientific principles. Mjelde (1997: 147) would like it to be so in her argument for a 'workshop pedagogy', which involves moving from the practical to the abstract (or from practice to theory), to be adopted more generally as a way of re-establishing the unity of head and hand.

One of the core issues in the present educational reforms is how to relate general theory to workshop learning and vocational theory. Today, students learn the doctrine of Pythagoras as general theory, not related to, for example, builders' use of Pythagoras's doctrine when they are building a house. Why not learn the doctrine of Pythagoras and measuring at the same time? Printers use chemicals in their everyday life. Could the theoretical teaching of chemistry be directly tied to the practical? Could the chemistry teacher work on the spot with the teacher in the workshop? Cooking apprentices learn the principle and formulae of evaporation in the physics classroom. In the kitchen, they see it in practice. Could they learn the principle and the formula in the kitchen and could the physics teacher work together with the workshop teachers?

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For Layton (1984: 29–30), the matter is not so straightforward. He offers a specific example to illustrate the point by referring to J.H. Pepper's *Playbook of Metals*, a popular textbook in 'technical education' at school level in the nineteenth century:

The *Playbook of Metals* went through numerous editions following its appearance in 1861. Though the years of its popularity saw the enunciation of Mendeleeff's Periodic Law, Pepper's account of metallic chemistry remained obstinately uncontaminated by considerations of periodicity to the end. The metallic elements were arranged alphabetically from aluminium to zirconium. Furthermore, elements which from a chemist's standpoint were interesting, frequently received scant treatment, whilst others such as iron, silver and gold were the subject of long chapters. Of course, the date of the publication provides the clue to the popularity of Pepper's book. It coincided with the discovery of gold in a number of colonies, including Australia, and the *Playbook of Metals* was a prospector's compendium for the young man going overseas to seek his fortune.

The significance of this brief allusion to a specific case of technical education is that prospectors' chemistry does not look like chemists' chemistry. A student of Pepper's book might become a successful gold prospector but he would be hard-pressed to earn his living as a soap manufacturer or a textile chemist, much less as a research chemist in a university. There was little in the book, which might be classified as transferable chemical skills or principles. In the same way chemistry for hairdressers might leave you with an understanding of keratin molecules, sulphur bonds and, today, dye materials, but – unless it also embraced the over-arching principles of chemical science – trapped in the salon for life.

Layton (1984: 30) uses this example to illustrate his central question:

Can a school science curriculum which is technical in the sense that it begins with specific applications, and relates to real-life situations, also satisfy the requirements of a liberal education in yielding general context-independent understandings? Or, putting the matter another way, in attending to the acquisition of general cognitive skills and principles, does the 'technical' course become so similar to the established 'liberal' counterpart, that few teachers will think it worth the effort to make the change?

Pye views workmanship as an extension of design, as, for him, 'design always involves making trial assumptions based on experience' (1978: 27). This does not mean, however, that he is denying the structural distinction between intellectual and manual labour. From his perspective it is the

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prepared mind that is able to abstract a 'class' of result from the particular objects and components involved and to reason about trial variations.

If we finally return to Bernstein, it becomes much clearer why he argues that transmission through modelling leads to the acquisition of a restricted code, albeit one where the 'ultimate display is a part of the discourse of an elaborated code modality' (1996: 191, as quoted previously).

Conclusion

Traditional craft apprenticeship, as a mode of transmission acquisition, is no longer deemed viable under contemporary forms of work organization, where continuous change is the norm (Guile and Young 1999; Sennett 1998); yet, in many countries, a new form of apprenticeship is being revived as a way of encouraging employers to provide access to unemployed youth who need to make the transition from school to work. In South Africa the introduction of employer-led 'learnerships', along the lines of the modern apprenticeships in Britain, is deemed a particularly crucial component of overall education and training provision. The new type of apprenticeship resembles the traditional master-apprentice relation in name rather than in form or content, with an altogether different kind of procedural vocational knowledge distributed.

While craft in its traditional form now relates mainly to mass production of ethnic artefacts, or to the lifestyle pursuits of those who want to opt out of the rat race, a study of its knowledge forms and pedagogies has much to offer those tasked with reform of vocational education and training. Craft as knowledge form and its related transmission-acquisition practices constitute a restricted orientation which cannot yield a resolution to the 'theory-practice' divide so ardently sought in current curricular reform, yet they bring a depth and complexity to the concept of vocational knowledge that has been missing for a long time.

Acknowledgement

An earlier version of this chapter was published under the same title in 2003 in the Special Issue on Adult Education of the *Journal of Education*, Number 29.

Notes

- 1 The term 'master' is used throughout this chapter in its historical sense.
- 2 Zilsel's aim is not to establish Western civilization as the natural peak of human evolution. He makes continual reference to the development of certain stages of the scientific spirit in various other civilizations to point out how amazing it is that fully developed science appears once only, in a certain period and under special sociological conditions.
- 3 While Dowling (1998) uses 'principling' and 'proceduralizing' as instances of abstracting and particularizing distributing strategies in school mathematics,

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- I use these terms to describe two knowledge forms that lie side by side. They become oppositional when they are split to generate different distributing strategies. In the production of scientific knowledge itself they are in a complementary relation.
- 4 'Trade school' is the term used by apprentices when they refer to the training centre of the Furniture Industry Board (now dissolved). It is not an official title but I use it to indicate the way in which apprentices viewed this component of their apprenticeship.
 - 5 Layton notes that 'science and art' would today be called 'science and design' (1984: 24).
 - 6 The irony is that it is mostly the remaining craft factories that still indenture apprentices and send them for training.

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14 Horizontal discourse in law and labour law

Mignonne Breier

Bernstein has said that the recontextualization of segments of horizontal discourse in the content of school subjects does not necessarily lead to more effective acquisition and is usually confined to 'less able' students, reducing vertical discourses to 'a set of strategies' to improve functioning in the everyday world of work and home' (1999: 169). His own writings contain relatively few 'examples' and are often seen by students as abstract, theoretical and 'difficult' to read. In his terms this could be regarded as a mark of respect for the reader, since Bernstein has also argued that the 'pedagogical frame is relaxed to include everyday realities . . . usually with the "less able children" whom we have given up educating' (Bernstein 1971: 215). Others who have worked within or around the Bernsteinian tradition have argued that the everyday can have an important role to play in formal schooling if it is used to provide an entrée into the formal, rather than as a means to limit certain students to the intellectual cul-de-sacs of manual work and domestic life (Dowling 1993, 1998; Ensor 1999; Muller and Taylor 1995; Taylor 1999).

In the field of adult education the everyday assumes particular significance because it is widely assumed that prior informal and non-formal experience of adult learners should be acknowledged, valued, reflected on and built upon in their educational programmes (Brookfield 1998; Freire 1972a, b; Knowles 1990; Kolb 1984).¹ How this is to be achieved in a specific disciplinary context and within a programme with a fixed curriculum is a neglected issue which this chapter attempts to address. The analysis is based on a Ph.D. study of two university courses in labour law and presents extracts from two lectures to illustrate the dilemmas associated with the recruitment² and recognition of prior informal experience in the pedagogy of adults in a formal educational context.

The case studies

The first course discussed here was a postgraduate diploma in labour law at where I shall call University 1. The entrance requirement for a postgraduate diploma is usually a degree, but this course also admitted students with school matriculation, though only if they had extensive experience in the field of

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labour law and if they 'passed' an interview in which they were questioned about their work experience and about two recent employment Acts. Ten students were admitted in this way, including four unionists from the progressive trade union movement. The rest spanned a broad range of occupations, and included labour lawyers, industrial relations and human resource managers, and full-time students with no work experience who had recently completed law degrees. Course 1 consisted of two intensive teaching blocks of two weeks each in February and October. Students were required to attend lectures and complete four assignments and a dissertation by the end of the year. Some were granted extensions on their dissertation but those who had not completed all four prior assignments by December were not allowed to continue.

By the end of the year thirty out of the sixty-four students admitted had completed the course. Eleven more had completed all four assignments to continue with the dissertation. Twenty-three had not met the criteria for continuation. Of the ten students admitted on the basis of their experience, five had completed and passed the course, two had completed the assignments only and three, all trade unionists, did not meet the criteria for continuation. The top student had no practical experience of labour law but extensive academic experience, and had worked in high-level positions in the pension industry.

Course 2 was a certificate in labour law at University 2 run by a project set up in 1993 with financial support from overseas funders, offering training, research and resource services to trade unions, NGOs and government departments. It consisted of eleven evening sessions extended over eleven weeks and a three-hour examination. Adults with less than school matriculation (Grade 12) were allowed admission if they had relevant experience because the course did not count as a university credit and could not be used to gain access to a university degree programme. Of the thirty-eight students who registered, eleven did not have matriculation, including nine with Grade 10 only. Occupations ranged from working class to professional, and the class included a lawyer with an LL B plus a Masters' degree in law from Oxford University.³ Thirty-three students sat the exam and twenty passed. Of those with less than Grade 1, eight sat and two passed, both full-time trade unionists. The lawyer gained the highest marks.

Course 2 focused on the Labour Relations Act of 1995 and the structures set up under this legislation to resolve disputes, in particular the Council for Conciliation, Mediation and Arbitration (CCMA). Part of Course 1 covered similar ground and it is this terrain that I concentrated on for purposes of comparison. One of the most important differences between the two courses concerned the role of prior informal experience in transmission and acquisition.

The lecturers in Course 2 concentrated on transmitting the rules and procedures provided for in the legislation and their application to hypothetical situations (case study exercises). In Course 1 there was some discussion of

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rules and procedures, and students were also given case study exercises, but the primary focus was on how laws had been applied in actual, specific cases. Its students were also shown how to access information in future, including legislation, case law and journal articles. The difference in approaches is made clear in the transcript extracts which follow. In the first, from the diploma course, the lecturer tells of the ways in which judges 'get around' certain laws in practice. In the second, from the certificate course, it is the student who introduces the complexities of actual practice while the lecturer emphasizes the general rule.

In analysing the transcripts I ask the question: What was the role of horizontal discourse in the pedagogy of these courses? This chapter shows that it is difficult to identify horizontal and vertical discourse empirically and presents alternative distinctions for the purpose of the analysis. It discusses the conflict between rule and experience which emerged in the study, and analyses this in relation to the broader tension in law between the general and the particular. It is argued that lecturers and students need to understand the role of the everyday in the structure and logic of law to bridge the gap between formal and informal.⁴

Horizontal and vertical discourse in a postgraduate diploma in labour law

One of the first dilemmas to arise in my analysis of the two courses concerned ambiguities surrounding terms, such as horizontal, everyday, informal and local used to denote knowledge which is not vertical, esoteric, formal and academic. Bernstein's earlier work distinguished between 'everyday' and 'uncommonsense' knowledge (Bernstein 1971: 206–15). The latter, Bernstein says, is 'knowledge freed from the particular, the local, through the various explicit languages of the sciences or the implicit languages of the arts which make possible either the creation or the discovery of new realities' (ibid.: 215). Bernstein did not attempt an explicit definition of everyday knowledge until the late 1990s. He then began to refer to 'everyday' or 'commonsense' knowledge as 'horizontal discourse' and said it had a group of well-known features: it is likely to be 'oral, context dependent and specific, tacit, multi-layered and contradictory across but not within contexts'. Crucially, it is segmentally organized. 'Horizontal discourse entails a set of strategies which are local, segmentally organized, context specific and dependent for maximizing encounters with persons and habitat' (Bernstein 1999: 159). By now, uncommonsense or educational or school(ed) knowledge had become 'vertical discourse' (ibid.: 158) and was said to take two forms. It could have a coherent, explicit and systematically principled structure, hierarchically organized as in the sciences, or it could take the form of a series of specialized languages, as in the social sciences or humanities (ibid.: 161).

In the cut and thrust of pedagogical encounters, however, it is difficult to distinguish between 'horizontal' and 'vertical', as the following extract

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from a postgraduate diploma illustrates. The lecturer, a labour lawyer and part-time commissioner in the CCMA, has been talking about grounds for dismissal and the question has arisen: How does one deal with a situation where an employer wants to dismiss an employee on grounds of incompatibility, which is not specified in the Act?

Transcript 1

STUDENT 1: [*name of Lecturer 1*] Just because you can't put something in a category, that doesn't exclude you from dismissing someone for incompatibility? Because you can't, because it doesn't fit a category, does it mean it doesn't exist as a ground?

LECTURER 1: Do you mean incompatibility? Because it is not listed in the Act?

STUDENT 1: Ja. Does it mean you can't dismiss him?

LECTURER 1: My understanding is that you can only dismiss on three grounds: it's misconduct, incapacity, operational [requirements].

STUDENT 1: [*Inaudible*]

LECTURER 1: That's what I am saying. We all understand an employer must at the end of the day be able to dismiss where the workplace has been undermined because of people who can't co-exist and you have gone to the lengths of trying to make it work and it hasn't. And that's what I am saying. What the courts will do is they will fit it back into one of those categories or they will just fudge it and call it incompatibility and not raise the issue. The courts are very good at doing that. They just don't raise the issue, they say incompatibility, they don't point out, oh hell you know we have had a look at the act there's nothing here, they just say incompatibility. And everybody is too sensible to challenge it because they know at the end of the day it's a wise decision even if it is not technically in line with what the act says. So that is how courts get around these things.

In this interaction the student, who is also a lawyer, though not in the field of labour law, presents the issue in impersonal legal terms (using terms such as 'incompatibility' and 'ground' rather than presenting a narrative) which could be regarded as an indicator of vertical discourse. The lecturer responds by referring to de facto practice, the way 'courts get around these things'. His answer contains segments of horizontal discourse but the point the lecturer is making might also be considered to be vertical, if one considers the logic of law, which is essentially about the application of rules, principles and concepts to real-life experience or 'cases' (Hahlo and Kahn 1968). What happened and happens in practice are vital dimensions of legal knowledge. This is not a clear-cut process. As the transcript indicates, it is recognized that the law can take on various forms in practice as it is interpreted and applied by individual judicial officers who are not, as a prominent South African judge has put it, 'ideological virgins' (Judge Edwin Cameron, quoted

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in Fedler and Olkers 2001: ix). For this reason a very important aspect of the work of lawyers and legal academics is the reading of case law.

The transcript shows the complex relationship between horizontal and vertical in pedagogic discourse. Verticality (the speciality of legal language) is not the preserve of the lecturer and horizontality (everyday practice) is shown to have a place in the formal discourse of labour law. Certain gaps in Bernstein's theory made it difficult for me to use his concepts in an analysis of empirical data. Bernstein did not address the structure of law, or indeed any 'region' as he might have categorized law along with other fields of professional education such as medicine, engineering and architecture (Bernstein 1996: 65).⁵ The legislation and associated concepts and principles that are applied to particular ranges of everyday events in law could be seen as substitutes for the specialized languages associated with 'horizontal knowledge structure' (Bernstein 1999: 163). However, none of his concepts related to horizontal and vertical knowledge forms provide clear indicators of what counts as 'horizontal' or 'vertical' in empirical data on real-life interaction between knowledge acquired informally and formally.

As a result of these complexities and gaps, I developed a language of description that eschews the terms horizontal and vertical in favour of concepts which allow for fine distinctions between utterances that recruit the general, the distant, the abstract and those that recruit the particular, the local and the concrete. My concepts of 'localizing and generalizing strategies' draw on the work of Dowling (1993, 1998) and Bourdieu (1977), and their interactions are mapped in the form of a network analysis that is inspired by the work of systemic linguists such as Halliday (1973), even if it follows the more diluted approach of Bliss *et al.* (1983). This is discussed more fully in Breier (2003). Suffice it to say here that in trying to identify how prior, informal knowledge is recruited and recognized, I look for localizing strategies that refer to prior personal experience, solicitations of, comments on and references to (constructions of) the prior experience of the other party in the pedagogical relationship and local generalizations based on that experience. Against this are generalizing strategies called formal generalizations that state, explain, interpret or solicit general rules, principles, concepts or propositions and formal applications that apply general rules, principles concepts or propositions to particular examples, or solicit their application.

The contrast between general and particular that underlies many of the strategies distinguished above is illustrated in the next section.

Rule versus experience in a certificate course in labour law

I have said that lecturers on the certificate course tended to emphasize the general rule and procedure. It was also common for students to challenge the general rule articulated by the lecturer on the basis that the experience to which they were party negated its validity. The following transcript extract is concerned with such a challenge.

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The interaction was between a lecturer (whom I call Lecturer 2) who was also a labour lawyer and part-time commissioner of the CCMA, and a 35-year-old female student (Student 2) who had worked in an administrative position before becoming a full-time social science student at the university concerned. She had extensive, informal experience of labour law, having been a shop steward for the union serving non-academic workers at the university and had also been involved in a protracted case against the university administration in which she alleged that she had been victimized for her union involvement.

In the exchange, Student 2 challenged a point made by Lecturer 2 – that only disputes which came into operation after 11 November 1996 could be dealt with by the CCMA – on the grounds that it had dealt with her personal dispute, which began long before this date. The lecturer deflected the issue by saying it could not be addressed without recourse to the specific circumstances involved, and confirmed that the point he had made earlier was the general rule. In doing so the lecturer recruited his own personal experience (he said he had had occasion to dismiss a dispute on this basis) and also drew on generalizations from practice (there were a host of other disputes, he said, which had been dealt with in this way).

Transcript 2

LECTURER 2: Only disputes that have been referred, only disputes that came into operation after 11 November 1996 can be dealt with by the CCMA.

All disputes that arose prior to 11 November 1996 need to be dealt with in terms of the old provisions.

STUDENT 2: It depends why you are dealing with this.

LECTURER 2: OK, you tell me why, give me an example.

STUDENT 2: An incident that happened prior to 11 November.

LECTURER 2: Like what? Dismissal?

STUDENT 2: Unfair labour practice that occurred prior to that and then the institution has the recognition agreement.

LECTURER 2: Yes.

STUDENT 2: Right. They [unclear] procedure within certain time frame, right, according to the recognition agreement, with the result time has lapsed, OK, right, the case is still pending, there is still a case hanging, now, after 11 November 1996, the case landed up at the CCMA but it happened prior to 11 November. Those circumstances couldn't. . . .

LECTURER 2: Well, it's very difficult to talk about the specifics of that in the absence of the specific circumstances. The general rule is, let's just say there might be very very very particular circumstances, the general rule, and again I would like to suggest for your purposes – apply the general rule. The general rule is that any dispute that arose before 11 November 1996 can't be dealt with in terms of the dispute resolution procedures in the act. There might be very extreme and particular circumstances, but

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I've had occasion to dismiss a dispute because it arose prior to 11 November 1996 and there're a whole host of disputes that were dealt with on that basis. . . .

In a lengthy interview later, Student 2 revealed that her case had in fact not been dealt with by the CCMA, as she suggested in class. It had only been put on the roll and allowed a brief hearing. The commissioner, after considering the issue concerning the dates and telling her and her representatives that he was not allowed to hear such a case, told the parties to pursue the recognition agreement which existed between them. In terms of this agreement they were required to settle a dispute by mediation or arbitration. And so, in the end, the dispute was heard and resolved by an independent arbitrator and Student 2's case could not be regarded as being contrary to the lecturer's general rule.

Afterwards the student said the lecturer should have given her a 'hearing' but conceded 'there was no time'. She concluded that the lecturer presented a positive image of the CCMA because, as a commissioner, he was 'biased' in its favour. The lecturer was also out of touch with 'real experience'.

The disappointment that this student felt as a result of this exchange appeared to be exacerbated by her expectations that her experience would be valued in the course. She said the only reason she attended was to get her experience 'on paper'. The exam gave her no opportunity to do this, which was probably one of the reasons why she failed.

The everyday in law and labour law

To understand the conflict above and to consider how it might have been avoided, one needs to consider the role of individual experience in law and labour law more generally. In this I am again following Bernstein who has argued the importance in pedagogical research of examining symbolic systems (disciplines) as well as the fields within which they are positioned, suggesting:

The form of the specialization of [the] symbolic system and the structure of the field may, under certain conditions, interact and so contribute in a fundamental way to the games, practices and strategies.

(Bernstein 1996: 170)

Inductive versus deductive processes and principles

I have already stated that the practice of law is essentially about the application of laws to particular cases. What is relevant here is that this follows a deductive principle, while the development of legal rules may be inductive. Laws alter with changing economic and social circumstances as well as with changing views of justice. In labour law, the inductive principle is particularly pertinent. Many aspects of the new labour legislation are the

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result of pressures by workers and trade unions for change, as Du Toit *et al.* (1998) have pointed out. With this in mind, it is not surprising that many of the unionists on the courses that I observed found it difficult to submit themselves to the pedagogical hierarchy, and that students such as Student 2 had expectations that their experience would be credentialed.

Law, as a discipline or field of education, is integrally bound to the practice of law and to a greater or lesser extent, depending on its focus, reflects that structure. This means, among other things, that it has a number of divisions, each reflecting an area of application and that each division shares common deductive and inductive principles. The distinguishing factor of each division, in the academic and practical context, lies with the nature and scope of the empirical phenomena to which the rules, principles and concepts apply or must be applied. Specialization within each division is associated with the range and depth of knowledge about the law and its application (case law) and, in the academic context, with depth of theoretical and contextual knowledge as well.

Figure 14.1 depicts the structure of law as a field of practice and of education. The taller columns indicate long-established divisions of law and the shorter relatively recent additions, such as Labour Law. The downward arrows indicate the deductive process whereby laws are applied to 'real life' cases. The upward arrows reflect the inductive process whereby laws are developed in response to changing socio-economic conditions and pressures and changing societal values.

Tensions between the general and the particular

The second feature of law that is relevant to my analysis concerns the inherent tension between the general and the particular.

Laws⁶ state what rational human beings ought to do or not do and it is generally accepted that laws should be reasonable, equitable and general (in the sense of being widely applicable).⁷ Contradictorily, their generality ensures that they are not always felt to be equitable by those to whom they are applied, since, as Dostoevsky (1963:306) put it in his novel *Crime and Punishment*, 'every crime, for instance, as soon as it actually occurs, at once becomes a thoroughly special case and sometimes a case unlike any that's gone before'.

Bourdieu (1990: 184) has noted that a judgement which is 'most formally in conformity with the formal rules of law may be in formal contradiction with the evaluations of the sense of equity'. This sense of equity proceeds 'directly from one individual case to another, from a particular transgression to a particular punishment, without passing via the mediation of the concept or of the general law'.

This verbal exchange illustrates the ongoing tension in law between the general and the particular and the trajectory from general to particular that characterizes the legal 'gaze'. I am using the latter term as Bernstein did to

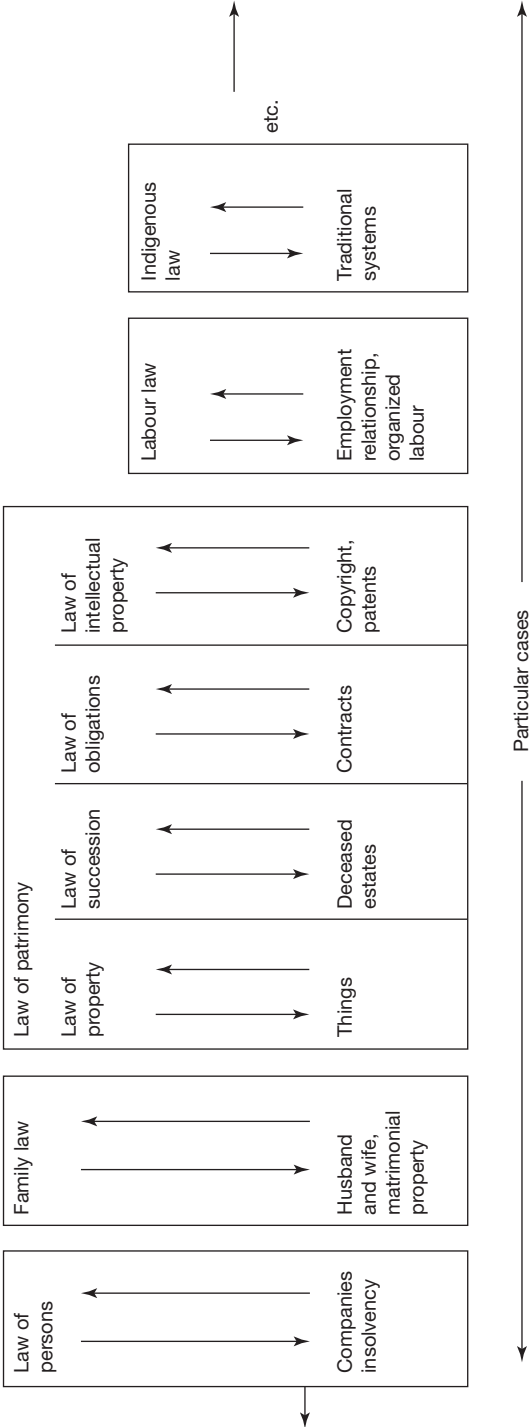


Figure 14.1 Law in practice and as a discipline

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refer to the perspective of expert or transmitter, transmitted tacitly to acquirers, which enables the recognition and realization of phenomena of legitimate concern to a discipline or field of education or of practice (Bernstein 1999: 172). A professor on Course 2 described it in this way:

Without theoretical education, people tend to see the practical, the concrete or whatever up real close and your academic quote unquote tends to see it in the framework of the rule, what ought to be versus what is. . . . Your legal academic bases him or herself on the study of hundreds of cases. What happens in your one workplace or ten workplaces . . . is almost irrelevant.

Characterizing the legal gaze is particularly difficult when one considers that both lecturers and students use localizing strategies, including the recruitment of personal experience. The difference lies with the purpose and trajectory. The student who has not been inducted into the theoretical approach described by the professor above, or who has expectations that her personal experience will be of great value and will be 'recognized', tends to focus on the particularity and exceptionality of her experience in relation to the general rule and inevitably finds a mismatch. Lecturers such as Lecturer 2, who are trying to simplify the law, focus on the abstractions and commonalities associated with the general and limit their localizing strategies to examples that will confirm these generalities, or they present the everyday in the form of hypothetical case studies. Lecturers such as Lecturer 1, who are trying to reflect the complexity of law in practice, present accounts of individual cases, including those in which they have been personally involved, to show this complexity. Their generalizations are based on numerous cases that have been reported in secondary written sources, such as law reports and journals.

Lecturer 2 recruits his own personal experience that is associated with his dominant position in the legal hierarchy and as a white male in society in general. That this experience is able to support rather than contradict the general rule is particularly frustrating for the student with a worker identity or orientation. They need a particular orientation to pedagogy to suspend judgements on the power relations of the course, and to accept that the recruitment of personal experience by a lecturer is not necessarily just the privileging of the experience of the powerful (the kind of conclusion that Student 2 reached) but may have more general significance as a pedagogical strategy.

Lecturers need a particular understanding of their own role as transmitters of legal knowledge and the relationship between that knowledge and legal practice, in order to facilitate the development of such an orientation. They also need an understanding of the experience of the student in order to show the connections between rule and everyday to facilitate induction into the esoteric domain. This is not easy. Anecdotes such as Student 2's are difficult

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to relate to unless both communicants have had the same or similar experiences, or the experience is described in vivid and comprehensive visual terms, which takes time. This is the dilemma of horizontal discourse. Lecturers need a great deal of time and patience or a great deal of experience 'on the ground' to 'recognize' and 'hear' the accounts presented by their students.

The situation is made more complex by discourses on RPL, which create the expectation that prior informal experience can usefully be recruited by the student in any educational context and will be recognized to the extent that it can count for access or credit. This has the potential to blind the student to the symbolic labour (Breier 2003: 235)⁸ associated with any formal learning. The extent of this labour varies from student to student depending on the extent to which their natural modes of participation differ from that which is expected. In this context this labour is necessary for the acquisition of the relevant generalizing gaze.

Significantly, the general rule was presented quite differently in Course 1. Here there was less attention paid to the rules and procedures associated with the legislation than to the way in which it had been interpreted in actual cases and the ways in which students could access such information. In the lectures there were fewer hypothetical examples and more references to actual cases. The lecturers, who were seasoned labour lawyers and had often had personal experience of the cases concerned, referred frequently to their personal experience. Course 1 also provided a formal opportunity for students to recruit their prior personal experience in one of the assignments, but this was not in the form usually associated with adult education or RPL discourses. Instead of being invited to recruit their experience, as is, and then reflect on it, students were asked to research their own workplaces or unions and audit certain practices, or to analyse certain conditions in the light of specific legislation and case law. In other words, they had to cast the legal gaze on that experience before recontextualizing it for pedagogical purposes.

There also appeared to be less conflict between student and lecturer on the grounds of authenticity of example in Course 1 than in Course 2. I interpret this as the result of using real, reported cases which meant that Course 1 was aligned more clearly with the practice of law. I suspect the cases also resonated more easily with student experiences than hypothetical examples, and had more authority because they were actual and had been reported. The complexity of actual experience which was absent from the hypothetical was injected into Course 2 in the form of interventions by students who referred to cases in which they had been personally involved.

Conclusion

It was clear throughout the study that there was a role for the horizontal in the vertical, simply because the everyday is an integral part of the practice and discipline of law, without which there would be no reason for either to exist. However, the manner and purpose of recruitments of the everyday

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varied across the two courses and between lecturer and student. Course 1 presented the law as complex and messy, and showed its application in real-life cases. Lecturer 1 drew on his knowledge of numerous cases to state what happens in practice. Course 2 attempted to simplify the law into a set of general rules and procedures, and to show their possible application to hypothetical cases. In the interaction above, Lecturer 2's recruitment of personal experience is in order to emphasize general rules and procedure.

In Course 1, students without the worldly gaze associated with the course would need to be shown how that perspective was associated with numerous, actual reported cases which could be accessed through reading case law. Individual experiences or events had to be analysed in the light of rule, principle, concept or case law, not the reverse. In Course 2, students needed to be informed that the course was endeavouring to simplify the law into a set of rules and procedures. These might well take a different form in their actual implementation, but it was beyond the scope of the course to deal with such complexities.

Ideally, lecturers should have used the everyday as a means to scaffold acquisition of the relevant gaze. In this way they could have helped students to recognize the border between informal and formal and how to cross the line (Muller and Taylor 1995). But to do this, lecturers needed time to hear students' accounts to acquire familiarity with the contexts of their personal experiences. Neither Lecturer 1 nor Lecturer 2 did this. My research indicated that this was probably because they did not know the importance of such a strategy. None appeared to give any real attention to pedagogical issues. Furthermore, there was inherent confusion in the course as to what kind of gaze should be acquired.

The lecturers who were lawyers (including 1 and 2) drew on their own practical legal experience through explicit references, jokes and asides to show their associations with both sides of the employment relationship and with the legal structures set up to enforce labour legislation. But students came from a vast range of occupations and had intentions of using their learning in very diverse ways. For many there was no appropriate modelling and the codified dimensions of the course presented a kind of academic common denominator. In this context, it is not surprising that it was students with no practical experience of labour law, but who had extensive exposure to legal academic discourses, who achieved the highest marks in both courses.

For those who had not had such exposure and were unable to cross the border between informal and formal, the question might arise: How legitimate is the border? The legitimacy of academic borders is a constant theme in some experiential learning and RPL discourses, and there will surely be some who will argue that the best way to assist the students who did not succeed on Course 2 would be to erase at least aspects of that border. In particular, they might say, the written assessments should be supplemented or even replaced by oral assessments, which would advantage the non-academic student. I would argue that if this were to prepare the students for

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the practice of labour law, para- or otherwise, then there would be grounds for recommending this. But as long as the written text – statute, law report, commentaries, legal letters – provides the basis of that practice, then any assessment that does not prioritize the written word would serve only to further disadvantage those students.

Notes

- 1 I use the term 'recruitment' (see also Dowling 1993, 1998; Ensor 1999) to denote the ways in which prior experience or learning is drawn upon in the pedagogic process.
- 2 This principle is extended further in the practice of 'Recognition of Prior Learning' (RPL) in which knowledge and skills acquired from prior experience, including that gained in everyday work or life contexts, is assessed against formal standards for purposes of credit or access.
- 3 A very wide range such as this is a feature of some adult education courses, usually those without formal assessment.
- 4 It should be noted that in this chapter I do not concentrate on the experience of students with limited formal qualifications, particularly trade unionists, although this was a major focus of my overall research. Here my focus is on prior experience per se, to address the issues mentioned above. The points made acquire even greater significance in the pedagogy of adults with very limited formal educational experience.
- 5 He does state that the regions are recontextualizations of singulars (e.g. physics or economics), but does not explain how the structure of the singular is transformed in the process.
- 6 I am referring here to the laws of the lawyer and not to other types of laws (e.g. the laws of nature or science or the rules of games).
- 7 This does not mean that laws have not been developed, as in the South African apartheid era, for example, that meet none of these criteria.
- 8 My concept of symbolic labour refers not only to the pedagogic effort required to master the content and literacies of a formal programme, but also to the extent to which students are prepared to be implicated in the imposition of 'symbolic violence' (Bourdieu and Passeron 1990) upon themselves.

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15 The wrong kind of knower

Education, expansion and the epistemic device

Karl Maton

Introduction

This chapter has two principal purposes, one substantive, the other theoretical. Substantively, it explores the question of how systems of education respond when facing rapid expansion. The most significant change undergone by education systems worldwide over the past century has been meteoric expansion, yet this remains one of their least studied aspects. In this chapter I specifically examine the hitherto often neglected role played by perceptions of the new learner that expansion is expected to bring into or retain within education. Moments of anticipated rapid expansion raise issues of what is to be done with these new students – they pose questions of who should be taught what, when, where and how. Analysis of such moments enables insight into the differential distribution, recontextualization and evaluation of forms of educational knowledge. By problematizing these issues, debates over new students also bring to the surface the tacit belief systems of educational fields and so afford heightened insight into the transformation, reproduction and change of education. To this end I examine a specific example of such a moment: the ‘new student’ debate prefacing the rapid expansion of English higher education during the early 1960s. Actors responsible for overseeing expansion focused debate on new, working-class students expected to enter universities in large numbers and their perceived needs legitimated radical changes undertaken within higher education, including the creation of new universities characterized by innovative pedagogic and disciplinary practices.

The second purpose is to illustrate and extend the concepts of legitimation code and epistemic device. These build on Basil Bernstein’s conceptual framework and were originally developed to explore the generative principles of knowledge structures and their intellectual fields. Here I extend the application of these concepts beyond the question of knowledge production. Specifically, I analyse the new student debate in terms of struggles for control of the epistemic device. The chapter comprises three main interrelated parts. First, I explain the conceptual framework. Second, I analyse the structuring principles of: English higher education prior to this debate; the new student as constructed within the language of legitimation of actors overseeing

expansion; and their related plans for the 'new' universities. These are shown to exhibit knower code, knowledge code and knower code legitimation, respectively. Lastly, I analyse how the new student debate worked to maintain the hierarchical relations of power and control in the field of English higher education in the face of anticipated change. In short, by constructing new students as the wrong kind of knower and, in the form of the new universities, revalorizing the field's existing legitimation code, the managers of expansion maintained their control over the epistemic device, and thus a key underlying structuring principle of the field.

Conceptual framework: codes and devices

This chapter forms part of a cumulative and ongoing project to develop a dynamic and epistemological sociology of knowledge. The aim is to provide an empirically applicable conceptual framework that enables the study of both social relations and intrinsic structures of knowledge (what Bernstein referred to as 'relations to' and 'relations within'), as well as their interactions and dynamics of change, for all forms of knowledge. This chapter uses and illustrates one dimension of this developing conceptual framework: legitimation codes and the epistemic device.

These concepts emerged primarily from developing the ideas of Basil Bernstein in directions immanent to his cumulative theory. Bernstein (1999) outlined the trajectory of his work as a movement from the analysis of the pedagogic transmission and acquisition of existing knowledge within educational contexts, through a theory of the construction of the pedagogic discourse being transmitted and acquired, to the study of the knowledge subject to such pedagogic transformation. The first of these was famously conceptualized in terms of educational knowledge codes (Bernstein 1975). These concepts also enabled empirical research of the workings of the 'pedagogic device', which Bernstein developed to account for the construction of pedagogic discourse. He postulated the pedagogic device as the means whereby actors are able to regulate the principles and social bases of the distribution, recontextualization and evaluation of pedagogic discourse (Bernstein 1990: 165–218). In the course of ongoing struggles within pedagogic fields, actors strive to control the pedagogic device in order to be able to shape the form taken by pedagogic discourse and so further their own interests. Having conceptualized the structure and generative principles of *pedagogic* discourse, Bernstein turned his attention to the intellectual fields from which knowledge is recontextualized to become pedagogic discourse (Bernstein 1999, 2000). With the concepts of 'knowledge structures' and 'grammars', Bernstein provided the means of systematically describing differences between fields of knowledge production in terms of their organizing principles. What remained was a means of accounting for the *construction* of new knowledge, i.e. a means of conceptualizing the underlying generative principles giving rise to these knowledge structures and grammars.

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This formed a key starting point for Moore and Maton (2001), where these generative principles were conceptualized in terms of an 'epistemic device'. The epistemic device was postulated as the means whereby intellectual fields are maintained, reproduced, transformed and changed. Whoever controls the epistemic device possesses the means to set the structure and grammar of the field in their own favour. Through illustrative analyses of mathematics and literary criticism as fields of knowledge production, we showed how different 'settings' of the epistemic device generate different knowledge structures and grammars and so shape intellectual fields. Such empirical study was enabled by the concepts of legitimation codes which had been developed through analysis of the language of legitimation (claims for knowledge, status and resources) of actors in intellectual fields (Maton 2000a, b). Applying Bernstein's concepts of educational knowledge codes and knowledge structures to an analysis of British cultural studies I found these characterized it as both weak classification and framing *and* strong classification and framing, respectively. I argued that this *prima facie* contradiction was resolved by distinguishing between the *epistemic relation* and the *social relation* of knowledge. These relations refer to two empirically co-existing but analytically distinguishable dimensions of knowledge and practice, namely that knowledge claims are *by somebody* and *about something*. In this study I defined these as follows. The epistemic relation (ER) refers to the relation between knowledge and its proclaimed object of study; the social relation (SR) is between knowledge and its author, the subject making the claim to knowledge. Each relation may be strongly or weakly classified and framed. Thus a language of legitimation may be conceptualized in terms of the strength of classification and framing it announces for what may be claimed knowledge of and how (ER), and for who may claim knowledge (SR). These strengths together give the legitimation code or specific 'setting' of the epistemic device. Varying the relative strengths of SR and ER generates four potential legitimation codes of which two were identified as predominant within extant intellectual fields: the knowledge code emphasizing mastery of specialized procedures (ER+, SR-), and the knower code emphasizing social attributes of the subject (ER-, SR+).¹ In more general terms, the knowledge code is predicated upon the rule 'What matters is what you know', and the knower code is predicated upon the rule 'What matters is who you are'.

In short, legitimation code augments Bernstein's concepts of strong/weak grammar to analyse the underlying principles generating knowledge structures; and the epistemic device analyses the means whereby these codes are established, maintained, transformed and changed in the course of struggles within intellectual fields. The epistemic device was, however, intended to *complement* rather than replace the pedagogic device. Just as Bernstein's theory shows the pedagogical nature of social relations well beyond the classroom, we argued that the epistemological nature of social relations is similarly universal and ubiquitous. Analyses of knowledge *production* had

highlighted a new issue necessitating conceptual development because epistemological issues are muted and secondary to pedagogic concerns in arenas of recontextualization and reproduction. None the less, *both* devices form the basis of all three arenas.² Knowledge production, recontextualization and reproduction are all both pedagogic and epistemological. Thus, though the concepts were developed through studies of knowledge production, they were intended to illuminate educational knowledge and practice more generally. This forms the starting point for two related papers where I analyse continuity and change within higher education. In Maton (2004) I shall focus on changes within its symbolic field or disciplinary map; in this chapter I analyse its social field – institutional map and pedagogic practices.

The ‘new student’ debate

In the early 1960s English higher education was on the cusp of dramatic expansion.³ An unprecedented governmental inquiry was being published (Robbins Report 1963), sixteen institutions were chartered as universities and student numbers doubled (Layard *et al.* 1969). Studies of such changes often focus on state reports or student experiences – the view from above and below. The relatively high autonomy enjoyed by higher education, however, highlights the significance of the view from *within* the field; as a major study of academics during this period declared, ‘the university teachers themselves are the managers of expansion’ (Halsey and Trow 1971: 26). Among these actors it was not expansion per se but questions of *who* should have access to *what* and *where* that focused debate. A spectre was haunting English universities: the ‘new student’. This student was defined as the first of (usually) his family to enter university and typically of working-class origin. Such students were portrayed as a major challenge for higher education, bringing ‘their own problems for which the universities have to find the appropriate answers’ (Fulton 1966: 26). Moreover, they were directly associated with dramatic institutional change. Huge financial government investment was ploughed into the creation of eight brand new, fully chartered universities during the early 1960s. These ‘new’ universities were heralded as radical, progressive and initiating ‘a sort of revolution within a revolution [...] the redrawing of the map of knowledge itself’ (Hall 1965: 117). Crucially, they were explicitly legitimated by their planners as the solution to the new student problem. The model of this student was thus central to the form taken by expansion.

This new student debate among the ‘managers of expansion’ is my focus here. Drawing primarily upon the public contributions of actors responsible for shaping these institutional changes, I analyse their representation of the new student and plans for the new universities in terms of the legitimation code each represents.⁴ I then discuss how these constructed problems and solutions contributed to continuity and change within higher education.

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I begin with a brief outline of the field of institutional positions prior to this debate and into which the problematic new student would arrive.

In the immediate post-war period the social field of English higher education was represented by participants as a polarized and hierarchically arranged field of institutional positions. The poles of this field were represented by two ideal types that comprised competing visions of higher education: a higher status 'English university' ideal and a lower status technological model. The English ideal represented a realization of the ruler by which universities were measured; the grouping of institutions into university types and ranking in status by participants depended on approximation to this ideal (Halsey 1961). This model comprised an assortment of empirical characteristics based on an idealized version of mid-nineteenth-century Oxford and Cambridge (Halsey and Trow 1971). One of the key threads running through these characteristics was the significance they accorded the university as a social context for cultivating knowers. A stress on 'academic freedom' and 'institutional autonomy' underscored the necessity for individual academics and universities to be protected from external political and economic interests, keeping the locus of allegiance, identity and practices *within* the strongly bounded institution. Similarly, liberal humanist ideas of 'knowledge for its own sake' were deemed essential and notions of vocational relevance viewed as anathema to university education. Rather than training students to attain a mastery of specialized procedures, education was defined as the inculcation of students into a way of life through cultivating specialized sensibilities. Universities should produce 'university men' (typically men) who identified themselves with their alma mater and were cultured knowers rather than technocrats. This vision portrayed an organic community of teachers and taught 'co-operating with leisurely confidence in the task of preserving and transmitting a cultured way of life' (Halsey 1961: 55). According to the ideal, students should be hand-picked on the basis of the fit between their habitus and the institution's established life and character rather than their educational qualifications. It thereby trumpeted the virtue of the amateur generalist with a breadth of culture and denigrated specialization to specific disciplines. The institutional character was further emphasized through the weight given to the longevity and tradition of universities: the older the institution, the higher its status.

One key thread throughout this ideal was an emphasis on the social context of privileged knowers at the expense of possession of specialized procedures. Analysing the principles underlying this empirical ruler in terms of legitimation code, one can describe higher status institutional positions as representing strong classification and framing of the social relation, and weak classification and framing of the epistemic relation: a knower code. In contrast, the technological model of the university, which lower status institutions were viewed as resembling, was of a newer, non-residential institution offering training in specialized technical competencies to anyone with sufficient educational qualifications; this ideal announced that what

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mattered was what you knew, not who you were – a knowledge code. In short, the prevailing conception of university education within English higher education was that of cultivating knowers rather than training knowledge specialists.

The new student

For the managers of expansion the new student was at odds with this established university ideal:

Concealed behind so many more of our university entrants now is the struggle between the home or the sub-culture and the life that you are trying to make him lead and the values that you are trying to give him.
(James, in Hall 1961: 155)

According to this conception new students presented problems on two fronts, equating to social and epistemic relations: they brought dispositions that would disadvantage them within universities; and they believed that what mattered in education was specialist knowledge.

The wrong kind of knower

The cultural background of new students was, Vice-Chancellors argued, likely to have profound consequences for their ability to succeed. The conventional single-subject honours degree course at university derived:

from a time when it was reasonable to suppose that students entered the university after liberal education, and, in most cases, from cultivated or bookish homes.

(Thistlethwaite 1966: 58)

Disciplinary specialization was predicated on cultural breadth that, in turn, assumed a certain social class of knower. In contrast, new students were said to come from 'homes with no tradition of culture or learning' (Sloman 1963: 11) where 'there are not a great many good books read, there is very little good music, there is above all not a great deal of very intelligent conversation' (James, in Hall 1961: 155). Their only *legitimate* cultural capital thereby derived from school education, which was portrayed as a narrow, scholastic background leaving new students vulnerable to *over*-specialization at university. Moreover, lacking the social ease which comes from sustained interaction with 'high' culture, they would struggle to fit into university life; new students had the 'technical but not normally the cultural background necessary for an easy transition to university style study' (*The Times Educational Supplement* 1964, quoted in Jobling 1972: 326). This prejudiced their chances of success within the traditional intimacy of collegiate life where

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ease and integration were paramount. New students therefore brought not different forms of cultural capital and dispositions to the university but rather suffered from a cultural deficit that no amount of further schooling or educational achievement could dispel – they were the wrong kind of knower.

Knowledge specialists

New students were also portrayed by managers of expansion as bringing a conception of university education that dispensed with time-honoured traditions. New students were, in short, pragmatic, utilitarian and careerist, seeking higher education not in and for itself but for the social advancement it endows. The founding Vice-Chancellor of York University, for example, described:

your very ordinary person who is going to do technology, for example, who really does not like learning at all . . . he does not like reading; he may quite like Science, but he is on the whole envisaging the university as the place from which the best jobs in electrical engineering are to be obtained.

(James, in Hall 1961: 154)

Under this barbarous gaze extrinsic function would displace intrinsic form as the focal measure of status. This, many participants feared, would produce pressure for vocational courses, transforming university education from the civilizing of well-rounded amateurs into the training of technical experts. A common conception was that new students ‘seek a degree course to earn a living rather than college residence to complete their induction into a style of life’ (Halsey 1961: 56). Their arrival would thereby herald a shift whereby specialists would replace generalists, depth would usurp breadth, and imparting knowledge would supplant cultivating the knower as the basis of achievement within the field. This would also see disciplines usurp universities as the central focus of higher education. While past students were said to owe their position, identity and allegiance to their membership of a university, scholastically minded new students would, it was alleged, focus on their knowledge of a discipline. One would no longer consider oneself an ‘Oxonian’ but rather a geographer or engineer – what you knew would be what mattered.

The managers of expansion portrayed new students as unlikely to integrate into university education. They were both culturally impoverished and liable to further compromise their education as well-rounded human beings. Conceptually, their imminent arrival within universities would elevate a new ruler of consciousness, relation and identity, one which emphasized the discipline over the institution, what one knows over who one is, and thus the epistemic relation over the social relation: knowledge code legitimation.

The new universities

A question often asked by senior figures within English higher education was how this mismatch between new students and university education could be bridged. Their conclusion was that they needed to provide 'in the atmosphere of the institutions in which the students live and work, influences that in some measure compensate for inequalities of home background' (Robbins Report 1963: 7). An oft-repeated argument held that this required new educational thinking:

New institutions starting without traditions with which the innovator must come to terms might well be more favourably situated for such experimentation than established universities.

(UGC 1964: 74)

To this end eight campus or 'new' universities were explicitly planned and created for the perceived needs of new students. Here I focus on two effects of these plans, which are the way in which they attempted to: weaken the epistemic relation by downplaying the significance of specialized disciplinary knowledge; and strengthen the social relation by inculcating a sense of membership of an institutional knower group among new students.

Discouraging knowledge specialization

According to the influential Robbins Report a key aim of higher education 'should be to produce not mere specialists but rather cultivated men and women' (1963: 6). For planners of new universities this aim necessitated new forms of curriculum 'to give the student a more liberal education . . . broad enough for them to emerge as educated human beings' (Thistlethwaite 1966: 58). This need for breadth rather than depth was the basis for a restructuring of the disciplinary map. Planners adopted multi-disciplinary Schools of Study that brought together cognate fields within which students would typically study a common foundation course before multi-subject Honours degrees. The aim was to minimize the student's contact with disciplinary boundaries: 'In all our schemes of study we stand by the principles of integration' (Sloman 1963: 41). Accordingly, requirements for applicants' qualification to match their chosen subject areas were relaxed, pedagogy emphasized the mastery of 'ways of knowing' rather than 'states of knowledge', and examinations were minimized. Moreover, a curricular bias against applied science and technology aimed to keep students insulated from the vocational demands of the economic world. However, specialization into a discipline was to be delayed rather than dispensed with, 'to broaden the base without blunting the point of the pyramid' (Thistlethwaite 1966: 60). New universities often embraced a fourth year or taught Masters course for students wishing to pursue an academic career. However, only once they had resocialized into

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becoming the right kind of knower could new students be granted access to disciplinary specialization.

Socializing knowers

This issue of resocialization was central to the design of the new universities. In a number of ways they resembled what Erving Goffman termed 'total institutions'. First, new students were removed from their originating social contexts and kept apart from outside influences. New universities were located near historic cathedral towns rather than in cities, separated from these towns on dedicated 'greenfield' sites, as far as possible residential and designed as 'university towns' that provided for the whole life of students. Second, students were said to need 'continuous education . . . positive guidance, which is both intellectual and cultural' (James, in Hall 1961: 155–6). Accordingly, campus layouts integrated learning and living areas within adapted forms of the 'Oxbridge' collegiate system and pedagogic practices were adopted that maximized interaction between staff and students, such as small-group tutorials and coursework assessment. Such intimate social and pedagogical relations were legitimated by planners as opening up more of the new student to surveillance and discipline and engendering familiarity, interest and social ease (Thistlethwaite 1966). Both also served to encourage institutional loyalty and affiliation. New universities attempted to 'show the student what it is to be a university man' (Fulton, in Mackenzie 1961: 151), and to shape them in such a way that it 'would be apparent in the university man's conduct and conversation for the rest of his life' (Lindsay, in Gallie 1960: 66). The collegiate-tutorial system emphasized the institution as a socializing space extending beyond transmission of knowledge in the lecture hall. Similarly, architects of new universities explicitly aimed to help inculcate students' commitment to 'university values' (Casson 1962). These were, moreover, the time-honoured traditions of the English university ideal. New universities imitated features of the 'Oxbridge' model, revived and re-enlivened in the image and financial exigencies of the 1960s precisely to enable new students to 'enjoy the same intense and immediate undergraduate experience' as at the ancient universities (Thistlethwaite 1966: 68).

In summary, managers of expansion hoped to overcome the mismatch between new students and the established university ideal by resocializing them into the right kind of knower. Institutional and curricular plans for the new universities attempted to move the locus of influence over the identity and allegiance of new students away from the specialized knowledge of disciplines (ER-) and towards the institution as a social space (SR+), to make new students into members of an institutionally based knower group; in short, they embodied knower code legitimation.

Controlling the epistemic device

The new student was a mythical figure. New students were not about to flood universities; the social class composition of the student population was neither undergoing nor about to experience great change (Layard *et al.* 1969). When new students did enter higher education they tended not to choose new universities, opting instead for such institutions as technical colleges (Couper 1965). Moreover, actual new students resembled little the portrait painted by the managers of expansion. Working-class students represented a survivor population already well socialized into the legitimate educational habitus (Halsey *et al.* 1980). In short, the 'new student' constructed by the managers of expansion did not exist. This raises the question of what the debate was really about and its role within educational expansion.

Its public face was of pastoral concern for the educational success of new students within universities. Although often expressed in what today appears unsympathetic language, participants legitimated their stances as helping new students. While not doubting their sincerity, I argue that the debate may also be understood as one realization of struggles for control of the epistemic device. The characteristics attributed to new students can be rewritten as realizations of a knowledge code. Returning to the discussion of English higher education prior to the debate shows this 'setting' of the device to be that already underlying lower status institutions and against which higher status universities defined themselves. The new student embodied an opposing legitimation code to that dominating the field – the threat of the profane entering the sacred. The anticipated entry of large numbers of new students would thus alter the field's status hierarchy – a change in ownership of the epistemic device.

However, the new student was a myth, occasioning a moral panic; the true source of this threat lay elsewhere, in a more diffuse perception of loss of control by actors within the field. During this period many 'managers of expansion' voiced concern that 'the Idea of a University . . . is frequently the subject of ridicule' (Mackerness 1960: 14), and claimed that economic and political changes were pressuring universities to move towards the technological model. The new student was, I would argue, the embodiment of these pressures. Space precludes extensive discussion here, but one example is how students are selected within the two university ideals. Policy makers argued that the growing tide of potential university applicants (generated *inter alia* by demographic trends) *should* be accommodated, a belief codified by the Robbins Report's 'guiding principle' that higher education should be available to everyone qualified to attend (1963: 8). From sponsored mobility, where elite status is bestowed upon hand-picked apprentices by established élites, expansion would thus encourage moves towards contest mobility, where status is earned by the candidates' own efforts in open competition (Turner 1971). This represents a move from knower code to knowledge code, changing the social role and position of intellectuals and elevating the

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technological university model. One finds this threat echoed in the portrayal of new students as culturally impoverished despite being highly qualified. In the new student such threats to ownership of the epistemic device from beyond higher education were refracted and embodied within a specific, manageable set of educational problems.

New universities: continuity through change

The solution to these problems was the new universities. This answer may be understood, I argue, as helping to maintain the existing hierarchy and underlying structuring principles of English higher education. I shall focus here on three illustrative ways in which this change to the institutional map enabled continuity.

First, it was taken for granted that new students should change to fit universities and not vice versa. The new universities were designed as specially built total institutions where the habituses of new students could be reconfigured in the image of the English university ideal. The form they took was legitimated as enabling new students to adapt successfully to *established* university life and, though couched in educational terms, this meant resocialization. As descriptions of their problematic cultural backgrounds made clear, it was not 'new' students per se who concerned the managers of expansion but rather *working-class* students. Similarly, the solution was not to augment their knowledge but to change their attitudes, perceptions, dispositions i.e. their habitus. The new student was simply the wrong kind of knower and the price of entry to university education was to become the right kind of knower. New students faced the choice of resocialization within higher status universities or (as many actually chose) relegation to lower status, knowledge code institutions.

Second, though innovative, new universities were not as new as portrayed. They were neither revolutionary nor a continuation of the status quo. They shared the knower code legitimation of the established English university ideal but for a new kind of knower, thus representing a *variation* of this ideal. Summarizing a conference on the new student, one commentator asked whether the universities could 'by some devious method, salvage the concept of "education" from the pressures of a merit-minded society. . . . Can they educate by stealth?' (Hall 1961: 13). The answer was, as one founding Vice-Chancellor put it, that 'traditional ends will have to be sought by new means' (Sloman 1963: 12).

Lastly, the creation of wholly new institutions changed the surface structure of the field of higher education while maintaining its underlying hierarchies. University planners argued that new students had specific needs requiring new institutions; the intention was to insulate higher status universities from this polluting category by channelling them into specially designed sites. Sir Charles Morris, highly placed in university governance, claimed that 'the main problem' was 'how to get the right students to go to the right

universities', those which would best suit their 'needs and interests' (1961: 359). The creation of the new universities transformed the shape of higher education, adding a cluster of new positions to the field, but retained the basis for organizing positions within the field, among them the dominance of the knower code. By legitimating this restructuring, the myth of the new student helped the managers of expansion to retain control of the epistemic device.

Conclusion

In this chapter I have explored one aspect of how educational systems work to maintain their hierarchical relations of power and control in the face of anticipated expansion. Specifically, I highlighted the significance of the image generated within educational debates of the learner expected to be brought into or kept within education by expansion. Using the concepts of legitimation code and epistemic device I analysed the way actors responsible for managing expansion legitimated their actions through the construction of this image. When facing rapid expansion, for things to stay as they are, something has to change and something has to be found to legitimate that change. In the example discussed here the 'new student' provided the educational rationale for avowedly radical changes within English higher education. New students were portrayed as embodying a knowledge code that would jeopardize their educational success and which required knower code institutions to remedy. The threat of a new social class of student entering a knower-based field was neutralized through resocializing institutions designed to produce the right kind of knower for the field. Although in reality the new student was a myth, the debate legitimated change which helped maintain the field's underlying structuring principles.

I would suggest that this is a paradigmatic episode within education under conditions of expansion, one example of a recurrent 'expansion/accommodation' problem (Hickox and Moore 1995). Raising the school-leaving age, for example, has typically prompted debates where forms of institution, curriculum and pedagogy are advanced as meeting the proclaimed needs of pupils who would otherwise have left education. Such models usually portray new students as not simply lacking in knowledge but as the wrong kind of knower. Within English higher education, for example, the 1960s portrait of the working-class student echoes that of the middle classes in the late nineteenth century (Lowe 1987). Moreover, despite recurrent expansions of higher education, institutional hierarchies have remained remarkably consistent (Tight 1996); as Bernstein was fond of stating, *Plus ça change, plus c'est la même chose*.

Finally, I have also illustrated the application of the concepts of legitimation code and epistemic device beyond their genesis in the analysis of knowledge production. As emphasized earlier, this is not intended to replace analysis of the pedagogic device. Rather, these concepts sensitize us to issues

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of the basis of claims to knowledge, status and resources, enable us to identify what is a change, what is a variation, what is the same, and (in this case) show that despite good intentions our hopes and fears for new students and educational expansion may be inextricably linked with our hopes and fears for ourselves.

Notes

- 1 +/- refers to strong/weak classification *and* framing. Note that legitimization codes are not ideal types but generating principles whose empirical realizations are dependent on the enabling context.
- 2 I shall discuss relations between the two devices and elaborate the overarching symbolic device of which they are two key components in future publications.
- 3 The Scottish system was sufficiently different to merit its own analysis and no 'new' universities were situated in Wales.
- 4 The corpus comprises published discourse of senior figures within higher education during the early 1960s, including conference reports, mission statements and interviews. For identifying quotes used here, founding Vice-Chancellors of new universities were: Fulton (Sussex, chartered 1961); Lindsay (Keele, 1962); Thistlethwaite (UEA, 1963); James (York, 1963); Sloman (Essex, 1964); Carter (Lancaster, 1964); Templeman (Kent, 1965); Butterworth (Warwick, 1965).

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