Vertical and Horizontal Discourse: An Essay
Author(s): Basil Bernstein
Source: *British Journal of Sociology of Education*, Vol. 20, No. 2 (Jun., 1999), pp. 157-173
Published by: Taylor & Francis, Ltd.
Stable URL: http://www.jstor.org/stable/1393106
Accessed: 29/04/2011 09:50

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British Journal of Sociology of Education, Vol. 20, No. 2 1999

Vertical and Horizontal Discourse: an essay

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ABSTRACT *The analysis in this paper has its origins in a critical account of the sociology of education (Bernstein, 1975) where the various approaches to the study of sociology were taken as the distinguishing feature of the discourse. This matter was further developed (Bernstein, 1996), with the distinction between vertical and horizontal discourses and their various modalities introduced in the context of differentiating this mode of analysis from more 'Bourdieuan' perspectives. This present paper is concerned with filling out and extending the sketches adumbrated in earlier work in a more accessible form. The model proposed generates a language which relates the internal structure of specialised knowledges, the positional nature of their fields or arenas of practice, identity constructions and their change, and the forms of acquisition for successful performances.*

Introduction

It might be useful to recall the development of the work that leads up to the present analysis. Up to the 1980s, the work was directed to an understanding of different principles of pedagogic transmission/acquisition, their generating contexts and change. These principles were conceptualised as code modalities. However, what was transmitted was not in itself analysed apart from the classification and framing of the categories of the curriculum. In the mid-1980s, what was transmitted became the focus of the analysis (Bernstein, 1986). A theory of the construction of pedagogic discourse, its distributive, recontextualising and evaluative rules, and their social basis, was developed: the pedagogic device. However, the *forms* of the discourses, i.e. the internal principles of their construction and their social base, were taken for granted and not analysed. Thus, there was an analysis of modalities of elaborated codes and their generating social contexts, and an analysis of the construction of pedagogic discourse which the modalities of elaborated codes pre-supposed, but no analysis of the discourses subject to pedagogic transformation.

This analysis will proceed by distinguishing between two fundamental forms of discourse which have been subject to much comparison and contrast. The two forms are generally seen as oppositional rather than complementary. Indeed, one form is often seen

ISSN 0142-5692 (print)/ISSN 1465-3346 (online)/99/020157-17 © 1999 Taylor & Francis Ltd

TABLE I

Evaluative	Spontaneous	Contrived
Epistemological	Subjective	Objective
Cognitive	Operations	Principles
Social	Intimacy	Distance
Contextual	Inside	Outside
Voice	Dominated	Dominant
Mode	Linear	Non-linear
Institutional	Gemeinschaft	Gessellschaft

as the destruction of the other. Sometimes one form is seen, essentially, as a written form and the other as an oral form. Bourdieu refers to these forms in terms of the function to which they give rise; one form creating symbolic, the other practical mastery. Habermas sees one form as constructing what he calls the 'life world' of the individual and the other as the source of instrumental rationality. Giddens, following Habermas, sees one discursive form as the basis for constructing what he calls 'expert systems'. These 'expert systems' lead to a disembedding of individuals from their local experiential world, which is constructed by a different form. Underlying these contrasts or oppositions is a complex multi-layered structure of pairs operating at different levels of individual and social experience (Table I) [1].

Although any one author may single out one pair of contrasts from the set in Table I (not exhaustive), the remainder of the set, like the nine-tenths of an iceberg, lurk invisible below the surface of the text.

In the educational field, one form is sometimes referred to as school(ed) knowledge and the other as everyday common-sense knowledge, or 'official' and 'local' knowledge. These contrasts are often ideologically positioned and receive different evaluations. One form becomes the means whereby a dominant group is said to impose itself upon a dominated group and functions to silence and exclude the voice of this group. The excluded voice is then transformed into a latent pedagogic voice of unrecognised potential.

To my mind, much of the work generating these oppositions homogenises these discursive forms so that they take on stereotypical forms where their differences or similarities are emphasised. It is not unusual for one form to be romanticised as a medium celebrating what the other form has lost.

What I shall attempt here is to produce a language of description which produces greater differentiation within and between these forms, and explores the social basis of this differentiation. This will involve using yet another set of descriptors with internal sub-divisions. The justification for yet another language can only be whether, on the one hand, its use enables a more productive, a more general perspective, and on the other, whether it leads to new research possibilities and interpretations.

Vertical and Horizontal Discourses

To begin, I shall distinguish between a 'vertical discourse' and a 'horizontal discourse', and give brief definitions which will be developed later. These definitions will take 'forms of knowledge' as criteria. Different forms of knowledge will be realised in the two discourses.

Horizontal Discourse

We are all aware and use a form of knowledge, usually typified as everyday or 'common-sense' knowledge. Common because all, potentially or actually, have access to it, common because it applies to all, and common because it has a common history in the sense of arising out of common problems of living and dying. This form has a group of well-known features: it is likely to be oral, local, context dependent and specific, tacit, multi-layered, and contradictory across but not within contexts. However, from the point of view to be taken here, the crucial feature is that is it segmentally organised. By segmental, I am referring to the sites of realisation of this discourse. The realisation of this discourse varies with the way the culture segments and specialises activities and practices. The knowledge is segmentally differentiated. Because the discourse is horizontal it does not mean that all segments have equal importance, clearly some will be more important than others. I shall contrast this horizontal discourse with what I shall call a vertical discourse.

Vertical Discourse

Briefly, a vertical discourse takes the form of a coherent, explicit, and systematically principled structure, hierarchically organised, as in the sciences, or it takes the form of a series of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts, as in the social sciences and humanities.

I want first of all to raise the question of how knowledge circulates in these two discourses. In the case of vertical discourse, there are strong distributive rules regulating access, regulating transmission and regulating evaluation. Circulation is accomplished usually through explicit forms of recontextualising affecting distribution in terms of time, space and actors. I am not here concerned with the arenas and agents involved in these regulations. Basically, circulation is accomplished through explicit recontextualisation and evaluation, motivated by strong distributive procedures. But how does knowledge circulate in the case of horizontal discourse, where there is little systematic organising principles and therefore only tacit recontextualising? Of course, in horizontal discourse there are distributive rules regulating the circulation of knowledge, behaviour and expectations according to status/position. Such distributive rules structure and specialise social relations, practices and their contexts. But how is new knowledge freed from the local context and local agents of its enactment, and how does it begin to circulate? In order to answer this question, I wish to sharpen and delimit the definition of horizontal discourse:

> A horizontal discourse entails a set of strategies which are local, segmentally organised, context specific and dependent, for maximising encounters with persons and habitats.

With this definition in mind, I wish to consider a fictitious community operating only with horizontal discourse. Here a distinction can be made between the set of strategies any one individual possesses and their analogic potential for contextual transfer, and the total sets of strategies possessed by all members of this community. I shall use the term 'repertoire' to refer to the set of strategies and their analogic potential possessed by any one individual, and the term 'reservoir' to refer to the total of sets and its potential of the community as a whole. Thus, the repertoire of each member of the community will have a common nucleus but there will be differences between the repertoires. There will

be differences between the repertoires because of differences between the members arising out of differences in member contexts and activities, and their associated issues. Now it is possible to ask about the relation between reservoir and repertoire? What is the regulation on the relation between reservoir and repertoire? Or what is the relation between the potential and the actual practice of a member? How do new strategies circulate?

Clearly, the more members are isolated or excluded from each other, the weaker the social base for the development of either repertoire or reservoir. If there is to be a development of either repertoire or reservoir, this development will depend upon how social relationships are structured. The greater the reduction of isolation and exclusion, the greater the social potential for the circulation of strategies, of procedures, and their 'exchange'. Under these conditions, there can be an expansion of both repertoire and reservoir. The exchange of strategies will affect the analogical potential of any one repertoire. Under these conditions, the relation between a member's actual and potential practice becomes dynamic. Consider a situation where one small-holder meets another and complains that what he/she had done every year with great success, this year failed completely. The other says that when this has happened, he/she finds that this 'works'. He/she then outlines the successful strategy. Now any restriction to circulation and exchange reduces effectiveness. Any restriction specialises, classifies and privatises knowledge. Stratification procedures produce distributive rules which control the flow of procedures from reservoir to repertoire. Thus, both vertical and horizontal discourses are likely to operate with distributive rules that set up positions of defence and challenge.

From the idealisation constructed, it is possible to see the inter-relations between horizontal discourse and the structuring of social relations. The structuring of the social relationships generates the forms of discourse but the discourse in turn is structuring a form of consciousness, its contextual mode of orientation and realisation, and motivates forms of social solidarity. Horizontal discourse, in its acquisition, becomes the major cultural relay. I shall now consider briefly the mode of acquisition. I shall propose that the mode of acquisition is created by the form taken by the pedagogy. And the pedagogic interventions, in turn, are a function of the different 'knowledges' required to be acquired. These 'knowledges' are related not by integration of their meanings by some co-ordinating principle, but through the functional relations of segments or contexts to the everyday life. It then follows that what is acquired in one segment or context, and how it is acquired, may bear no relation to what is acquired or how it is acquired in another segment or context. Learning how to tie up one's shoes bears no relation to how to use the lavatory correctly. These competences are segmentally related. They are not related by any principle integrating their specific acquisitional 'knowledge'. I have called the form of this pedagogy 'segmental'. Later, I will distinguish this segmental pedagogy and the segmental 'knowledges' or literacies [2] to which it gives rise, from the institutional pedagogy of vertical discourse.

The segmental organisation of the 'knowledges' of horizontal discourse leads to segmentally structured acquisitions. There is no necessary relation between what is learned in the different segments. Furthermore, as acquisition arises from discrete segments, pedagogic practice may well vary with the segment. Thus, similar segments across social groups/classes may differ in the code modality regulating acquisition. Or, to put it another way, vertical discourse may regulate more segments of acquisition in one social group/class than another, and this entails a different mode of learning and context management [3]. I am here contrasting a segmental pedagogic control with an institutional or official pedagogic control.

Segmental pedagogy is usually carried out in face-to-face relations with a strong affective loading as in the family, peer group or local community. The pedagogy may be tacitly transmitted by modelling, by showing or by explicit modes. Unlike official or institutional pedagogy, the pedagogic process may be no longer than the context or segment in which it is enacted. The pedagogy is exhausted in the context of its enactment, or is repeated until the particular competence is acquired: learning to dress, running errands, counting change, addressing different individuals, using a telephone, selecting a video. The segmental pedagogies of the peer group may well depend strongly on modelling/showing. In general, the emphasis of the segmental pedagogy of horizontal discourse is directed towards acquiring a common competence rather than a graded performance [4]. Clearly, competitive relations may well develop, as in the peer group, on the basis of these common competences.

Thus, in the case of horizontal discourse, its 'knowledges', competences and literacies are segmental. They are contextually specific and 'context dependent', embedded in on-going practices, usually with strong affective loading, and directed towards specific, immediate goals, highly relevant to the acquirer in the context of his/her life. The activation of the learning strategies may require the features of the original segment. Where these features are absent, the learning strategies may not be demonstrated. Segmental competences literacies are culturally localised, evoked by contexts whose reading is unproblematic. Although the competences/literacies are localised, they do not necessarily give rise to highly coded inflexible practices. Indeed, any one individual may build up an extensive repertoire of strategies which can be varied according to the contingencies of the context or segment. (As I have proposed earlier, any individual repertoire may depend on its relation to the reservoir of the group.) From the point of view of any one individual operating within horizontal discourse, there is not necessarily one and only one correct strategy relevant to a particular context (see note 2). Horizontal discourse relayed through a segmental pedagogy facilitates the development of a repertoire of strategies of operational 'knowledges' activated in contexts whose reading is unproblematic.

I now wish to turn to vertical discourse which, it will be remembered, has two forms: one is a coherent, explicit and systematically principled structure, hierarchically organised; and the second takes the form of a series of specialised languages with specialised modes of interrogation, specialised criteria for the production and circulation of texts, e.g. the natural sciences, humanities and social sciences. In the case of any vertical discourse, this, unlike horizontal discourse, is not a segmentally organised discourse. The integration of a vertical discourse is not integration at the level of the relation between segments/contexts as in horizontal discourse, but integration at the level of meanings. Vertical discourse consists not of culturally specialised segments, but of specialised symbolic structures of explicit knowledge. The procedures of vertical discourse are then linked, not by contexts, horizontally, but the procedures are linked to other procedures hierarchically. The institutional or official pedagogy of vertical discourse is not consumed at the point of its contextual delivery, but is an on going process in extended time.

The social units of acquisition of this pedagogy (that of a vertical discourse) have a different arbitrary base to the arbitrary base of the social units of the pedagogy of horizontal discourse. The social units of the pedagogy of vertical discourse are constructed, evaluated and distributed to different groups and individuals, structured in time and space by 'principles' of recontextualising. We have context specificity through 'segmentation' in horizontal discourse, but context specificity through recontextualisation in vertical discourse. Both discourses, vertical and horizontal, have an arbitrary peda-

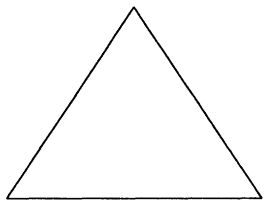
TABLE II

	Vertical discourse	Horizontal discourse
Practice	Official/institutional	Local
Distributive principle	Recontextualisation	Segmentation
Social relation	Individual	Communalised
Acquisition	Graded performance	Competence

gogic base. The arbitrary of both discourses is constructed by distributive rules regulating the circulation of the discourses. The pedagogy so far is summarised in the contemporary context in Table II.

The language of description I have developed has examined the oppositions that began this paper and has illuminated their internal structures, and in the case of horizontal discourse, its social base, acquisition mode and form of knowledge. However, if this language I have developed was limited only to such a context then it would only produce the homogenising which I argued underpinned the oppositions. I want now to examine in more detail vertical discourse. The way forward has already been adumbrated by the distinction between the different modalities of knowledge of vertical discourse. These modalities will be conceptualised as 'hierarchical knowledge structures' and 'horizontal knowledge structures'.

Briefly, a hierarchical knowledge structure' looks like the following:



This form of knowledge attempts to create very general propositions and theories, which integrate knowledge at lower levels, and in this way shows underlying uniformities across an expanding range of apparently different phenomena [5]. Hierarchical knowledge structures appear, by their users, to be motivated towards greater and greater integrating propositions, operating at more and more abstract levels. Thus, it could be said that hierarchical knowledge structures are produced by an 'integrating' code.

In contrast, horizontal knowledge structures consist of a series of specialised languages with specialised modes of interrogation and criteria for the construction and circulation of texts. Thus, any one of the specialised disciplines within the form of a horizontal knowledge structure found within the humanities and social sciences can be visually portrayed as:

$$L^1\ L^2\ L^3\ L^4\ L^5\ L^6\ L^7\ \ldots\ L^n$$

Thus, in the case of English literature, the languages would be the specialised languages of criticism; in Philosophy, the various languages of this mode of inquiry; and in Sociology, on which we shall focus, the languages refer, for example, to functionalism, post-structuralism, post-modernism, Marxism, etc. The latter are the broad linguistic categories and within them are the idiolects (theories) of particular favoured or originating speakers. Horizontal knowledge structures, unlike hierarchical knowledge structures,

which are based on integrating codes, are based upon collection or serial codes; integration of language in one case and accumulation of languages in the other.

It is interesting to inquire what counts as a development of hierarchical knowledge structures and of horizontal knowledge structures. In the case of hierarchical knowledge structures, development is seen as the development of theory, which is more general, more integrating, than previous theory. In the case of horizontal knowledge structures, this criteria, as we shall see, cannot apply. It cannot apply because the set of languages which constitute any one horizontal knowledge structure are not translatable, since they make different and often opposing assumptions, with each language having its own criteria for legitimate texts, what counts as evidence and what counts as legitimate questions or a legitimate problematic. Indeed, the speakers of each language become as specialised and as excluding as the language. Their capital is bound up with the language and, therefore, defence of and challenge of other languages, is intrinsic to a horizontal knowledge structure. A particular field is constructed by the internal characteristics of a horizontal knowledge structure. Thus, the internal characteristics and external field amplify the serial character of a horizontal knowledge structure [6].

Development, in the case of a horizontal knowledge structure, cannot be a function of the greater generality and integrating property of the knowledge because, as has been shown, such developments simply are not possible in the case of a horizontal knowledge structure. So what counts as development? I suggest that what counts as development is the introduction of a new language. A new language offers the possibility of a fresh perspective, a new set of questions, a new set of connections, and an apparently new problematic, and most importantly, a new set of speakers. This new language is likely to be taken up by the younger speakers of the particular horizontal knowledge structure [7]. This new language can then be used to challenge the hegemony and legitimacy of more senior speakers. The latter may be cut off from acquiring the new language because of trained incapacity arising out of previous language acquisition, and a reduced incentive, arising out of the loss of their own position.

Now to turn hierarchical knowledge structures. In a way, the opposition between theories in hierarchical knowledge structures is analogous to the oppositions between languages in a horizontal knowledge structure, but it would be a mistake to view this similarity as indicating no difference between these knowledge structures. Opposition between theories in hierarchical knowledge structures is played out in attempts to refute positions where possible, or to incorporate them in more general propositions. At some point, sometimes later than sooner, because of special investments, a choice is possible provided the issue can be settled by empirical procedures. However, in the contrasting case of a horizontal knowledge structure within the social sciences (for example, sociology, which I have in mind here and earlier), neither of these possibilities are possible because the discreteness of the languages defy incorporations into a more general language. Indeed, built into the construction of the language here is the protection of its discreteness, its strategies of apparent uniqueness, its non-translatability, and its essential narcissism. Motivations under this discursive regime are oriented to speaking/acquiring/developing the hegemonic language or its challenge or marketing a new language.

Horizontal Knowledge Structures: Strong and Weak Grammars

I wish now to turn attention to issues arising out of acquisition and I have in mind, as before, sociology. One of the problems of acquiring a horizontal knowledge structure is

the range of languages which have to be managed, each having its own procedures. It might be useful here to make a distinction within horizontal knowledge structures, distinguishing those whose languages have an explicit conceptual syntax capable of 'relatively' precise empirical descriptions and/or of generating formal modelling of empirical relations, from those languages where these powers are much weaker. The former I will call strong grammars and the latter weak grammars. It is important to add here that 'strong' and 'weak' must be understood as relative within horizontal knowledge structures. From this point of view, economics, linguistics and parts of psychology would be examples of strong grammar. Mathematics would also be considered a horizontal knowledge structure as it consists of a set of discrete languages, for particular problems. Thus, mathematics and logic would be regarded as possessing the strongest grammers, although these languages, for the most part, do not have empirical referents nor are they designed to satisfy empirical criteria. Examples of weak grammars would be sociology, social anthropology, and cultural studies.

The strong grammars of horizontal knowledge structures (excluding mathematics and logic) often achieve their power by rigorious restrictions on the empirical phenomena they address. For example, the formal precision of transformation grammar arises out of the exclusion of meaning from its concerns; whereas Halliday's systemic functional grammar addresses meanings as the fundamental focus of the grammar and is a much less tidy system.

Following these distinctions within horizontal knowledge structures, I can return to issues of acquisition. In the case of hierarchical knowledge structures, the acquirer does not have the problem of knowing whether she/he is speaking physics or writing physics, only the problem of correct usage. The strong grammar visibly announces what it is. For the acquirer, the passage from one theory to another does not signal a break in the language; it is simply an extension of its explanatory/descriptive powers. However, if the social sciences are considered, then problems of acquisition arise particularly where the grammar is weak. The acquirer may well be anxious whether he/she is really speaking or writing sociology. In these conditions, it is likely that canonical names will be a useful resource. Later, the names will be associated with languages or, in some cases, the language will come before the exemplars. Thus, managing names and languages together with their criticisms becomes both the manner of transmission and acquisition. There is, however, a prior issue. Because a horizontal knowledge structure consists of an array of languages, any one transmission necessarily entails some selection, and some privileging within the set recontextualised for the transmission of the horizontal knowledge structure. The social basis of the principle of this recontextualising indicates whose 'social' is speaking. The social basis of the principle of the recontextualising constructs the perspective of the horizontal knowledge structure. Whose perspective is it? How is it generated and legitimated? I say that this principle is social to indicate that choice here is not rational in the sense that it is based on the 'truth' of one of the specialised languages. For each language reveals some 'truth', although to a great extent, this partial 'truth' is incommensurate and language specific. The dominant perspective within any transmission may be a function of the power relations among the teachers, or of pressure from groups of acquirers, or, particularly today, a function of indirect and direct external pressures of the market or the State itself. Thus, a perspective becomes the principle of the recontextualisation which constructs the horizontal knowledge structure to be acquired. Also, behind the perspective is a position in a relevant intellectual field/arena.

At the level of the acquirer, this invisible perspective, the principle of recontextualisation structuring the transmission, is expected to become how the acquirer reads,

evaluates and creates texts. A 'gaze' has to be acquired, i.e. a particular mode of recognising and realising what counts as an 'authentic' sociological reality [8].

Perhaps this is why the acquirer has such difficulty in recognising what he/she is speaking or writing, for to know is to 'gaze'. And this is, I suspect, a tacit transmission: to be inside the specialised language probably requires oral transmission; the experience of a social interactional relationship with those who possess the 'gaze'. I am not suggesting for one moment that this component does not facilitate acquisition of a hierarchical knowledge structure, only that 'gaze' is not crucial to the acquisition. Here, what is important is mastering the procedures of investigation and instruments of observation and understanding the theory; developing the imaginative potential of the language comes much later, if at all. However, work in a laboratory does not proceed only by a mechanical regulation of the procedures. Measurement is the result of something prior to measurement. And a component of that something is a developed sense of the potential of a phenomenon arising out of practice.

Basically, in the case of a hierarchical knowledge structure, in the end, it is the theory that counts and it counts both for its imaginative conceptual projection and the empirical power of the projection. Clearly, acquisition of a hierarchical knowledge structure also may involve acquisition of a perspective; a perspective that a hierarchical knowledge structure is the only and sole pathway to 'truth'. Its procedures are the only valid way to 'truth'. Where choice of theory is possible, such choice may well have a social base. Indeed, in areas of biology, as in the case of the nature/nurture issue, the social base of choice is often revealed. Nor does my position deny that any one hierarchical knowledge structure may entail a principle of recontextualisation for its transmission which is influenced by the interests of particular teachers or by external pressures. These interests may well relate to advancing social, economic and cultural capital or simply survival. But the recognition and construction of legitimate texts in a hierarchical knowledge structure is much less problematic, much less a tacit process than is the case of a horizontal knowledge structure, particularly those with weak grammars. In the latter case, what counts in the end is the specialised language, its position, its perspective, the acquirer's 'gaze', rather than any one exemplary theory (although the exemplary theory may be the originator of the linguistic position). In the case of horizontal knowledge structures, especially those with weak grammars, 'truth' is a matter of acquired 'gaze'; no-one can be eyeless in this Gaza.

There is a resemblance, at a fairly abstract level, between horizontal knowledge structures, particularly and especially of the weak grammar modality, and the horizontal discourse I discussed at the beginning of this paper. These two forms share some common features: both are horizontally organised, both are serial, both are segmented. In both, the contents are volatile. In the case of horizontal discourse, volatility refers to the referents of this discourse, and in the case of horizontal knowledge structures, especially of the weak grammar modality, volatility refers to additions and omissions of the specialised languages of a particular horizontal knowledge structure. Perhaps there is a deeper resemblance. Acquisition of horizontal discourse is a tacit acquisition of a particular view of cultural realities, or rather of a way of realising these realities. The 'way' itself is embedded in the unity latent in the contextual segmentation of this discourse. The 'way' may be likened to the 'gaze' as it becomes active in the experience and on-going practices of the speakers. This is similar to the 'gaze' embedded in the acquisition of the specialised languages of a horizontal knowledge structure with a weak grammar.

To recoup, the contrast between hierarchical knowledge structures and horizontal knowledge structures lies in the fight for 'linguistic hegemony' and its acquired 'gaze'

within a horizontal knowledge structure, and the competition for 'integration of principles' or for furthering, or for challenging, such integration in the case of hierarchical knowledge structures. The fight for linguistic hegemony and the competition for, or to further, integration may well share common field strategies, but the issues are different [9]. It is, therefore, important to relate the external conditions of the context of the field/arena to the internal conditions of the discourse. Separation of field from discourse may well distort analysis. Indeed, from the point of view taken here, field and discourse are inter-related and inter-dependent.

Horizontal Knowledge Structures: changes and Orientations

The seriality of horizontal knowledge structures may vary as between those with a strong grammar and those with a weak grammar. The number of languages internal to any horizontal knowledge structure may be fewer in the case of a strong grammar than the number internal to a horizontal knowledge structure with a weak grammar. This raises the question as to whether the serial organisation and its variations are internal to the phenomena studied. Broadly speaking, all the specialised knowledges of horizontal knowledge structures from the social sciences to the humanities address human behaviour, conduct or practice in one form or another. What is of interest is that those knowledges produced by particular methodological procedures (the social sciences) share a similar linguistic organisation to the humanities, the disciplines of which operate quite differently as a group and differ within that group. It therefore seems that what, on the contrary, has to be accounted for, is the shape of hierarchical knowledge structures. Clearly, this is not a function of its methods as the social sciences claim that in the most part they operate with similar methods. Popper insisted that there were no differences between the social and natural sciences, and that differences in the phenomena studied were irrelevant to the question of the status of the knowledge. The status is a function of methods. But I have shown that, for the most part, there is a common method in the social sciences; a common method but an organisation of knowledge similar to that of the humanities.

As a first approach to this similarity it might be useful to look at changes in the development of specialised languages across time. It might be useful to plot the increase in the number of languages, for example, in sociology across time to see whether the rate of increase is linked to a particular period of societal development or change. Certainly, the number of practitioners engaged in the social sciences has increased enormously over the past 40 years. It is also the period of the greatest economic, cultural and technological change, possibly since industrialisation. Certainly, in sociology and, I suspect, in other social sciences and the humanities, there has been an increase in the number of languages and procedures of inquiry. It has been noted that the ritual of the generations provides a dynamic of intellectual change. Bourdieu (1984, 1993) sees this as a function of new class habituses entering a particular field. But the increase in numbers, the rituals of the generations, the new habituses are the resources, perhaps the necessary conditions, but not the sufficient conditions, to explain changes in languages. It is possible that the languages of horizontal knowledge structures, especially those of the social sciences, have an inbuilt redundancy. They could be called retrospective languages. They point to the past and the hegenomic conceptual relations they generate have that past embedded in them. Thus, their descriptions presuppose what has been. But under conditions of rapid social change, what is to be described is not describable or is only inadequately

describable in a retrospective language. This fuels the fight for linguistic hegemony within a horizontal knowledge structures [10].

But why are the languages within horizontal knowledge structures retrospective? Why is the past projected on to continuous becoming? I think it is necessary here to return to horizontal discourse. As others have also noted, the contributors to horizontal knowledge structures have no means of insulating their constructions from their experience constructed by horizontal discourse. The contributors cannot think beyond the sensibility which initially formed them, a sensibility embedded in a knowledge structure and on an experiential base, local in time and space. The specialised languages that the speakers therefore construct are embedded in projections from the past. What of the future? Language again limits such projections, but language, here, as a formal set of combinatory rules. This finite set of rules is potentially capable of generating 'n' other rule systems; consequently, language is an open system and opens the way to a universe of potential futures. At the level of speakers, language creates reflective feedback from on-going experience and practices. This introduces constraint on the determination of the future. Such determination weakens with the period of time entailed. Thus, in the case of the social sciences, their knowledge structures are likely to be retrospective with respect to intellectual orientation and sensibility, and restricted with reference to the time period of their future projections. There is then built into horizontal knowledge structures an internal obsolescence of the languages.

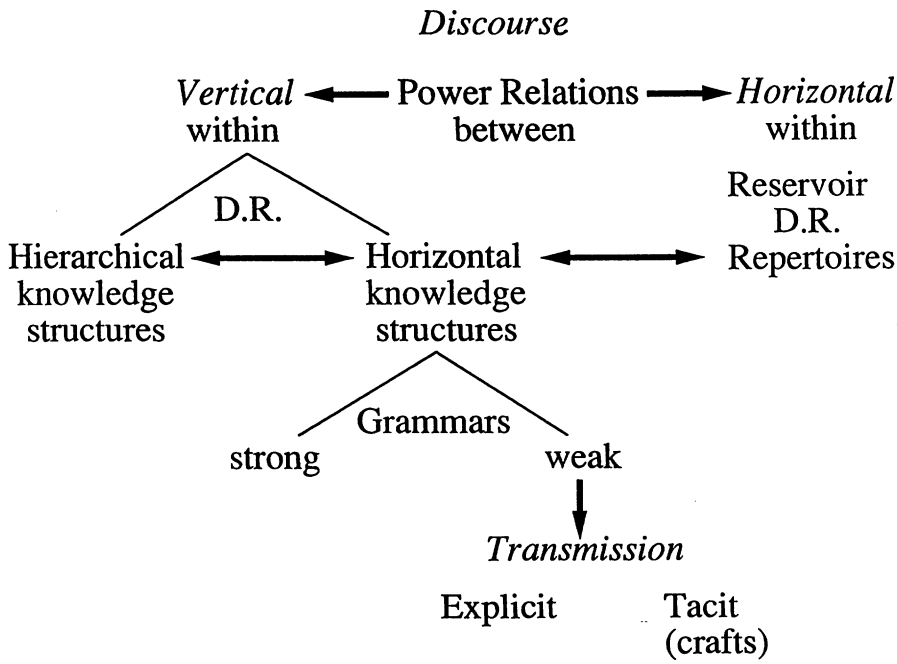
This has two potential consequences. There is an expectation of change which facilitates and legitimises attempts to add to the existing set of languages. It also encourages, at a lower level of description, idiosyncratic terms; all have the power of naming and re-naming. Furthermore, the more contemporary the specialised language, the less retrospective it appears to be and the more its terms and syntax, to some, appear to create more relevant descriptions. Such consequences are more probable in the case of a horizontal knowledge structure with a weak grammar than in the case of a horizontal knowledge structure with a strong grammar. I would expect then that horizontal knowledge structures with weak grammars, as a consequence of their acquisition, would generate speakers obsessed with issues of language, which in turn would serve to construct, destruct, affirm and so reproduce the positional structure of a particular intellectual field.

This obsession with language is transferred through initiation into a particular horizontal knowledge structure. The obsessive orientation is particularly pronounced where derivations from the specialised language yield very weak powers of specific unambiguous, empirical descriptions. This disguises any mismatch between the description and that which prompts it. Weak powers of empirical descriptions remove a crucial resource for either development or rejection of a particular language and so contribute to its stability as a frozen form. Text books, particularly in the case of sociology, devote little space to reports of empirical research in comparison to the space devoted to the specialised languages, their epistemologies and their methodologies (rather than methods).

In summary, horizontal knowledge structures, especially and particularly those with weak grammars as in some of the social sciences, give rise to speakers obsessed with languages characterised by inherent obsolescence, weak powers of empirical descriptions and temporally retrospective.

This, of course, is an implied contrast with hierarchical knowledge structures, where it will be recalled that the orientation is towards the experimental potential of a generalising theory. While the field strategies typical of horizontal knowledge structures

TABLE III



may well be common to any herarchical knowledge structures, survival of a theory in the latter case ultimately depends on its power to deliver the empirical expectations. The obsolescence of theory in this discourse is not because of inbuilt obsolescence, but because of a failure to meet empirical expectations or its absorption into a more general theory. Although there may well be field strategies to delay failure, there are contexts within hierarchical knowledge structures, with characteristics and consequences possibly similar to the 'natural' state of horizontal knowledge structures, especially those with weak grammars. This is the case where theories compete in a context where experimental procedures are not available or inadequate. Such theories are usually at the edge or over the edge of 'established' knowledges. The plausibility of these theories, however, will draw on their relation to existing, more established theory in that particular field.

Before turning to the relationships between vertical discourses and horizontal discourses as these arise in education, it might be useful to produce a map of the discourses and knowledge structures I have discussed (see Table III).

In the figure, a level has been added. Within weak grammars of horizontal knowledge structures, a distinction has been made in terms of the manner of their transmission and acquisition. Explicit transmission refers to a pedagogy which makes explicit (or attempts to make explicit) the principles, procedures and texts to be acquired. This is usually the case with the social sciences and perhaps less so for the humanities where the transmission tends to be more implicit. A 'tacit' transmission is one where showing or modelling precedes 'doing'. This is likely to occur with the transmission of crafts. From this point of view, a craft is a modality of vertical discourse and is characterised as a horizontal knowledge structure with weak grammar, tacit transmission. This knowledge structure is the nearest to horizontal discourse emerging as a specialised practice to satisfy the material requirements of its segments.

Vertical and Horizontal Discourses in Education

As part of the move to make specialised knowledges more accessible to the young, segments of horizontal discourse are recontextualised and inserted in the contents of school subjects. However, such recontextualisation does not necessarily lead to more effective acquisition for the reasons already given. A segmental competence, or segmental literacy, acquired through horizontal discourse, may not be activated in its official recontextualising as part of a vertical discourse, for space, time, disposition, social relation and relevance have all changed [11]. When segments of horizontal discourse become resources to facilitate access to vertical discourse, such appropriations are likely to be mediated through the distributive rules of the school. Recontextualising of segments is confined to particular social groups, usually the 'less able'. This move to use segments of horizontal discourse as resources to facilitate access, usually limited to the procedural or operational level of a subject, may also be linked to 'improving' the student's ability to deal with issues arising (or likely to arise) in the students' everyday world: issues of health, work, parenting, domestic skills, etc. Here, access and recontextualised relevance meet, restricted to the level of strategy or operations derived from horizontal discourse. Vertical discourses are reduced to a set of strategies to become resources for allegedly improving the effectiveness of the repertoires made available in horizontal discourse.

However, there may be another motive. Horizontal discourse may be seen as a crucial resource for pedagogic populism in the name of empowering or unsilencing voices to combat the élitism and alleged authoritarianism of vertical discourse. Here, students are offered an official context in which to speak as they are thought to be: Spon-tex (the sound-bite of 'spontaneous text') [12]. This move at the level of the school is parallelled by the confessional narratives of a variety of Feminist and Black studies in higher education. The 'new' ethnography celebrates horizontal discourse through extensive use of quotations which serve as experiential 'evidence' [13]. The 'ethno' is the 'unconstructed' voiced informant; what is missing is the 'graphic' (Moore & Muller, 1998).

From various points of views, some diametrically opposed, segments of horizontal discourse are being inserted in vertical discourse. However, these insertions are subject to distributive rules, which allocates these insertions to marginal knowledges and/or social groups. This movement has been described and analysed by Maton (1999) as a discursive shift in legitimation from knowledge to knower.

The shift in equity from equality ('of opportunity') to recognition of diversity [14] (of voice) may well be responsible for the colonisation of vertical discourse or the appropriation by vertical discourse of horizontal discourse. This, in turn, raises an interesting question of the implications for equality by the recognition and institutionalisation of diversity. There may be more at stake here than is revealed by attacks on the so-called élitism, authoritarianism, alienations of vertical discourse.

Conclusion

In this somewhat wide-ranging paper, I began with a complaint that the contrasts and oppositions between specialist knowledge and everyday local knowledges (as if the latter were not specialised) produced limiting, often homogenising, descriptions in which the social basis of these forms was inadequately conceptualised. I have tried to show how by developing a more systematic and general language of description, albeit at the cost of introducing a new conceptual vocabulary (an irony of this analysis), a more general and delicate perspective may be gained. Furthermore, the language of description contains

within the analysis it generates, new research issues and re-positions some present research. The analysis which takes as its point of departure the internal properties of forms of discourse, reveals the inter-dependence between properties internal to the discourse and the social context, field/arena, in which they are enacted and constituted. Briefly, 'relations within' and 'relations to' should be integrated in the analysis. Contrasts, variations and relationships in the form taken by different knowledges are related to the social contexts of their production, transmission, acquisition and change.

There are other implications of the analysis. I have referred to the tacitly acquired 'gaze' of a horizontal knowledge structure by means of which the acquirer learns how to recognise, regard, realise and evaluate legitimately the phenomena of concern. This 'gaze' is a consequence of the perspective created by the recontextualising principle constructing and positioning the set of languages of a particular horizontal knowledge structure, or privileging a particular language in the set. This is a conscious process giving rise to a tacit acquisition, but there is, I suggest, an unintended consequence of acquiring the set of languages of a horizontal knowledge structure. I can illustrate this with my own discipline of sociology. The array of specialised languages which fragment the experience of the acquirer, and shatters any sense of an underlying unity, may yet reveal the various ways the social is imaged by the complex projections arising out of the relationship between individuals and groups. This diverse imaging shows the potential of the social in its different modes of realisation.

Looking through the set of languages and their fractured realities, forever facing yesterday rather than a distanced tomorrow, is rather like visiting a gallery where paintings are in continuous motion, some being taken down, others replacing and all in an unfinished state. The invisible energy activating this movement is changes in the landscapes already taken place or taking place, some disfiguring, some eroding, some opening new prospects.

Yet, I suppose that the view would be markedly improved if the discursive centre of gravity shifted from the specialised languages to issues of empirical description: a shift from commitment to a language to dedication to a problem and its vicissitudes. Latour makes a distinction (see note 9) between science and research. Science refers to established canons, research refers to a dynamic inter-actional process. In the case of sociology and many of its 'ofs', the specialised languages are the equivalent of science. What is being advocated here is linguistic challenge by the dynamic interactional process of research; not a displacement, but a re-positioning of the role of specialised languages.

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NOTES

[1] Dowling (1993, 1997) gives the following list of authors who contrast abstract thought with concrete thought: Bernstein, Bourdieu, Foucault, Freud, Levi-Strauss, Levi-Bruhl, Lotman, Lumà, Piaget, John-Rethel, Vygotsky, and Walkerdine; to which he adds his own contrast, high discursive saturation, low discursive saturation. Dowling (1997), a development of Dowling (1993), analyses what he describes as the Public Domain (the everyday world) contrasted with the Esoteric Domain (specialised knowledge structures). His analysis of the Public Domain draws on Bernstein (1996, pp. 169–181). Dowling's major contribution is the construction of a language of description of great power, rigour and potential generality, which he applies to mathematical textbooks written for students of different assumed ability levels. He shows successfully how the texts constructed for these 'ability levels' incorporate, differentially, fictional contexts and activities drawn from the Public Domain in the classification and framing of

mathematical problems; inserted in such a way that the 'low ability' textbooks orient the student to a world of manual practice and activity to be managed by restricted mathematical operations.

[2] It may be interesting to compare this discussion with that of Lave *et al.* (1984) and Lave (1988). Gemma Moss's research (Moss, 1991, 1993, 1996, 1999) on informal literacies and their relation to formal schooled literacies is of particular interest as she has developed an original language for their description and interpretation.

[3] For such differences see Bernstein (1990, Chapters 2 and 3). See also Heath (1984) who I understand is now about to publish a new edition with an added epilogue; also Collins (1999).

[4] Bernstein (1996, Chapter 3) gives a detailed analysis of differences within and between 'performance' and 'competence' modes of pedagogic transmission.

[5] There is likely to be more than one triangle in a hierarchical knowledge structure. The motivation is towards triangles with the broadest base and the most powerful apex.

[6] As languages are based on different, usually opposing, epistemological/ideological/social assumptions, the relations between them cannot be settled by empirical research. The relations can only be those of critique. Each specialised language, or rather their sponsors and authors, may accuse the other of failures of omission and/or epistemological/ideological/social inadequacies of the assumptions.

[7] Bourdieu makes a similar point with reference to both the intellectual field (Bourdieu, 1984) and the cultural field (Bourdieu, 1993) where he sees change arising out of new opposing class habituses entering a field. Examples can be found in Sociology (Garfinkle and Parsons) and in Linguistics (Chomsky and Bloomfield), but I doubt whether this explanation of change holds across hierarchical and horizontal knowledge structures or, necessarily, within all horizontal knowledge structures. However, it is possible, in the case of a horizontal knowledge structure where there is an expansion of access to Higher Education under conditions of rapid social change (access and change appear to go together), that new authors and their sponsors of new languages appear, arising out of their own history of such change.

[8] I believe 'gaze' was first introduced by Foucault (1976) in *The Birth of the Clinic*, where it referred to the 'medical gaze' which transformed the body into a positivist object. That specialised knowledge selected and constructed a particular object, on the basis of recognition and realisation procedures internal to the specialisation of that knowledge. Dowling (1997) puts his own spin on Foucault's 'gaze' with a twist of Bernstein (1986, 1996).

> The gaze lights upon external practices which are recontextualised by it. Recontextualising entails the subordination or partial subordination of the form of expression and/or contents of practices of one activity to the regulatory principle of another. (Dowling, 1997, p. 136)
>
> We can say that the gaze of school maths recontextualises shopping practices. In so doing shopping is constituted as a set of virtual practices, it is mythologised.

Gaze, it seems, is the motivator and shaper of the recontextualising process. So what is it?

> 'Gaze refers to a mechanism which delocates and relocates, that is which recontextualises ideological expression and content. The result of such recontextualising is to subordinate the recontextualising ideology to the regulatory principles of the recontextualising ideology.' (Dowling, 1997, p. 136)

... Clear?

More concrete perhaps?...

> That mathematics can be exchanged for shopping is contingent upon mathematics incorporating recognition and realisation principles that facilitate that exchange: the mathematics string for that retail transaction and so forth. That is what I mean by 'gaze'.

But surely, what is meant here is that a specialised discourse must contain features which make 'gaze' possible. However, the conditions for 'gaze' are not what 'gaze' is. It seems to me that 'gaze' is the 'result' of the recontextualising principle, 'a principle which removes (de-locates) a discourse from its substantive practice and context and re-locates that discourse according to its principles of selective re-ordering and focusing. In this process of the de-location and the re-location of the original discourse the social basis of its practice including its powers relation is removed. In the process of the de- and re-location the original discourse is subject to a transformation which transforms it from an actual practice to a virtual or imaginary subject'. From this point of view, 'gaze' is not a mechanism, but is entailed in the 'outcome' of the recontextualising principle. The 'mechanism' is more likely to be the principle of selection of a theory of instruction. This theory (implicit or explicit) is the means whereby a specialised discourse is pedagogised. The theory of instruction selects both the 'what' of the specialised discourse and the modality of its realisation. It guides the recontextualising process. If the matter is to be pressed further to

ask what regulates this process, the answers in Bernstein's terms would be a modality of classification and framing ($\pm C^{ic}/\pm f^{ic}$). The recontextualising process translates the theory of instruction into a specific pedagogic form.

This rather lengthy comment is necessary to disentangle the use of 'gaze' in this paper. It is used to refer to the acquirer not to the discourse to be acquired. The pedagogic discourse to be acquired is constructed by the recontextualising process of the transmitter(s), which creates a specific modality of the specialised knowledge to be transmitted and acquired. The acquirer rarely has access to the transmitter(s) recontextualising principle but this principle is tacitly transmitted and is invisibly active in the acquirer as his/her 'gaze' which enables the acquirer, metaphorically to look at (recognise) and regard, and evaluate (realise) the phenomena of legitimate concern.

[9] See Latour (1979, 1987) and Serres (1995). Latour makes a crucial distinction between science and research and produces a complex description of the invisible mediations of the social process in which research is embedded. He argues that 'truth' emerges out of the relative weight of mediations of opposers and affirmers. However, Latour considers that the 'Modern Constitution' has attempted explicit work of purification by separating nature from society, while invisibly colluding with society through processes of mediation. Truth is essentially a hybrid. From this point of view, it does not make sense to ask any more where nature leaves off and society begins. Clearly, there are outcomes where the dialectic of mediation is suspended and the battle lines drawn elsewhere. But the outcome must work discursively, i.e. it has to bear not simply the weight of successful mediations, but work retrospectively with respect to the past and prospectively as a springboard to further explorations (see also Nader (1996)). For different views, see Wolpert (1992) and Barnes (1982).

[10] Indeed, the issue of the relevance of the descriptions of a particular specialised language raises the even more controversial question about social change and its nature. What changes, where, to what extent, and with what consequences cause the alleged descriptive inadequacy? In this way, the demise or rise of a language may be bound up with a theory of social change which unfortunately again exists only in the pluralities of specialised languages.

[11] Cooper & Dunne (1998) analysed national curriculum mathematics texts and showed social class differences on those texts which incorporated segments from horizontal discourse in the framing of the question. Middle-class students tended to read these questions as calling for mathematical principles, i.e. they identified these questions as elements of the school's vertical discourse. Whitty *et al.* (1994) showed that when a school subject drew extensively on segments of horizontal discourse, as in the theme 'Personal and Social Education', the students did not regard this subject as 'academic', i.e. as a realisation of vertical discourse. Lave *et al.* (1984), in their classic study, gave an example of the lack of transfer of arithmetic competence from a shopping context to a school context. Thus, the incorporation of segments of horizontal discourse by the school may lead to such contents being defined as non-pedogogic. On the other hand, transfers of apparent competences from horizontal discourse to the vertical discourse of the school may not occur.

[12] Interesting work remains to be done examining the recontextualising of social anthropology, linguistics, history, literature/English to provide a legitimation for what is here called pedagogic populism. A favoured position in the 1970s of the school subject English; now a position strongly held in some quarters in the USA with respect to marginalised social groups.

I should make it quite clear that it is crucial for students to know and to feel that they, the experiences which have shaped them, and their modes of showing are recognised, respected and valued. But this does not mean that this exhausts the pedagogic encounter. For, to see the pedagogic encounter only in terms of a range of potential voices and their relation to each other is to avoid the issue of pedagogy itself, i.e. the appropriate classification and framing modality. When this is considered, institutional, structural and interactional features are integrated in the analysis. Necessary resources (material and symbolic) can be assessed to become the site for challenge of what is, and demands for what should be.

[13] See any issue of the *British Journal of the Sociology of Education* for examples.

[14] An important discussion of the relation between equality and diversity is in Solstad (1997).

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