SOCIAL GEOGRAPHIES OF EDUCATIONAL CHANGE

Social Geographies of Educational Change

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FERNANDO HERNÁNDEZ & IVOR F. GOODSON

SOCIAL GEOGRAPHIES OF EDUCATIONAL CHANGE: DRAWING A MAP FOR CURIOUS AND DISSATISFIED TRAVELLERS

SOCIAL GEOGRAPHIES AND EDUCATIONAL CHANGE: ANOTHER CONCEPTUAL APPROPRIATION?

People involved in the field of education tend to use metaphors and notions from different disciplines to explain or illustrate their own concepts, findings or considerations. For instance, the appropriation of agricultural terms such as 'cultivation' 'germination' or 'growth' may be used to talk about the aims of school in promoting children's education. Similarly, educationalists have gleaned references from different disciplines like Anthropology - remember notions such as 'insider-outsider' or the 'narrative approach' or more recent influences like Ecology, from which the term 'sustainability' has been taken.

In this context of appropriation, when we use the term 'social geographies' linked to educational change[1], it is not only because a new process of conceptual cross-disciplinary fertilisation is emerging. Our view is that after more than twenty years of research on educational change many examples have demonstrated that educational change has to be contextually situated. This is because the educational process of change and its human landscapes

> are created by knowledgeable actors (or agents) operating within a specific social context (or structure). The linkage between the two, the structure-agency relationship, is conceived as being mediated by a series of institutional arrangements, which both enable and constrain human action. (Dear and Flusty, 2002: 2)

When the notion of social geographies is used in educational terms, it is because we are emphasising the importance of the physical and social spaces in understanding how people produce and react to educational changes. By using the notion 'social geographies', we try

> to explain the spatial patterns and processes that enable and constrain the structures and actions of everyday life... [because] it provides an account of the ways in which complex sociocultural, economic, and political processes act through time and space. (Dear and Flusty, 2002: 2)

When we talk about social geographies of educational change we are paying attention, as Hargreaves (2002: 193) has noticed, to "the ways that changes or failures to change are located, distributed and redefined or reconstituted as they move through space, from one place to another". When we use the notion of social geographies in the context of educational change, we need to keep the following questions in mind:

- How initiatives in a classroom or department are influenced by the surrounding context of the school, the district or the nation;

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, xi–xxi.

- How innovation spreads or diffuses from one school to another;
- How and whether reforms can be scaled up from a few schools to a whole system;
- How seemingly standardised reforms affect schools differently depending on where they are located;
- How schools influence one another;
- How the identities of, and interrelationships among, schools are affected by technology, principles of market competition and choice, and other initiatives.

All these questions are connected to the six 'strategic geographies' mentioned by Hargreaves, which are related to market conditions; social and professional networks; virtual connections; scaling up reforms; prescribed performances standards; differentiation of schools, and contribution of social movements (Hargreaves, 2002: 201-209). By using the notion of social geographies, we try not to forget that we, the potential readers of this book (educationalists, policy-makers, teachers, students and the community) are occupying particular locations in social space, influenced by a range of factors. Consideration of the diversity of locations, spaces and subjectivities, which affect the study of social change, has been one of the main purposes of this book.

EDUCATIONAL CHANGE: FROM SUCCESSFUL PROGRAMMES TO PEOPLE INVOLVEMENT

Behind all these questions and considerations, we see an epistemological turn that suggests that educational reality "can never be fully apprehended" and that

> any attempt to definitively assert what reality is constitutes an imposition upon other ways of seeing and experiencing the world, and may eventually drive those other ways of seeing and being into oblivion. (Dear and Flusty, 2002:253)

By assuming this epistemological position, we make clear why the notion of social geographies could be relevant in drawing a more complex approach to discussing change and improvement in education.

When we introduce the relevance of physical and social space to understand educational reform failures (and, on some occasions, successes), it is basically for two reasons. Firstly, when we explore, by implementing policies, promoting experiences and doing research on the forms of educational change and the diversity of human situations, it is essential to understand how we support, respond to, or criticise these changes. Hence, each individual occupies a "particular location in a material space at numerous scales: an affluent nation or a deeply indebted one, a major metropolis or an isolated farmstead, a boardroom or a classroom" (ibid., 251). This positionality influences aspects like the sustainability of reform, innovation or educational change (Fullan, in this book). Goodson has written here about the 'crisis of positionality', when spaces contradict positional, social and political purpose (Goodson, 2003).

Secondly, if this spatial location is a factor relevant to understanding the variety of people's interpretations and appropriations of educational innovations, their location in the *social space* also influences their response to change. In the field of educational change, social space means for example, skin colour, gender distribution of teachers in one school, children's self-cultural representations or parents' religious attitudes. As Dear and Flusty (2002: 253) have pointed out, "all these localised factors carry a range

of meanings within their larger, similarly localised social contexts, and this stew of influences gives rise both to us and to how we see the world".

For years the field of educational change has been considered as 'an object' that can be defined, planned, implemented and evaluated. Behind this approach it was the epistemological assumption that it is possible to construct a knowledge and understanding of this educational phenomenon as an object. More recently, the theoretical position that guides policy and research on educational change has moved to consider the relevance of understanding how subjects construct meaning and represent educational changes. Based on this reconstructionist approach, some new critical questions have emerged in the field of the study of educational change. Questions such as: how many realities are present at any given moment as we are exploring a process of change or a school improvement process? How do we make them and they, in turn, make us, thereby creating mutual influences? How do these influences affect our representations of the phenomena we are researching? Which version of educational change given by different sources or actors is the right one? In which sense is it possible to say that there is 'a right version'? Which ways of seeing and being in an educational change experience are acceptable and for whom? Which knowledge of educational change is trustworthy and in which conditions are we (people from different geographical and social contexts) able to learn from it?

In considering these questions, we are reframing the epistemological, methodological and political approach to studying educational changes, particularly because we are moving the focus of interest: from the nature of the educational representation to the biographical and subjective aspects through which such representations of change are experienced and imagined by the different actors involved. Paraphrasing Dear and Flusty (2002: 254-255), we could affirm that educationalists interested in promoting and carrying out research in educational change for school improvement have undertaken their work from a reconstructive approach by, "focusing on the subjects, adopting their own forms of mobile positioning, and partially inhabiting multiple-situated knowledge systems to address the question of spatial representation in two ways".

- Firstly, how different approaches to seeing and knowing the world give rise to different concepts of constructing educational change?
- And secondly, how educationalists have gone about representing educational changes, and in what ways might assumptions about the truthfulness of these representations be both presumptuous and oppressive to other ways of seeing?

These questions have been implicitly addressed through the different contributions presented in this book.

THE CONTEXT OF THE BOOK: CREATING AN INTERNATIONAL NETWORK FOR RETHINKING EDUCATIONAL CHANGE

The structure and the content of this book was designed by taking into account the contributions made on the occasion of the invitational *Conference on Social geographies of Educational Change: Contexts, Networks and Generalizability*, held in Barcelona on March 11-14, 2001[2]. The main purpose of this conference was to bring together a wide range of international expertise to examine the contemporary social geographies of educational

change. Social geographies means considering the importance of studying "the physical space and human constructions, perceptions and representations of spatiality as contexts for and consequences of human interaction" (Hargreaves, 2002:194). To be more precise, this conference addressed six objectives:

(1) To build an international conceptualisation and understanding of social geographies of educational change; of how educational changes are transplanted and transformed across different contexts.
(2) To work together, compare and refine different theories of contexts in terms of educational change (e.g. embedded context, network theory, scaling up, etc.).
(3) To determine the implications for school-level, district, regional, national and international approaches to change and reform.
(4) To draw on top class and cutting-edge international expertise to examine the relationships between 'variable geometries' of globalisation and localisation in educational change and reform.
(5) To explore the most promising forms of qualitative and quantitative inquiry which are appropriate for investigating the context of social geographies of educational change in complex times.
(6) To raise awareness of how different cultural and educational traditions inform and reflect the variations in approach to educational research and inquiry on change.

Behind these aims was the idea that while educational reformers seek to change the world, their own world of educational change is also in rapid transition. With new technologies and an accelerating circulation of information and ideas, educational reform agendas are increasingly global in nature –in terms of international test comparisons; market influences on schools; the investment of international finance and policy organisations; standards-based reform movements, etc.– even though these changes often feel intensely national or local to the people involved.

On the other hand, we wanted to make explicit something that in recent years has been forgotten. Until the middle of the 20th century, pedagogical ideas were internationally spread and circulated among different countries affecting educational change. Teachers and scholars from most Western (and non-Western) countries were familiar with the ideas of Pestalozzi, Froebel, Montessori, Dewey, etc. Educational scholars were interested in educational developments taking place in other countries and in sensitively adapting ideas and experiences from elsewhere to their own countries and idiosyncrasies. Paradoxically, the present growth of economic, political and media globalisation does not always seem to foster this kind of process of dissemination and international exchange across different contexts in relation to educational change.

At the same time, there is more national and regional determination to co-ordinate and create greater coherence in reform strategies (i.e. scale them up) (Elmore, 1995), and yet, by increasing research awareness, as local contexts become more flexible and complex, they also become more challenging and difficult to understand. Contexts have been conceptualised, for example, as nested systems (Smith *et al.,* 1987; Talbert & McLaughlin, 1994), elaborately tangled networks (Nespor, 1997) or unpredictably chaotic systems (Fullan, 1999). In addition, the effects of new technology, the growing pressures from changing families and cultural diversity, and the impact of stronger accountability, are all breaking down the walls of schooling and creating more porous

and permeable institutions that demand more of teachers' expertise, and challenge their existing definitions of professionalism (Goodson & Hargreaves, 1996).

The idea of organising this conference in Europe arose because we are living in a historical period where a combination of forces stress that national and regional differences are combined with the will of creating a common European educational space for 25 countries. In that context, it also drew widely on North American expertise, where research on centralisation, decentralisation, educational networks and 'scaling up' is especially strong.

By bringing together a range of international contemporary researchers, the conference aimed to contribute to the development of more sophisticated understandings of social-geographical, contextual influences on the nature and impact of educational change, and to facilitate a high-level exploration of different research strategies and methodologies for investigating the following topics:

- The globalisation of reform patterns and the development of world movements (see Meyer *et al.,* 1992).
- Relationships between globalisation and localisation in educational change.
- The nature and effects of centralised and decentralised change strategies.
- The impact of markets and charter arrangements on inter-school relations and systemic coherence.
- Changing patterns of social inclusion and exclusion in education.
- The importance of new technologies for the changing social geographies of schooling.
- The increasingly permeable relationships between schools and the world beyond.
- Different ways of conceptualising the nature and influence of 'context' (e.g. embedded contexts, tangled networks or chaotic systems). This is particularly true since social geographies need to be complemented by the analysis of 'social histories' (see Goodson, 1985).

This conference sought to create a community of knowledge and understanding, where participants from a variety of cultures exchanged and discussed the role of social geographies in educational change and their distinct research perspectives.

The result of the conference can be summarised in a sentence: *to convert the culture of loss into the culture of hope*, and the following nine points:

(1) Schools must be thought of as open educational institutions that are a part of society and a community, and are both a reflection of them and can contribute to transforming this same society and community.
(2) The opening of schools to society and community is bringing teachers and scholars together to create collaborative networks beyond the spatial and geographic limits of their schools.
(3) Teachers' expectations and their predisposition to deal with new challenges have a prime role in the schools' improvement process and results.
(4) To overcome simplistic and technically driven solutions to educational problems, it is necessary to recover the role of those participating in the changing process, with their biographies, personal histories, hopes and fears. This enables us to interrogate the social histories of educational change.

(5) Teachers' professional development, together with a deep change in teaching practices, is a life-long learning process based on every day problems and situations.
(6) Deep educational change must promote teachers' creativity, collaborative work, and the development of learning communities and the consideration of teaching, not as a technical profession but as a highly emotional, moral and political activity.
(7) In order to take advantage of the educational opportunities of the Information Society, schools should dramatically change their views on knowledge, assessment, and the teacher, students and information relationships.
(8) Accumulated knowledge about change in the last forty years has demonstrated the need to promote change from a non-bureaucratic perspective, which allows teachers to develop their own educational programmes and not only act as mere 'executors' of somebody else's ideas and proposals.
(9) There is an urgent need of losing our fear when faced with 'orthodoxy' and of considering 'transgression[3]' as a possibility for rethinking education in such a way that everyone will be able to find a place to learn.

These conclusions were taken from the discussions around thirty papers, where leading educationalists from different countries, academic positions and social contexts presented their reflections on the influence of social and geographical particularities in understanding educational issues. The majority of these papers were concerned with the explanation, new insights, alternatives practices and research findings related to the role of the 'spatial' on educational change.

A KALEIDOSCOPIC REPRESENTATION OF EDUCATIONAL CHANGE

Some of the papers presented in the conference were published in the *Journal of Educational Change*[4], particularly those dedicated to exploring the meaning of social geographies of contextual difference on the impact of educational reforms, and the important role of a social geographies network in order to influence educational change. In addition to these two main issues, we would like to invite our readers to complement these visions with the exploration of other spaces and issues written from a wide range of 'geographies'.

In the first part, called *Educational change: from the analysis of conditions of achieving to the relevance of personal biographies* we included as a complementary contrast the papers written by Michael Fullan *et al*., from Canada and Ivor Goodson from the United Kingdom. In the first case, by paying attention to the importance of considering a systemic approach when large reforms are implemented and, in the second case, by emphasising the importance of paying attention to people's trajectories to escape from all-consuming change enthusiasm.

In the second part, *Beyond School Walls: creating networks in education,* we continue exploring the importance of networking in education by presenting three different examples that also illustrate an international diversity: Jorge Ávila de Lima from Portugal; Ann Lieberman and Diane Wood from the United States, and Wiel Veugelers and Henk Zijlstra from The Nederlands, have drawn on what characterises the creation of educational networks and their effects on improving education.

The third part, *Gazes on education protagonists*, is dedicated to exploring some of the changes different educational actors have experienced in recent years. Nieves Blanco, Fernando Hernández, both from Spain, and Andy Hargreaves from the United States

try to illuminate some of the changes that affect the role of women, adolescents and parents, and their positions in the current situation of schooling.

In the last part entitled *Looking Technology from the other Side of the Mirror,* Roni Aviram and Deborah Talmi from Israel and Juana María Sancho from Spain critically analyse the contributions of ICT to educational change. Let us explore in more detail some of the contributions of these papers and the problems and questions that arise in understanding the importance of the social geographical approach.

FROM CELEBRATION TO QUESTIONING THE RELEVANCE OF EDUCATIONAL CHANGE

The chapter by Fullan *et al.* shows the importance of a systematic approach in developing a sustainable process of educational change. The model that represents this system is based on interaction and integration policies, decisions and strategies taken by schools, districts and the state. However, Fullan *et al.* still assume that, "change in complex society will never be linear. So don't expect a tri-level coherent system that settles down once and for all". They believe in the rhetoric of change and use all their knowledge and experience to demonstrate that working on this tri-level agenda shows that large scale and sustainable reform will be possible.

Adding complexity to this affirmative position, Goodson's chapter starts by posing the question: "the inevitable desirability of change, which seems an endemic expectation, especially within western societies", and the inevitable, "assumption that movements for change normally include progressive and inclusive elements". The danger with singular-site school improvements, school change methods and individual self-managing schools, is that they do not confront the problem of the distribution of resources for schools generally. It is always possible to improve single schools by concentrating resources on them. The down side of this kind of school change is school deterioration in the schools that are starved by the improving school. What is needed is a holistic model of school change that aims at improving *all* schools. This, however, is not envisaged by the counter reaction against inclusive schooling. Just as school subjects were invented to internalise and limit the debate about school purposes, so singular-site school improvement strategies have been invented in ways that limit a general democratic debate about improving schooling from taking place. The general point is that the timing of curriculum change has to be closely scrutinised. This is a primary lesson of the histories of education. At the moment, the timing for change initiatives is extremely problematic, given the global forces that we have reviewed. It could well be that, in recent times, progressive forces should have been on the side of educational conservation time, rather than on the side of change. However, the pendulum is now swinging towards an increasing concern with the social downsides of market deregulation. This all leads to a new 'third way' emphasis on ameliorating social exclusiveness. We are, we believe, at a turning point, where progressive concerns with social inclusion are now back on the political agenda. The prospects for change may then be about to change in more hopeful directions.

ALTERNATIVE MODALITIES OF CHANGE: SCHOOL AND TEACHER NETWORKS

Moving from the desirability of change –which is a fundamental question– to the modalities of change is the concern of the following sections in this book. Jorge Ávila de Lima foreshadows a number of questions in his chapter, notably the question of teacher collegiality as a mainspring of educational change, the role of social networks more generally and, anticipating a later chapter, the role of information technology in building a network society focusing on teacher-initiated educational change. Here his work would be usefully complemented by a close reading of Manuel Castells' (1996) work on the potential for social change embedded within the new network society. However, as with the initial disagreement about the desirability of contemporary change forces, Castells stresses the Janus-faced characteristic of 'networks' in that they both offer the potential for new liberations and coalitions, but also carry within them the potential for new oppression and stratifications. This ambiguity must be fully exposed in the work on school and teacher networks, for teacher networks can be seen as new subordinating stratifications as well as new liberating coalitions. The truth is, it all depends: it depends on the underpinning processes and on the structural location and positionality in which the networks are embedded.

This complexity and ambiguity is eloquently explored in Ann Lieberman's and Dianne Wood's chapter. They write:

> On the face of it the National Writing Project may look like a strategy for improving reading – one teacher at a time. But this conclusion oversimplifies the layered complexity of the network at both national and local levels.

They also show how the particular 'framing' of contemporary change forces 'refracts' the better impulses within education. Advocates of change need to understand how their change forces reposition and refract the better impulses of educators.

> As accountability is being reframed in the United States, the WP [Writing Project] has been asked to show that their work results in higher test scores… WP teachers, in common with many teachers throughout the U.S. believe that high stakes testing has begun to drive the curriculum undermining their more developmental and integrated approach to student learning.

Here one can see the change forces of accountability acting as a regressive social agent; change as regression not progression: change taking us backwards not forwards.

Veuglers and Zijlstra provide a welcome antidote to this vision, as change is always ambiguous and ambivalent –never unidimensional. They provide a powerful argument for ways in which networks can be progressive agencies in the restructuring of education. Here we see network participation as a kind of participatory democracy, a kind of action research, an ongoing reflective enterprise.

CHANGES ON EDUCATIONAL ACTORS

Blanco's chapter also provides an eloquent testimony to some of the progressive aspects of contemporary change. She focuses on the pedagogy of sexual difference and on the place of female authority in the school. She argues that authority relationships are based on the exchange between unique yet different individuals, "in the necessary negotiation between real people in order for them to grow and nourish their freedom". She writes with great feeling and insight that:

> the acknowledgement of female authority in schools and the practice of a pedagogy of sexual difference brings –at a time of deep and dramatic change- hope to schools because it can give it meaning and renewal in a more inclusive, responsible, and humane way.

Hernandez's chapter strikes a similarly powerful note looking at visual universe of adolescents, and its mediation in the production of power relations, social functions and roles, and in the representation of identity:

> It seems important not to forget that one of the new concerns in the study of educational change is the importance of people's personal trajectories in understanding their reactions and positionalities.

The main argument of this chapter is related to the forces acting from cultural mediations (particularly those with audiovisual representations) on adolescents' subjectivities and identities. This emphasis is, in the first place, because the learners' biographical trajectories have been silenced in most of the studies on educational change and school improvement initiatives. On the other hand it seems necessary to localise the influence of visual culture on adolescents' personal itineraries in order to go beyond cognitive explanations on learning or social characterisation of school failure and disaffection. This is because, he writes:

> Adolescents are, more than anything, visual learners. Google is their first tool for collecting information. They think visually and present themselves as visualised subjects. This visual positionality takes its roots from images that circulate both globally and locally; in this context images that contribute to creating new geographies of the self and to constructing their subjectivity.

Hargreaves' and Moore's chapter mines a rich seam, which he has been exploring for some time now, on the 'emotional geographies' of schooling. This work shows some of the limits of emotional engagement, particularly, as in this example, teacher-parent relationships. Teachers, it seems, often prefer silent respect-at-a-distance to, "more open and reciprocal relationships with parents where communication learning and criticism run in both directions" (Vincent and Tomlinson, 1997). They argue that teachers should in fact become less professionally distant and more politically open, and they end with an important progressive exhortation.

> In a culturally diverse, increasingly unequal and rapidly changing postmodern world, building strong, reciprocal partnerships with parents to develop the depth of emotional understanding on which successful learning among and caring for all students depends has never been more necessary.

ICT AND THE PROMISES OF EDUCATIONAL CHANGE

The final section of the book approaches the important dimension of information technology. Aviram and Talmi provide a challenging, indeed combative paper: an approach to be deeply welcomed in the often-flaccid discourses that surround information technology. Their chapter appeals to the reader to make a cognitive leap and it is well worth responding to the appeal. It is a chapter full of good things, but difficult to summarise. Take the following assertion:

> Large-scale educational reforms have almost never been rationally discussed, founded, or evaluated. Educational reforms have largely reflected political demagogy and deeply rooted, unquestioned and unexamined myths without rational debate (certainly not of a systematic and ongoing nature). Furthermore, it seems that the more extended and costly the reform, the less rational the discussion about it.

Or,

> The growing confusion in the West in the last few decades concerning the aims of education reflects the most basic existential and social problems of the late modern and postmodern eras. This confusion has led to the development of escape mechanisms. The 'sloganization' and 'technocratization' of educational discourse is certainly such a mechanism. (Macintyre, 1985)

These kinds of observations add intensity to the search for a whole range of social geographies of educational change, geographies which particularly focus on the production and geographical/distribution of particular ideologies of educational change.

In the final chapter, Sancho explores a further range of insights into the technology of educational change and introduces us with great clarity to the ambiguities of complexity and simplicity.

Sancho departs from Hargreaves' (2002) conceptualisation of virtual geographies as tying together the power of computer and other technologies to defeat the tyranny of space; to give parents and students independent access to the prescribed curriculum and also open up access to knowledge far beyond the set curriculum and its recommended texts; to contribute to the rapid increases in home schooling; to break down the walls of schooling and threaten teachers' role; but also exclude outsiders deepening the problem of the digital divide.

She argues that in the last thirty years the potential of computers and related information and communication technologies (ICT) has served as a powerful discourse to develop a very optimistic view regarding virtual geographies of educational change. However, an in-depth look into present social and educational contexts discloses that this discourse is a very long way from reality. ICT *per se* is not an educational technology, but even more, if removed from sound educational approaches is far from being the kind of technology needed to meet current and future educational needs and challenges.

Our expectation is that by exploring all these issues the notion of Social Geographies of Educational Change will be meaningful to the reader. We also expect to have made a case for the necessity of introducing a new agenda to think about and carrying out research about educational change and school improvement. In this agenda it seems appropriate:

(1) To go beyond the fascination for finding patterns of generalisation in educational change and innovation processes and start paying more attention to how these processes move through space and time, from one place to another, from one situated narrative to another.
(2) To travel beyond the purpose of representing in an objective form how educational change occurs while trying to understand how different educational actors construct meaning, interpretations and appropriations of educational innovations, and how they represent educational changes depending on their location in the social space.
(3) To refocus our attention from the researcher's views of educational changes towards constructed representations considering biographical (not only professional) aspects through which such representations of change are experienced and imagined by the different actors involved in it.

By considering these issues, as different authors of this book have done, a new approach to the study of educational change and school innovative processes could be developed. Such an approach will depict, in a more complex and comprehensive manner, the social experience that is affected by people's social locations and their biographical trajectories.

NOTES

[1] The term 'social geographies' arose from a conversation between Goodson and Hargreaves in New Jersey in 1994, when Goodson said: "I think what we are talking about is 'social geographies'".
[2] The conference was mainly sponsored by the Spencer Foundation with the collaboration of the University of Barcelona, the Spanish Ministry of Science and Technology, the Catalan Department of Universities, Research and Information Society and Octaedro Publishing House. The conference was organised by Juana M. Sancho and Fernando Hernandez at the Scientific Park of Barcelona.
[3] We refer to the possibility of passing over the current boundaries of school organisational structures or to go beyond, to break, the limits imposed by the "grammar" of schooling rules (Tyack and Tobin, 1994).
[4] *Journal of Educational Change,* (3), 3-4, 2002.

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Part 1. Educational change: from the analysis of conditions of achieving to the relevance of personal biographies

MICHAEL FULLAN, CAROL ROLHEISER, BLAIR MASCALL & KAREN EDGE

ACCOMPLISHING LARGE SCALE REFORM: A TRI-LEVEL PROPOSITION

The field of educational reform has shifted focus over the past decade to issues of large scale, sustainable reform. It is no longer sufficient to work with one school at a time. In our own work we are working on the tri-level reform model which is what has to happen at the 1) school and community level 2) the district or regional level and 3) the state level. Both intralevel development (within the levels) and crosslevel co-ordination are needed. We have been involved in many examples of district level capacity building involving many or all schools within a district, and some multilevel reform initiatives such as the National Literacy and Numeracy Strategy in England. This chapter outlines the tri-level model and provides examples of how the model works in practice.

INTRODUCTION

A critical new theme of the 1990's was how to achieve large scale reform. In the current decade sustainability has been added as a major concern. These twin concepts represent a radical shift from understanding individual school innovation toward establishing system change that generates and supports continuous improvement on a large scale.

In this paper we use literacy and to a certain extent numeracy initiatives as examples of attempts at large scale sustainable reform. We first describe the sources we use from our own and others work –a lively body of multi-year attempts at large scale reform. Second, we offer a tri-level model- school/district/state, along with evidence to demonstrate what is necessary at each of these three levels in the pursuit of system-wide reform. Third, we identify an agenda of unfinished business in order to take us to the next level of sustainable reform.

We should also provide an advance organizer for what we mean by large scale, sustainable reform. We exclude for example, large scale external reform models such as Success for All, even though they are underway in thousands of schools. There are two reasons for this exclusion. First, these school-wide models, while comprehensive, are not occurring in *school systems*, i.e., they are situated in thousands of ad hoc schools. Second, they represent externally adopted models as such, and are not likely to produce deep change in the culture of learning. At best, the models get implemented, but do not produce the kind of deep cultural change required for continuous improvement. We acknowledge that they represent legitimate large scale reform (for an excellent study of this set of models see Datnow et al, 2002). It is just that we do not believe that they represent the future because they can never produce deep organization and system change.

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, 1—13.

SOURCES

We do not attempt a systematic review of research (see Fullan 2001a, 2001b). Rather, we describe some case examples of large scale multi-year case studies, many of which we are currently involved in. This is the data base for this article. In particular, we include the reform work in District 2, New York City, and in San Diego as well as our own training, research and critical friend roles in three districts in Canada (Edmonton Catholic Schools in Alberta, the Toronto District and the York Region in Ontario). Finally, we report on our evaluation of the National Literacy and Numeracy Strategy in England.

First, we build on the excellent work of District 2 in New York City, coupled with San Diego City School District. What makes these two cases interesting is that they are sequential attempts at achieving ever more complex reform using essentially the same set of strategies.

New York

District 2 in New York has fewer than 50 schools. In 1988 it ranked tenth in reading and fourth in mathematics out of thirty-two sub-districts. Using a systematic reform strategy based on seven themes, eight years later, by 1996, it ranked second in both reading and mathematics. Elmore and Burney (1999) identify the seven organising themes or principles of the strategy: (1) it's about instruction and only instruction; (2) instructional improvement is a long, multistage process involving awareness, planning, implementation, and reflection; (3) shared expertise is the driver of instructional change; (4) the focus is on system-wide improvement; (5) good ideas come from talented people working together; (6) set clear expectations, then decentralize; (7) collegiality, caring, and respect are paramount (p. 272). These themes were instituted through a subset of strategies which include: intervisitation (teams of principals visiting schools to examine implementation of initiatives), monthly principal support groups, peer coaching, study groups, institutes, and the like (see Fink and Resnik, 2000). This work involves 'learning in context' –built-in methods for groups to learn together focusing on the actual work of the district. It is moreover systemic –all schools, all leaders, all teachers are involved together.

San Diego

San Diego represents an interesting case because the leadership in District 2 became involved in designing an intensive reform effort beginning in 1996 and involving all of the district's 187 schools. The focus again was literacy and numeracy. In a sense the proposition was can you do in San Diego with 187 schools what you did in District 2 with 48 schools in half the time by using the strategies more intensely? The short answer is yes (but see our qualifications about sustainability in the concluding section of this paper). In the pre-strategy years (1993-1996) scores in reading and mathematics in San Diego were flatlined –neither increasing nor declining. The new strategies were put in place commencing in 1996-1997, and after a year's lag the results have steadily increased by some 10-30% (depending on the subgroup) from 1997-2000.

Our own reform efforts involve a series of large scale, multi-year projects in which we are serving as trainer and/or 'critical friend' evaluators/consultants. We cite four in particular.

Edmonton

In the Edmonton Catholic School District in Alberta, Canada, we are engaged in the third year of a multi-year training of school teams from all 84 schools in four cohorts of 21 schools. Each team consists of the principal and 4-6 teacher leaders. The initiative is called Assessment for Learning. Each school uses the knowledge base that we and others have developed to guide their efforts to improve student learning and achievement in targeted areas. The knowledge base includes: understanding the change process, building professional learning communities at the school level, assessment literacy, knowledge building and sharing, the role of the district in fostering school reform across all schools dealing with resistance, and going deeper. In effect, the project has focused on 'reculturing' the district. We are now conducting a series of case studies (not yet available) to derive lessons and conclusions.

York Region

In York Region District School Board (118 elementary and 23 secondary schools), to the north of Toronto we are not doing the training, but serving as a critical friend consultant focusing on both the school and the district level. First, we have completed six case studies of schools involved in literacy initiatives. Second, we are advising on how the district as a whole can develop a strategy for system-wide change (Mascall et al, 2001).

Toronto

In the Toronto District School Board, we are involved in the second year of training school leaders from 93 schools engaged in an Early Years Literacy Project. Each school team consists of the principal and a literacy coordinator (.50 position). The content of the training is similar to the Edmonton initiative except that it is all channelled towards improving early literacy. We have just completed seven case studies of schools, which are reported in the next section (Edge et al, 2001). Still to be considered is how to go district-wide in a system that has 451 elementary schools and 102 secondary schools.

England

We are in the final year of a four year evaluation of the National Literacy and Numeracy Strategy in England (Earl et al, 2001). In 1997 the newly elected Labour government selected literacy and numeracy as priorities for the 19,000 primary schools in England. They established base-line achievement figures (in 1996, 57% of all 11 year olds in the country were achieving at the proficient level in literacy; the mathematics figure was 54%). They set targets for 2002 of 80% for literacy and 75% for numeracy. The strategy to get them there was essentially drawn from the knowledge base we are discussing in this article, combining accountability and capacity-building (see Barber, 2000, and Fullan, 2001a, Ch. 13). We received the contract to monitor the

implementation of the strategy, and feed back our findings on an ongoing basis. As of 2001, literacy achievement has risen to 75% (on the way to 80%), and 71% for mathematics (on the way to 75%). The complex issues in this national case are discussed in the next section.

What are we learning about large scale, sustainable reform?

THE TRI-LEVEL MODEL

Our argument in a nutshell is that to get large scale reform, you need to establish and coordinate ongoing accountability and capacity-building efforts at three levels –the schools, the district, and the state. We illustrate our findings at each of the levels. We conclude that large scale reform is being accomplished with significant, but not necessarily deep results. Further, the conditions for sustainability simply are not evident.

The School Level

In our view the best depiction of what is needed at the school level derives from the work of Newmann and his colleagues (2000). The model they have developed is a compelling starting point (see Figure 1).

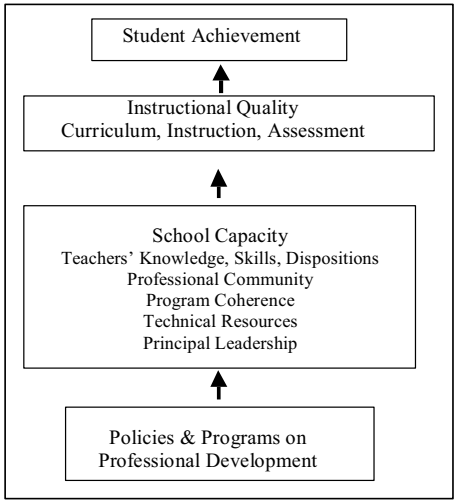

Figure 1. Newmann et ak (2000)

Newmann et al found that school capacity was critical, which they defined as consisting of five dimensions:

(1) Teachers' knowledge, skills, and dispositions
(2) Professional community
(3) Program coherence

(4) Technical resources
(5) Principal leadership

Basically Newman et al claim, with backing from case studies, that professional development often focuses on knowledge, skills, and dispositions of teachers as *individual* staff members. This is the first component of school capacity. Obviously this is important and can make a difference in individual classrooms, but in isolation it is not sufficient (never send a changed individual into an unchanged culture).

In addition, there must be organization development because social or relationship resources are key to school improvement. Thus, schools must combine individual development with the development of *school-wide professional communities*, the second element of capacity.

However, individual development combined with professional communities is still not sufficient, unless channelled in a way that combats the fragmentation of multiple innovations by working on *program coherence*, "the extent to which the school's programs for student and staff learning are coordinated, focused on clear learning goals, and sustained over a period of time" (Newmann et al, 2000, p. 5). This third element, program coherence, is organizational integration.

Fourth, instructional improvement requires additional *resources* (materials, equipment, space, time, and access to expertise).

Fifth, school capacity is seriously undermined if it does not have quality leadership. Put differently, *the role of the principal is to cause the previous four factors to get better and better*. Elmore (2000) agrees:

> [T]he job of administrative leaders is primarily about enhancing the skills and knowledge of people in the organization, creating a common culture of expectations around the use of those skills and knowledge, holding the various pieces of the organization together in a productive relationship with each other, and holding individuals accountable for their contributions to the collective result. (p. 15)

We will see that this model has been verified in our own case studies. Before commenting on these findings, however, we need to comment on what is missing or undeveloped in the model. Three key things. First, the parents and the community are omitted. We know that reform will not be successful unless the school can develop a strong, mutually influential relationship with the community (Fullan, 2001a, Ch. 12). Second, in our own work, 'assessment literacy' is a central strategy (it is implied in Newmann's model under instructional quality). Assessment literacy as a strategy involves developing the capacity of teachers and principals *collectively* to:

(1) Gather/access dependable student achievement data.
(2) Make critical sense of the meaning of the data
(3) To develop school improvement action plans based on (1) and (2)
(4) Be effective players in the accountability arena by being proactive and open about the uses and abuses of achievement data in an era of high-stakes testing; this means being engaged in public discussion with a range of stakeholders so that the rationales for decisions are transparent.

Third, the external infrastructure at the district and state level is largely missing (it is partially included in the bottom box 'Policies and Programs'). It is this infrastructure which constitutes the second and third levels of our tri-level model as we discuss below.

School Level Lessons

Focusing on the school level for the moment, in the six case studies in the York Region District School Board, consistent with Newmann et al, we found that all five aspects of school capacity were associated with success (teacher skills, professional learning community, program coherence, resources, and principal leadership). However, we were able to identify additional nuances.

First, as in all our studies it is not just principal leadership that counts but the combination of instructionally focused principal leadership with *one or more* other change agents inside the school. In York Region this meant the principal, the Mentor Teacher (as the literacy coordinator was called), Reading Recovery teachers; and in some cases the vice-principal.

Second, in four of the six schools highly collaborative cultures (professional learning communities) were evident. We emphasize that this is not individual professional development, but *shared* development in which teachers meet frequently, discuss challenges particular children are having, and support (and pressure) each other. In three of the four collaborative schools there also was strong evidence of 'assessment literacy' as staff a analyzed and interpreted student data and used this to alter their practice. It is crucial to understand that this is *learning in context*, i.e., what is learned is specific to the school situation, and it is done collectively, it is shared.

Third, program coherence or focus was critical but difficult to maintain. Schools are under constant pressure to juggle multiple initiatives. Even the literacy strategy had several different components, which needed more integration.

There were also difficulties. These included:

(1) All schools experienced difficulties in engaging parents and communities. We believe that this is indeed more difficult than fostering professional learning communities. Interestingly, the latter may be the best route to community involvement, because we have found that as principals/teachers develop their individual and collective competence and confidence, they become more proactive and effective vis-à-vis parents.
(2) Assessment literacy was being developed but was far from advanced. For example, teachers had access to their own "running record" data, and to the provincial assessment of levels of achievement for grade 3 students. Little was done to interrelate these data, and where there were differences few people had ideas about how one might understand those differences.
(3) Lack of resources was a significant factor in four of the six schools (materials, time, assistance).
(4) Staff turnover was another problem (see the district section for a partial solution).
(5) Reconciling district initiatives was also problematic as school professional development plans and district activities often did not mesh.
(6) Finally, sustaining success was a concern of all schools. This reflected various uncertainties about the availability of resources, turnover of staff (especially teacher leaders) and maintaining focus in the face of external forces.

Many of these findings are corroborated in the case studies of the seven schools in the Toronto District, and so we won't repeat them in detail. Once again we found that the combined leadership of the principal and the literacy coordinator was crucial. We

also found a number of issues that had to be sorted out with respect to the role of literacy coordinator –the clarity of the role; relationships with other teachers in terms of trust, expertise, and age; relationship with the principal. Similarly, resources, maintaining focus, reconciling different assessment techniques, coping with turnover, and maintaining momentum were all issues of concern.

All and all in both the York and Toronto projects, schools have made considerable progress. Those in year two or three of the initiatives were especially effective, reflecting what is normal in many large scale reform efforts. In year one people experience the difficulties of getting started, and some misgivings about the top-down nature of the strategies (remember we are talking about large scale reform); in year two (if the strategy is sound) people talk about initial success; by year three people can see that their own skills, especially the collective skills of teachers and principals together, have developed. They see results of their efforts, can pinpoint problems in student learning, and have greater confidence about how to address the problems. (This is also the case in the Edmonton initiative).

Two big problems remain. In both districts only about a quarter of the elementary schools in the district were engaged in the projects. Going to scale remains an issue. Second, even in those schools in which success was being experienced three years into the initiative, nay, *especially* in those schools in which success was evident, the big worry was 'sustainability'. People were right to worry, because neither achieving nor sustaining large scale reform is possible unless the district and state get their acts together.

THE ROLE OF THE DISTRICT

We have written elsewhere about the role of the district (Fullan, 2001a, Ch. 10). And, certainly the principles and strategies used in District 2 and in San Diego provide some clarity about what districts need to do. We highlight in this section some of the key requirements of effective districts and difficulties they have in staying the course.

We start by observing that if school capacity is critical, the main objective of the district should be to generate and maintain greater capacity in all or in the vast majority of schools in the district. Here are some of the ways in which districts can address this issue.

First, start with literacy (and we could say numeracy). It is essential that these foundational skills be established as building blocks for other subjects and developments. This involves establishing an accountability/capacity-building initiative across many schools as we have seen in all the districts. The key point is that districts establish instruction as the priority. By focusing on instruction/curriculum, districts embed their pressure and support solely in the service of improved teaching and learning.

Second, a critical part of the strategy involves directly investing in leadership roles at the school level (e.g., principal and literacy coordinator) as well as appreciating that such an investment also pays off down the line. For example, think of the 93 literacy coordinators in the Toronto District receiving great training and experience as 'change agents'. In turn these individuals are likely to be the leading candidates when positions become available at the vice-principal and principal levels (assuming that the district is seeking principals as instructional coordinators). We only have anecdotal data but we would hypothesize that experienced literacy coordinators are becoming the leading candidates for principalships. If they get promoted in numbers, they will in turn

develop the capacity of teacher leaders in their schools at a much greater rate than their principals did with them. Soon a critical mass with a steady pipeline of leadership development will be in place.

Third, recognize the community-building nature of learning in context. Such learning is specific and it fosters sharedness. It takes place within school districts and schools, but deliberate strategies must be established in the overall district design so that learning across schools is featured. This begins to foster commitment to other schools and to district success as a whole.

Fourth, focus on assessment literacy, benchmarks of achievement, and a new indicator that we are suggesting as the true measure of progress –closing the gap between high and low performers (school to school, group to group). Closing the gap is the greatest contribution schools can make to societal development. It involves raising and levelling the differences as all schools move forward with low performers moving at a greater rate.

Fifth, intervene in schools which are persistently failing in order to help them to move forward. The goal is to take action in order to move schools to a level of capacity where they can go forward more on their own (always in the context of district stimulation).

Sixth, conduct an inventory of district initiatives with a view to achieving greater coherence or connectedness. Sometimes this means dropping certain activities, other times it involves consolidation or integration. Working on coherence making is the greatest need for complex systems (Fullan, 2001b). San Diego is a good example. Prior to the 1996-97 focus, San Diego was a highly innovative district. The problem was that it was *too* innovative. It had multiple disconnected initiatives that came and went at irregular intervals. It needed to consolidate and focus, and that was what the new leadership did.

District Level Lessons

In York Region and in Toronto we see the initial success of the literacy projects now reaching a crossroads. Will these successful endeavours, which are currently not integrated into district wide systems move to the next level of incorporation or will they become another example of 'this too shall pass'. York Region, for example, has much going for it. The literacy initiative is successful in terms of raising literacy achievement. It has a number of other quality initiatives that feed forward in the same direction of capacity-building. Our recommendations to York Region were the following:

(1) Consolidate the various literacy initiatives into one Core Literacy Strategy.
(2) Extend the Mentor Teacher (Literacy Coordinator) role to all schools in the district.
(3) Integrate the various improvement strategies so that they are coordinated.
(4) Add new strategies to foster across school sharing. Access to cross school knowledge provides better ideas as it creates a shared sense of commitment in the district as a whole.
(5) Add new resources in terms of materials, access to expertise and time.

The Toronto District is much larger and presents a more complex set of problems. Among other matters the District needs to continue and expand the work of the 93 schools to other schools in the district. The investment in training and support of the

school teams (principal and coordinator) has been very effective. Another issue is how the early literacy program can be integrated and supported by area superintendents across the district. At the present it is lead by one area superintendent coordinating the work across other area superintendents.

The biggest problem in the Toronto District is working through the aftermath of amalgamation in which seven districts were incorporated into one (unlike York Region which was unaffected by amalgamation). The amalgamation has accelerated staff turnover. The District Director (Superintendent) has just resigned to take another position.

Our point is that it is impossible to develop school capacity across the vast majority of schools, i.e., it is impossible to accomplish large scale reform, if the district does not improve its own capacity. Infrastructure counts. It can lead the way or it can actually undercut efforts of individual schools on the move, while neglecting other schools that are persistently failing.

So far we have said that the first two levels, schools and district, must work in a mutually beneficial direction, and we have provided some examples of districts moving down that path. Now we say, districts cannot play this role if the state is not doing the right things –the third part of our tri-level model.

THE ROLE OF THE STATE

Just as schools will not develop capacity if districts are not helping (or if a few do, it won't be sustained), districts will not progress if the state policy context is not working to foster district and school development. This means that the state must work to establish a sophisticated blend of pressure and support (or accountability and capacity-building). In this section we illustrate what this looks like in terms of what we will call the specific infrastructure (i.e., specific to literacy and numeracy), and the generic infrastructure (i.e., policies related to the overall quality of the teaching profession).

Specific Infrastructure

We take the National Literacy and Numeracy Strategy in England as the case in point. When the Labour government came to power in 1997, they established literacy and numeracy as top priorities. As we saw earlier the government established baseline measure (the percentage of 11 year olds performing proficiently) and new targets to be met over a five year period. They drew on the knowledge base about change (again pressure and support), and crafted a comprehensive strategy. Michael Barber, the head of the government initiative describes the main elements of the implementation strategy:

- A nationally prepared project plan for both literacy and numeracy, setting out actions, responsibilities and deadlines through to 2002;

- A substantial investment sustained over at least 6 years and skewed toward those schools that need most help;

- A project infrastructure involving national direction from the Standards and Effectiveness Unit, 15 regional directions, and over 300 expert consultants at the local level for each of the two strategies;

- An expectation that every class will have a daily math lesson and daily literacy hour;
- A detailed teaching programme covering every school year for children from ages 5 to 11;
- An emphasis on early intervention and catch up for pupils who fall behind;
- A professional development programme designed to enable every primary school teacher to learn to understand and use the proven best practice in both curriculum areas;
- The appointment of over 2,000 leading math teachers and hundreds of expert literacy teachers, who have the time and skill to model best practice for their peers;
- The provision of "intensive support" to circa half of all schools where the most progress is required;
- A major investment in books for schools (over 23 million new books in the system since May 1997);
- The removal of barriers to implementation (especially a huge reduction in prescribed curriculum content outside the core subjects);
- Regular monitoring and extensive evaluation by our national inspection agency, OFSTED;
- A national curriculum for initial teacher training requiring all providers to prepare new primary school teachers to teach the daily math lesson and the literacy hour;
- A problem-solving philosophy involving early identification of difficulties as they emerge and the provision of rapid solutions or intervention where necessary;
- The provision of extra after-school, weekend, and holiday booster classes for those who need extra help to reach the standard. (Barber, 2000, pp. 8-9)

Note, the blend of pressure and support, and problem-solving mechanisms. Most governments invest in accountability (pressure) but not in support (capacity-building). From the start, the English government made substantial new financial investments. It is also revealing that as achievement targets began to rise, additional monies were garnered. In other words, each degree of success was used as a lever to obtain more resources from Treasury. It is also noteworthy that demonstrable success was obtained within one electoral four year term, and was one of the factors instrumental in the landslide 2001 reelection, which brought even more resources (and continued pressure). We will qualify our interpretation of success in the final section of the paper, as there are still some fundamental problems. As a first phase, however, the English case represents an impressive accomplishment.

Generic Infrastructure

The generic infrastructure is another matter. Here the question are the state policies (concerning compensation, standards of practice), and working conditions for teachers and administrators such that the quality of the teaching profession is enhanced?

Measures of enhancement include good people coming into teaching (and staying); morale; and continued development of the quality and performance of schools. In a sense, the role of the generic infrastructure is to contribute to accountability and capacity developments on a large scale with respect to the previous two levels (schools and districts). The empirical question is does the generic infrastructure enhance quality performance or fail to enhance it? We have to say that in most jurisdictions including England, the generic infrastructure has so far failed to make a difference as the system continues to weaken (or at the very least not move from a weakened to a stronger state).

The key policy strategies with respect to the generic infrastructure include (among other things): the quality of initial teacher preparation; progress; induction; continuous professional development tied to standards of practice; compensation for teachers; the recruitment, continuous development and retention of leaders (as school principals); and the alteration of the working conditions of teachers toward creating professional learning communities that mobilize and engage teachers, parents, business and community leaders in the services of student learning.

Using England as the example, the generic infrastructure has not yet improved as indicated by an increase in the attraction and retention of more teachers, teacher morale, more effective school and district leadership, and so on. If anything the specific infrastructure has weakened. Consequently large scale, sustainable reform is not possible. The next steps, then, are crucial and they are not straightforward. We turn to some of these key issues in the final section of the paper.

THE UNFINISHED AGENDA

We have made the case that new capacities have to be built at all three levels, and we have provided evidence of good work happening at each level. We do not, however, have evidence of the three levels working in concert. And indeed our overall recommendation is that policy makers need to turn their attention to developing capacities and interactions across the three levels if they are seeking large scale, sustainable reform.

There are four main aspects of the unfinished agenda, and a final caution we would offer. First, concerning literacy and numeracy, a set of policies on accountability and capacity-building must be established that take into account all three levels and their interrelationships. We have outlined in each section what that would entail.

Second, also concerning literacy and numeracy, it is important to worry about the limitations of a tightly orchestrated tri-level strategy. As successful as the first 5 years of the English strategy has been, there are fundamental doubts about whether that strategy is appropriate for going to the next level of reform. Among other things the English strategy has supplied lesson plans and resources on the web. We have said earlier that this has helped weaker teachers. The question, however, is whether all or most teachers start to use "provided" materials because that is easier and because they wish to cover themselves. Such mechanical following of central directives is more likely as the government sets new targets for 2004. Following the election in May 2001, and following a year of non-movement in assessment scores (literacy was at 75% in 2000 and stayed at that level for 2001; numeracy went from 72% to 71% in the same period). The danger is that even more intensified, prescriptive high pressure strategies will be used, and what is worse, teachers will be vulnerable to following directions. The overall

strategy has given teachers a lot of new information and good ideas, but given that, the next phase should be based on giving teachers (not as individuals, but as professional learning communities) time to reflect on, apply and consolidate what they have learned. It is time for schools (principals and teachers) to make the strategies their own, not to become even more government-directed.

This brings us to our third point which concerns the generic infrastructure and the quality, morale and internal commitment of the teaching profession qua profession. In acknowledging England's first phase success in improving literacy and numeracy, Baker (2001: 36) makes the case:

> In countries where accountability measures have undermined teachers' autonomy, there is now a recruitment crisis …
>
> So this is Britain's cautionary tale: Policymakers must involve teachers in the reform process, and accountability must be balanced by professional autonomy. In the past, teachers in England had high autonomy and low accountability. The past decade has produced a tilt to an opposite imbalance: low autonomy and high accountability.
>
> The result has been a demoralized teaching profession. England has now started to emerge from the rapids of school reform. There are sound structures in place for future progress; but just as the government hoped it could build on these new foundations, it was hit by the crisis of teacher recruitment.
>
> What both the United States and the United Kingdom need is a balance: both high accountability and high autonomy for teachers. Not one or the other, but both.
>
> The warning is there. Somewhere along the road of England's school reforms, the policymakers took their eye off the ball. It is as if the football coach had worked out the most careful and detailed theoretical plays only to look up, on the day of the game, to find his [best] players had lost interest and gone home with the ball.

A word about professional autonomy. Our version is one steeped in professional learning communities in which lateral accountability (as teachers focus collectively on student learning and what it will take to get there) among teachers is enormously powerful. No loss in accountability there!

The fourth point concerns broadening the curriculum beyond literacy and numeracy. There is a great deal of evidence that certain sets of life performance dispositions and skills are required for the knowledge economy of the 21st century. — problem-solving in novel situations, teamwork, emotional intelligence, good citizenship, commitment to life-long learning, and the like. You can't get them through prescriptive methods. Policymakers must begin to focus on these developments with the same intensity as they did for literacy and numeracy. Teacher ownership will be even more crucial in these domains.

The caution. Change in complex society will never be linear. So don't expect a tri-level coherent system that settles down once and for all (see the Change Forces trilogy –Fullan, 1993, 1997, forthcoming). But successive approximations are possible. Whatever level in the system you are at, work on the tri-level agenda. To be content with your own bailiwick is to make large scale, sustainable reform impossible. And indeed, to confine local reform to episodic spasms.

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UNDERSTANDING CURRICULUM CHANGE: SOME WARNINGS ABOUT RESTRUCTURING INITIATIVES

Firstly, the article raises some questions about the inevitable desirability of change, which seems an endemic expectation, especially within western societies. These questions are raised about the assumption that movements for change normally include progressive and inclusive elements. Rather, the article argues that we need to closely interrogate the historical circumstances of change forces before we judge their progressive or regressive potential. In doing so, the article draws on some of the methodological work conducted on the 'Change Over Time' project funded by the Spencer Foundation (1998-2003).

INTRODUCTION

> I hereby swear and affirm. Affirm. On my.... honour? My belief in... in… the technological revolution, the pressing, growing, pressing, urgent need for more and more scientists. My own belief in change, change for its own sake. (Osborne, 1965)

> It is not always time for a change.... often it is not time for a change even when change looks like the easy way out. (Sheehy, 1981, p. 99)

> The 'necessity' for change has been such a bludgeon in European history and has justified so much that was in fact unnecessary, stupid, or tragic that it ought by now to be a principle that its advocacy should always be countered with a very firm Why? This is not conservativism, even only with a small 'c', but common sense. We should remember how many times we have been here before. (The Guardian, 1998, p. 24)

Whilst most curriculum change emerges in specific local milieus, it remains true that, at times, there are 'world movements' that drive change forces. John Meyer has detailed some of these in his seminal studies (Meyer, 1980; Meyer *et al.,* 1992). By understanding the historical circumstances in which change forces emerge, we can assess the likely balance of progressive or regressive elements. Looking at a number of instances, I posit a model of waves of change, where a more open, democratic inclusive period is often followed by a more reactionary counter movement.

Studies of cultures and structures of schooling have often worked with snapshot notions of time and context. Cross-site case studies of secondary school change (e.g. Louis & Miles, 1990; Lieberman, 1995) have not permitted the change efforts to be grounded in patterns of influence and causation in the past, or to be followed longitudinally into the future. By comparison, historical studies of school change have tended to focus on broad patterns of organisational persistence and development (Cuban, 1984); on the fate of particular reform policies (Tyack & Robin, 1994), or on reforms in particular areas such as curriculum (Goodson, 1993). Alongside these have been more intensive historical case studies of single schools and their experiences of curriculum change (e.g. Grant, 1988; Labaree, 1988; Goodson & Anstead, 1993; Fink, 2000). One important exception is Brouillette's (1996) doctoral study of the geology of

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school reform in a small school district, which shows how school change processes are embedded in the contradictory constraints and reform trajectories of the wider system and indeed, Jan Nespor's new work, published in *Tangled up in Schools* (1997).

One of the most detailed and complete case studies of school change in one institution over a significant period of time is Smith and his colleagues' study of Kensington School (Smith *et al.,* 1986, 1987, 1988). At the beginning of a study that would span a quarter century, Smith, Prunty, Dwyer and Kleine predicted with uncanny accuracy that this innovative, open plan school with team teaching, democratic decision-making and students organised by divisions rather than by grades, would ultimately fall back into line with the rest of the school district. This reversion, they said would come about because of community pressure, changes in central office administration along with other school-level staff changes. Historical and longitudinal case studies of this kind serve as a strong warning to those who might be inclined to become overly optimistic about contemporary school change efforts when snapshots are taken of their early stages (e.g. Lieberman, 1995; Wasley, 1994). What is now needed is a set of historical and longitudinal investigations of school change across multiple sites, where the change trajectories and the conditions in which they are grounded vary.

Our study of secondary school cultures and change over time will take a particular approach to the study of historical time. This is grounded in and adopted from the Annaliste methodology for understanding historical change (Ladurie, 1975; Goodson & Anstead, 1998). Historians and social scientists in the Annaliste school see change as operating at three layers or levels of time - long, medium and short –which interpenetrate in a complex manner. These theorists provide an oceanic allegory to capture the three categories or levels and their interdependent mode of operation.

At the bottom, representing long-term time, are deep oceanic currents which, although apparently quite stable, are moving all the time. Such long-term time covers major structural factors: worldviews, forms of the state, etc. The movement from pre-modern to modern, or modern to postmodern forms, can be understood in terms of these broad epochal shifts (Mills, 1959; Bell, 1973; Lyotard, 1984; Denzin, 1991). The effects of the emerging social, economic and political conditions of the postmodern era upon the organisation and practices of schooling might be understood in these terms (e.g. Hargreaves, 1994; Aronowitz & Giroux, 1991, p. 62).

Above this level are the swells and tides of particular cycles representing medium time. Such medium-term time has been conceived in boom-bust like spans of fifty years or so –although with the compression of time and space in the postmodern age, these cycles may themselves undergo compression (Giddens, 1990). It is within these medium-term cycles that one might explain the establishment of the current 'grammar of schooling' for example as classroom-based, graded and subject-specialised schooling in the latter years of the nineteenth and early years of the twentieth centuries. As Tyack and Tobin (1994) admonish 'unless reformers begin to talk the historical 'grammar of schooling', their attempts to initiate curriculum change will be forever thwarted.'

At the top of the ocean, representing the waves and froth, is short-term everyday time: the everyday events and human actions of ordinary daily life. Proponents of this view of history often celebrate its empirical specifics against the grander theoretical claims of epochal shifts between different historical periods (e.g. McCulloch, 1995). These theorisations of history should not be treated as competitive though. Fine-

grained empirical detail and broad-based theoretical sensibility are complementary forces in history and complementary resources for interpreting such history.

The most interesting points for inquiry and investigation are when the different layers of historical time coincide; for it is at such points that inclination towards, and capacity for, change and reform are strongest. Such co-incidences or conjunctures can be seen in key moments of educational history and change. One such moment, arguably, is the global restructuring around the turn of the century that established the worldwide grammar of schooling (Tyack & Tobin, 1994; Meyer *et al.,* 1992). Another, at least within many parts of the West, is the period 1968-72, when Keynesian economics and belief in the power of the welfare state, and optimistic ideologies of growth, expansion, openness and equality were at a peak –in ways that impacted on the proliferation of curriculum innovation, the growth of open-plan schooling, and the expansion of flexible High Schools within education (Goodson & Anstead, 1993). In many ways, the current global restructuring of schooling around market principles of choice and self-management with greater standardisation and centralisation of curricula and testing, along with greater school-level experimentation in patterns of teaching and learning and forms of organisational structure, may some twenty or more years later represent a third such conjuncture in education (although this is not an assertion in our study, but a point for inquiry and investigation).

The article works with an historical methodology derived from the French Annaliste School where the Annalistes work with three levels of time. This is the methodological centrepiece of our Spencer Foundation project. As we have seen, they argue, following Kondratiev's (1984) study of economic cycles of change, that beyond the recognisable short cycles of change there are long waves of change which often cover fifty to sixty year cycles. At these points, they argue 'conjunctures' emerge where macro-economic transformations coincide with major shifts in educational reform.

The past decade has been such a conjuncturalist moment, where free markets have triumphed and educational reforms have echoed the stratifying and differentiating efforts of globalised markets. This has been a time where the engines of global efficiency have existed alongside a growing pattern of social inequality. Schools have become less engines for equality and compassion, more engines for efficiency and differentiation. Making schools of this kind more effective has an oxymoronic connotation for those concerned with socially progressive policies concerned with issues of social justice and equity.

This having been said, the full force of free market deregulation has, I believe, run its course, and the social downside of this is now increasingly being confronted by new political, environmental, social and educational movements to take one instance from Britain. Here, free market initiatives driven by Margaret Thatcher's regime began soon after global deregulation in the early 1980's. There has been a range of initiatives pushing marketisation of education, tighter accountability structures, a clearly specified national curriculum and a general push for assessment, testing and inspection. The famous focus on 'Standards not Structures' –a political and linguistic delusion, if there ever was one.

The evidential results of the push has been Janus-faced. More children are achieving better results at one end of the educational spectrum. But, increasingly, the other side of the push for standards is evident - namely a rising tide of dissatisfaction and failure as assessment structures are tightened. Those who do not succeed in a standards regime are more and more visibly stigmatised and marginalised. The figures of school

withdrawal and truancy fill a clear story of the downside of a headlong pursuit of marketisation and highly regulated curriculum and assessment reform. The major force of government alarm is that the new underclass emerging in schools is providing an army of disaffected young people who are causing a rising crime wave in the country.

REVISITING CURRICULUM CHANGE THEORY

The great virtue of examining curriculum change theory and change initiatives at this point in time is that it allows us to scrutinise some of the paradoxes which progressive thinkers and agents face at the moment. A simple way of stating this paradox would be to say that, so inverted is the current pattern of positionality, our normal assumption that progressive forces should be in favour of change needs to be seriously scrutinised. As we shall see, such an assumption is at best naive, and at worse wilfully misguided. In troubled times, when global forces are pushing restratification and redifferentiation, change may have a very undesirable side to it. Hence, at the very least, change theorists and advocates of change need to examine the 'structures of opportunity', where their change will have its effect. For, if they do not undertake such an examination, they could be promoting changes which have quite different effects from those they might intend. Change, far from being progressive, could have the opposite effect.

The reason for starting with such a broad polemical introduction is that the issues confronting schooling and education are clearly affected by the colossal changes currently underway in the global economy. As educational work is repositioned and restratified inside this new global work order so, inevitably, the role of change agents is itself repositioned. In such a situation, even where people go on working as they have worked before, it is possible that the effects of their work have been redirected; sometimes so as to substantially invert or shift the effect and relevance of that work.

These global changes are mediated at national and local levels and the specific results of these negotiations, of course, vary considerably. The range of contemporary changes in the global economy then works at two general levels. At levels of economic production, there is the much analysed crisis of modernisation and a consequent need to explore and interrogate the condition of postmodernity; but at the level of cultural production, it is to the above crisis of positionality that we should be turning. Let me state clearly what this means: a crisis of positionality arises at this point because high modern capital has successfully reconstituted and repositioned the social relations of production. The newly deregulated circulation of capital globally, substantially confines and repositions those social movements that have sought to tackle issues of inequality and redistribution. Hence, progressive movements, welfare states and national trade unions can be redefined and challenged by the press of a button which moves capital from one national and local site to another.

Global capital, then, has a twin triumph to celebrate; the emasculation of social democratic and egalitarian movements within the western world, and the culminating destruction of alternative systems of production and distribution in the communist world. These twin triumphs leave would be change agents in a precarious position; detached from past histories of action for social justice and divorced from hard won visions of alternative futures. In the crisis of positionality that they face, there is no firm

ground to stand on, and to remain in the same place is to risk one's position, be it change, nonetheless.

RESTRUCTURING SCHOOLING: HOW THE CHANGE AGENTS ROLE IS REDEFINED

It is, of course, obvious that schooling, far from being a timeless and changeless institution, is in fact subject to recurrent waves of restructuring (whether this works its way down into the intricate details of classroom life is a matter for continuing discussion but, in a sense, this misses the point I want to make). In their seminal book, *School Knowledge for the Masses,* Meyer *et al.* (1992) have reviewed the spread of schooling as a world movement associated with modernisation. They show how, in a very short period at the end of the nineteenth century, national systems of education were established in many of the countries of the world. Whilst many of the pioneering definitions of schooling developed local and idiosyncratic versions of curriculum, within a very short period, a world movement got underway which established a short list of basic subjects. Meyer *et al.* (1992) judged this to have been the period 1890 to 1910. What their work alerts us to is that new democratic moves to open schooling up to the masses were only the first stage in a process. Fairly rapidly, a second counter reactionary stage set in, whereby schools were redefined and restratified according to the subject-centred curriculum. Whilst this may seem a small structural issue of fine tuning, rather like the new school effectiveness movement, it was in fact a massive repositioning of the possibilities for progressive action within schooling. Let me explain why.

First of all, we have to begin to see the school subject and the subject-centred curriculum as one block in a mosaic of public schooling which was painstakingly constructed over many hundreds of years. Only then can we begin to understand the role of the school subject within wider social purposes: purposes which often relate closely to the mysterious 'mechanisms of fixity and persistence in society'. The school subject is, therefore, one of a number of prisms through what we might glimpse the structural frame surrounding state schooling. It seems, however, a particular valuable terrain for inquiry, for the subject sits at the intersection of internal and external forces. Moreover, the actions of 'educational state' are often uncharacteristically visible at times of subject redefinition (e.g. in the current case of the British National Curriculum, or in the current debate over the Australian Curriculum).

The school subject stands, in a sense, as the archetype of the division and fragmentation of knowledge within our societies. Encapsulated within each subject microcosm, broader debates about the social purposes of schooling are pursued, but pursued in an insulated manner and segmented (and indeed sedimented) in the range of different internal and external levels, and public and private arenas of discourse. Harmonisation across levels and arenas is an elusive pursuit: stability and conversation, therefore, remain the most likely result of the structuring of schooling, of which subjects are such a critical ingredient.

Some scholars have recently argued that the system was, from its early days, built to ensure stability and to mystify and conceal the power relations that underpin all curriculum-making. For instance, speaking of Germany specifically, and Europe generally, Haft and Hopmann (1990) have argued that:

> Societies like ours are class societies, organised to provide for an uneven distribution of the resources needed for self-determination of one's way of life, and thus one's chances of education. Since such resources cannot be increased at will, every decision about distribution means taking from one and giving to another. Consequently, social struggle is on the national as well as on the international agenda. Problems arise whenever the losers refuse to give in. Thus, from the viewpoint of the dominant forces in the distribution fight, it is necessary to organise the distribution in a way that it can ensure consensus by a majority, or at least not effectively be challenged.
>
> The same holds for state-run curriculum making: The distribution of knowledge is socially secure as long as it is accepted as a rule, or at least not effectively challenged, however unequal it may be. (p. 159)

And further that:

> curriculum making is the mode of producing curricula which makes sure that the structure of the social process conceals the underlying power relations, or at least prevents their being effectively interfered with.
>
> This concealment is not as easy as it sounds. Simply keeping quiet will not do, unless Orwell's nightmare comes true with complete control of the social distribution of knowledge. Moreover, to keep quiet all of those contributing to the existing structure of distribution would have to agree - something which is very unlikely in a society like ours. Hence, what is needed is an elaborate system able to provide legitimation of the desired distribution. At its best, such a system can itself produce or organise the legitimation it needs. Frictions that may occur during the process of legitimation must not affect the underlying balance of power, but have to be neutralised in other areas (making them appear as technical problems of, for instance, the structure of knowledge or the method of teaching). (ibid, p. 160)

In scrutinising the emergence of their own system in Germany from the first Prussian Normal plan of 1816, they note that the division of syllabi, according to school level and school type, further entailed divisions into timetables, examination and promotion regulations, instructions concerning textbooks etc. In its final version, these divisions are augmented by the overall syllabus which is reduced to a subject-based catalogue of goals and contents. Haft and Hopmann argue that:

> For the administration, the practical returns of this differentiation of the curricular framework serve a double purpose. First, the separation of syllabus editing from decisions about structural as well as educational principles from pressure which would otherwise arise from the curricular discourse where basic structures of knowledge distribution are touched upon. Proposals to change that distribution by curriculum reform can thus almost always be rejected with reference to other levels of regulation (such as laws, examination rules, or timetables). The exclusion of fundamental school organisation and subject canon questions has become so self-evident for syllabus authors that today suggestions to treat such questions in the curriculum commissions are met with incomprehensibility. On the other hand, all attempts to eliminate once initiated differentiation, e.g. to have structural and subject planning questions solved by one and the same commission, have failed and thus proved the necessity of compartmentalisation.
>
> The second advantage of continuing differentiation lies in its creation of a clear framework of reasoning for the planning of distinct sections of subject matter. Thus, there is no discussion at all about the purpose of schooling as a whole, but narrowly defined issues, such as whether optics should be taught in the seventh or in the ninth grade, or which type of literature should dominate in tenth grade lessons. Such detailed questions are obviously questions for experts, and not for the general public. Tying syllabus work to subjects opens

> up ways of justification, which are hardly possible at a more comprehensive level. As for the rest, the subject constraints in syllabus work are reflected in paralleled differentiations in school administration, teacher training, and employment, and thus create a consistent network of cross-reference elements in which all curricula quarrels can be taken care of. (ibid, p. 162)

The structuring of schooling into subjects represents at once a fragmentation and an internalisation of the struggles over state schooling. Fragmentation, because conflicts take place through a range of compartmentalised subjects; internalisation, because now conflicts take place not only within the school but also within subject boundaries. Giving primacy to the 'school subject' in the resourcing of schooling is, therefore, to finance and to promote a particular narrowing of the possible discourse about schooling.

The symbolic enshrinement of subjects as the basis of the secondary school curricula is perhaps the most successful principle in the history of curriculum-making. However, as we have seen, it is not a neutral, bureaucratic or rational/educational device; it is a perfect device for conservation and stability, and stands to effectively frustrate any more holistic reform initiatives. Comprehensive innovations, such as those suggested by Dewey, stand little chance of long-term implementation.

New initiatives in curriculum-making have to be scrutinised at this level of symbolic action. A segmented subject-centred model of schooling acts to effectively silence or marginalise alternative models. Yet, often the symbolic significance of subject-centredness is itself unrecognised in much of the debate over new initiatives. In the debate over the British National Curriculum there has been a deafening silence on this aspect of the proposals.

Just to reiterate then, a democratic extension of public education to educate all children in the late nineteenth century was quickly followed by a new dispensation, a new wave, which established the subject-based curriculum. The effect of this was to internalise and fragment all arguments about the social and political purposes of schooling. From now on, these arguments could be contained within the 'power cushion' which school subjects represent. Any challenges to the nature and purposes of schooling had to be played out within each subject area. Hence, more general arguments and more general changes that would have transformed the nature of schooling were rendered impossible. And furthermore, the capacities for progressive action were transformed and the role of change itself revolutionised. For a teacher moving through this period, the capacity to teach a general curriculum, according to one's judgement of the relevance and needs of the pupils, was transformed into a situation where a written curriculum, defined by the state and defined in terms of a particular school subject, was the only arena in which one could operate. In such a situation, the teachers' work and the change agents' work had been dramatically repositioned.

Let me now move on to a more recent world movement and then, I think, you will begin to see why I have been providing this historical introduction. A New World movement in the school curriculum began in the 1960s and 1970s. This was powered by, in the United States, a desire for the 'great society' and, in many western countries, by a desire to create more inclusive curriculum to bring in the many groups and classes that had been excluded by previous settlements of public schooling. Hence, new curricula were defined in the 1960s and new interdisciplinary patterns of work generated. Normally, the attempt was associated with a more comprehensive system of

schooling, which broke down the selective boundaries which had been erected over past centuries. Comprehensive schools and more comprehensive curricula went hand-in-hand. As in the previous world movement at the end of the nineteenth century, the attempt was to democratise schooling and provide genuine education for a mass clientele.

But, as also with the previous world movement, a counter reaction to restratify and redirect schooling began in the 1980s under the title of 'Back to Basics'. Once again, the attempt was to internalise the discussion about the social and political purposes of schooling and to restratify clienteles. This time a dual approach was adopted. Firstly, the reassertion of the traditional school subjects which, as we have seen, had done their work so successfully in the period following 1910 and, secondly, a move to confine the discussion of schooling within the site of each school. The discussion then could be confined both within subjects and within each individual school site. Thereby, once again, any general discussion about restructuring the purposes of schooling could be confined. It is here that one begins to confront the crisis of change in the postmodern period. For if change is confined within these sites, then the change itself is confined in ways that cannot challenge the basic structures of schooling. Hence, change activity works in fact to conserve the status quo. This is the paradox of progressivism that we currently confront.

Let me look at these two strategies in turn. Firstly, the reassertion of traditional school subjects. This movement has taken different forms in different countries. In the United States, it has taken the form of a broadly based 'back to basics' movement, sponsored by the New Right which attained power with Reagan's election in 1980. In other countries, it has taken a more nationalistic flavour with the enshrinement of 'national curriculum' guidelines. This has been the case in countries as geographically far apart as the United Kingdom and New Zealand. In the former case, the similarity between the original world movement, establishing school subjects in the late nineteenth century and the more recent national curriculum guidelines, can be clearly seen in the following chart:

Table 1. School Subjects.

1904	*1988*
English	English
Mathematics	Mathematics
Science	Science
History	History
Geography	Geography
Physical Exercise	Physical Education
Drawing	Art
Foreign Language	Modern Foreign Language
Manual Work	
Domestic Subjects	Technology
(Music added soon afterwards)	Music

The similarity between 1904 and 1988 questions the rhetoric of 'a major new initiative' employed by the government and points to some historical continuity in social and political purpose and priorities. The 1904 Regulations embodied that curriculum, historically offered to the grammar school clientele, as opposed to the curriculum being developed in the board schools, and aimed primarily at the working classes: one segment or vision of the nation was being favoured at the expense of another. In the intervening period, more egalitarian impulses brought about the creation of comprehensive schools where children of all classes came together under one roof. This in turn led to a range of curriculum reforms which sought to redefine and challenge the hegemony of the grammar school curriculum.

Seeking in turn to challenge and redirect these reforms and intentions, the political right has argued for the rehabilitation of the 'traditional' (i.e. grammar school) subjects. The National Curriculum can be seen as a political statement of the victory of the forces and intentions representing these political groups. A particular vision, a preferred segment of the nation has, therefore, been reinstated and prioritised and legislated as 'national'.

The historical continuities evident in the National Curriculum have been commented on in a number of places. For instance, *The Times Educational Supplement* stated that: 'the first thing to say about this whole exercise is that it unwinds eight years of English (and Welsh) educational history. It is a case of go back to Go' (DES, 1989). In writing of the National Curriculum project, Moon and Mortimore (1989) commented:

> The legislation, and the much-criticised consultative document that preceded it, presents the curriculum in needlessly rather restricted terms. Thus the primary curriculum was put forward as if it were no more than a pre-secondary preparation (like the worst sort of 'prep school'). All the positive aspects of British primary schooling so valued by HMI and the Select Committee of the House of Commons and so praised by many foreign commentators were ignored.
>
> The secondary curriculum, in turn, appears to be based on the curriculum of a typical 1960s grammar school. We would not take issue with the subjects included, but we believe that such a curriculum misses out a great deal. Information technology, electronics, statistics, personal, social and careers education have all been omitted. Yet, surely, these are just the areas that are likely to be of importance for the future lives of many pupils? (p. 9)

Alongside the definition of a more regressive national curriculum –namely, one returning to links with past social hierarchies, rather than forward to more progressive coalitions –other initiatives have sought to reverse change in similar ways. The changing pattern of power, which is associated with the definition of national curriculum guidelines, has gone hand in hand with the move to restructure the teachers' work. It should be noted that in England, traditionally a very decentralised system, more central power is evident, but likewise in more centralised systems, decentralised initiatives are underway. It could be that systems are tending to converge. In the new coalition, the teacher is seen as a technical deliverer of curriculum defined by other people, in this case the national state. This marks a substantial reversal from the role of the teacher in the 1960s and 1970s when schooling was being democratised. At that time, the teacher was seen as the moral interpreter and partial definer of the curriculum (see Goodson, 1998).

A whole new genre of methodologies has been generated to define the teacher as a practical deliverer of other peoples' intentions. For example, the movement to define teachers' knowledge as 'personal practical knowledge' marks a substantial move in the emasculation of the previous democratic incarnation of the teacher's role.

At the moment, there is a sense of change, crisis and anxiety in many workplaces, which is associated with economic restructuring or what Harvey (1989) calls the move to 'flexible accumulation' (p.1). Given this sense of job crisis, one of the battles which is under way is over what kinds of 'knowledge' workers are encouraged to acquire in their on-the-job situation.

Kari Dehli (1991) has argued that, increasingly, local and provincial groups are making claims about knowledge, skills and policies which are explicitly addressed to global capital –as a way of drawing capital into the region in question. In Canada, for instance, the Ontario Premier's Council stated in its first report in 1988: 'We are now firmly ensconced in a new global economy in which our ability to compete will be increasingly called into question'. In 1990, the Council continued in the same vein, although the sense of urgency and crisis was heightened:

> When the Premier's Council issued its first report in 1988, Ontario had been enjoying a period of sustained economic prosperity. Now, two years after the release of Competing in the New Global Economy, there are signs that growth is faltering... the inexorable movement towards global trading markets have accelerated. (Dehli, 1991, pp. 9-10)

Their perception of competitive pressures of global markets lead these writers to urge a shift from resource-based economic activity towards 'high value-added' manufacturing and services. Likewise, they argue that investment in low-wage sectors will be wasted because an international division of labour will intensify the tendency to locate 'low-wage production' in 'the less developed world', and 'complex production (will be) anchored in high-wage countries'. This is how they put together their case:

> We cannot cling to low-wage, low value-added activities where we have no competitive advantages, but must move into the high value-added, high-wage goods and services wherein lies our best hopes for prosperity over the long-term. This shift will require continuing improvements in the productivity of both capital and labour. (ibid, pp. 9-10)

From here, the connections are made to what they call 'the human resources issues'. They write:

> A critical determinant of whether we can make the transition to a higher value-added economy will be the education, skills, ingenuity and adaptability of our workers. They must be prepared for work which will demand the sophisticated knowledge and talents that are the trademarks of a truly developed nation. Our raw materials, our infrastructure and our capital will not be utilised to their fullest without the enhancements that a competent, innovative and adaptable work force can bring to such advantages. (ibid, pp. 9-10)

Recent commentaries have been fairly explicit about the nature of the desired shift in forms of knowledge:

> While many shareholders and management experts have been training their critical spotlight on executive compensation in recent months, a number of companies are engaged in a quiet but momentous revolution that is redrawing paychecks –and careers- much lower on the organizational chart. At the heart of the new pay scheme is the notion that people should be paid not for how many people they supervise or how much power they have, but for how much knowledge they bring to their work. The concept is variously

> knows as 'pay for skills', 'skill-based pay' or 'knowledge based compensation'. (Gabor, 1992, p. 5)

Whilst 'sophisticated knowledge' and 'knowledge-based compensation' sound encouraging, the reality is that, more and more, the workplace is focusing on narrow, often low-grade technical skills. So that in fact the 'knowledge-based' and 'skills-based' rhetoric is being used alongside a move towards more practical, decontextualized workplace knowledge.

These new global patterns have to be linked to the question of how the battle over 'knowledges', specifically in this case, 'what counts as teacher knowledge, is linked to the power of external 'constituencies'' (Meyer, 1980). The contest over teachers' knowledge takes place on terrain which is already occupied by a strong ideology of redefinition as related to forms of knowledge. Traditionally, it has been argued that teachers are 'professionals' with degrees of professional autonomy, and that the 'constituencies' which influence discourse, debate and policy are both 'internal' professional constituencies and more external constituencies, such as business and commerce. The balance is now tilting further and further towards external constituency power and, in particular, the demands of business and commerce are developing analogies between industrial workplace skills and teachers technical and practical skills. In this move towards new forms of knowledge, there is a developing global tendency for more teacher education to become field-based. This is normally presented as part of a much-needed process of 'getting closer to practice' in our teacher training and in-service education.

In fact, this process is closely allied to the more general movement to focus workplace knowledge solely on technical skills. If teacher knowledge can be promoted which is practical and individual (one school of thought argues for 'personal practical knowledge'), it sharply reduces the access which teachers will have to the wider understandings of school systems and school organisations. These understandings are the central ingredient of courses for those who will manage or, should I say, 'lead' the schools.

Interestingly, it is often progressive thinkers who have been attracted to the idea of 'practical knowledge', seeing it as a reaction against the ivory tower of foundational theory. But once the pattern is viewed holistically, what appears to be a progressive position can be seen to be closely in line with a conservative coalition of interest. This is a classic example of the crisis of positionality and the paradox of progressivism that I am referring to.

The second major initiative, besides the reassertion of traditional subject-centred curriculum, is the attempt to confine change initiatives within each school side. Here, the major carrier of this message is the so-called school effectiveness or school improvement movement. You will note that school, here, always appears in the singular, for each site is scrutinised for its improvement or effectiveness potential in isolation from other sites. The mythology of this form of change theory is that each school can be scrutinised for its improvement potential, and a new improvement profile can be drawn up and each school can then be improved. The fallacy, of course, is that each school stands in relation to other schools, and each school student population stands in relation to other school student populations. And, as can be clearly seen, one school may improve following change theory, but at the expense of all the surrounding schools. Once again, in the counter-reaction to the democratic period, the debate about schooling is confined within each site so that matters of general

distribution with regard to equality of opportunity are effectively masked. In the same way, then, the progressive scholars who involve themselves in change theory can be in an ambivalent relationship to progressive movements and find themselves much closer to a broader conservative matrix of purpose.

The danger with singular-site school improvement and school change methods, and individual self-managing schools, is that they do not confront the problem of distribution of resources for schools generally. It is always possible to improve single schools by concentrating resources on them. The other side of that kind of a school change is school deterioration in the other schools that are starved by the improving school. What is needed is a holistic model of school change which aims at improving *all* schools. This, however, is not envisaged by the counter reaction against inclusive schooling. Just as school subjects were invented to internalise and limit the debate about school purposes, so singular-site school improvement strategies have been invented in ways that limit a general democratic debate about improving schooling. The general point I am making is that the timing of curriculum change has to be closely scrutinised. This is a primary lesson of the histories of education. At the moment, the timing for change initiatives is extremely problematic given the global forces that we have reviewed. It could well be that, in recent times, progressive forces should have been on the side of educational conservation time, rather than on the side of change. However, the pendulum is now swinging towards an increasing concern with the social downsides of market deregulation. This all leads to a new 'third way' emphasis on ameliorating social exclusiveness. We are, I believe, at a turning point, where progressive concerns with social inclusion are now back on the political agenda. The prospects for change may then be about to change in more hopeful directions.

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Part 2. Beyond School Walls: creating networks in education

JORGE ÁVILA DE LIMA

SOCIAL NETWORKS IN TEACHING

The advancement of research knowledge on social networks and professional communities in teaching entails asking new questions and trying out new methodological approaches. With the advent and dissemination of powerful forms of computer-mediated communication, the concept of the teacher community itself is changing, and this presents new theoretical and empirical challenges that must be confronted by researchers and practitioners alike.

INTRODUCTION

For the past two decades, teacher isolation and collegiality have been a major focus of concern for many researchers and practitioners interested in promoting and sustaining worthwhile educational change. In spite of all that has been achieved in the field, there is still much to know. The exploration of the still vast and largely unexplored territory that lies ahead of us warrants asking new questions and trying out new methodological approaches. Social network analysis provides a valuable set of questioning and analytical tools that may help us illuminate important sides of teachers' cultures which have not received due attention yet.

My early work on social networks in education (Lima, 1997) focused on whole school- and department level teacher interaction and sought to show how our understanding of these contexts can be improved through the use of network concepts and techniques. In the first part of this chapter, I share some major insights that have resulted from this effort.

But we also need to focus more on teacher interaction *across* school buildings. Furthermore, the recent rise and dissemination of new and powerful communication technologies in contemporary societies has made communication between different and distant sites cheaper and quicker. These developments can have important consequences for the ways we conceptualise teacher collegiality. Thus, the second part of this chapter explores the possibilities, dilemmas and risks that computer mediated communication presents to the development of contemporary professional networks in teaching. In the chapter, I will argue that these developments call for new ways of thinking about teacher collaboration and isolation.

TEACHER COLLEGIALITY: DISCOURSE AND REALITY

Since Willard Waller's (1932) classic *The Sociology of Teaching* and, particularly, Lortie's (1975) *Schoolteacher*, educational researchers have sought to understand why most teachers spend small amounts of time in face-to-face interaction with their colleagues, choosing instead to interact closely and almost exclusively with their students (Sarason, 1982).

Characterisations and explanations of this phenomenon have focused on school organizational norms (Rosenholtz, 1991) and lack of time (Connell, 1985), among many

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other factors that tend to turn teacher relations into superficial and occasional events and that push meaningful teacher collaboration to the margins of the school day (Johnson, 1990). As Ranjard (1984) and Britzman (1986) pointed out nearly two decades ago (and is still true today), many educators and policymakers assume that teachers are self-made and that good teaching is a matter of art, not of learning.

Several educational reformers and practitioners have sought to change schools, in an attempt to turn them into more collaborative cultures. These interventions are based on the assumption that more teacher collaboration will promote the development of alternative forms of power within educational organizations (Barroso, 1991; Blase and Anderson, 1995), resulting in the empowerment of teachers as masters of their own professional lives (Cohen, 1981). It is also believed that teachers who work in collaborative professional environments are better equipped to deal with pedagogical innovation and to socialize new members into their usual ways of working (Little, 1987).

Of course, these and other benign conceptions of teacher collegiality have not gone unchallenged. Andy Hargreaves (1994) and Michael Huberman (1993), among others, have shown that teacher collegiality has often become a dangerous form of educational orthodoxy that can be imposed upon teachers, irrespective of the contexts in which they work and of the beliefs they hold. This insensitivity to the contexts of teachers' work is a major feature of change strategies that mandate collegiality, rather than promote or help sustain it, where it already exists.

Regardless of whether one is or is not a collegiality advocate, it s often the case that the arguments in either side of the debate are not based on really solid research evidence, resulting from an in-depth knowledge of teachers' workplaces. Most of the work that has been published on the subject conveys an exclusively ethnographic view that usually fails to produce broader pictures of teacher communities beyond small groups of interviewees or small schools that are characterized on the basis of reports obtained from very few teaching staff. Despite their importance in providing vivid and in-depth characterisations of teachers' work cultures, these narrow ethnographies of teacher groups have usually lost sight of important structural features of work cultures that escape teachers' discourse, as captured exclusively on the basis of their narratives and interview accounts.

IMPROVING OUR KNOWLEDGE OF TEACHERS' PROFESSIONAL COMMUNITIES

It is therefore surprising how little we still know about the relational side of teacher cultures. Some very basic questions still remain unanswered (Lima, 2002). Among these, two fundamental ones are: (1) what is the range, the frequency, the intensity, the nature, the regularity and the breadth of teachers' professional relations in their schools? And (2) how do they develop these relations *outside* of these buildings? Unfortunately, contemporary researchers' aversion of quantification has made them unwilling (or unable) to answer these simple but deeply critical questions.

With honourable exceptions (in particular, Rosenholtz, 1989, Little, 1990, Hargreaves, 1994, Siskin, 1994, Talbert and McLaughlin, 2001), the literature in the field also displays a modest level of conceptual discrimination. Usually, we are offered an overwhelming multitude of phenomenological depictions of teacher experiences, with little overall direction or coherence among distinct studies. Moreover, due to the

absence of a clear framework of analysis, studies of teacher interaction usually opt for shallow dichotomised approaches that fail to grasp intermediate but significant levels of collegial involvement in schools. The complexity of teacher interaction is, thus, reduced to simple strong/weak polarities that oversimplify the multiplicity of forms that teacher collegiality can take.

This is unfortunate because, as I have shown elsewhere (Lima, 2002), we can get very different representations of teacher collegiality, depending on the measures we use, the criteria we apply and the content areas and contexts we examine. Without an explicit definition of analytical criteria and a diversified set of research tools and techniques, we are limited to teachers' verbal reports of interaction that have been, too often, the only criteria for judging collaboration and for seeking to impose change upon schools.

TEACHER COMMUNITIES AS NETWORKS OF TIES

Studies of teachers' professional cultures have tended to focus almost exclusively on the knowledge, the values and the beliefs that teachers hold, rather than the actual patterning of the ties they establish, develop and sustain among themselves. Emphasising teachers' thoughts, values and life experiences is important, but there is more to teachers' cultures than this. Focusing exclusively on teachers' narrative accounts sometimes gives way to overly individualistic representations of their cultures, which are then presented as essentially collections of *individuals*, each with his or her unique perspective and approach to work matters and challenges. This produces a regrettable oversight of the *form* (Hargreaves, 1992) of teachers' cultures.

The examination of teacher collaboration and collegiality will remain imprisoned in a sterile analytical cage if we persist in avoiding considerations of cultural form. Moreover, we will remain unable to grasp this form if we keep looking at these cultures merely from the point of view of their individual participants. To achieve an alternative, more inclusive representation of teachers' collegial cultures, a double focus is called for. On the one hand, it is important that we continue to value participants' interpretations, as has been common practice among educational researchers. However, we also need to build an overall perspective that goes beyond each particular tie, a perspective that looks at the overall form that is taken by the intermingling of every existing and significant tie, taken together. In short, ethnographic, interpretative approaches, however important, need to be complemented with global, structural approaches that illuminate how the many teacher interactions that make up educational life come together and articulate themselves in multiple and complex forms.

These structural representations rest on the simple idea of the social network, put forward most articulately by German sociologist Georg Simmel (1955), who referred to the "web of social affiliations" that constitute social life. The metaphor and the associated and sophisticated techniques of analysis that have been developed since then provide fascinating possibilities for characterising teachers' relational worlds.

But the network metaphor would simply be a catchy but useless idea if there were not concrete ways of applying it to the domain of social and professional life in teaching. Fortunately, social network researchers have achieved important theoretical and methodological developments that make the network notion much less a vague and fluid concept than it used to be in its initial formulations. It is this transition from vagueness to precision, from metaphor to measurement that makes the work of

network scholars so important and, indeed, a fundamental contribution that may be applied, with clear profit, to the study of the complexity of teachers' professional communities.

Researchers working in the field of network analysis have made major contributions to the advancement of our knowledge of the interactional construction of social communities, by posing new and stimulating intellectual questions and calling for alternative ways of conceptualising social structures (Wellman, 1983). Regrettably, despite several decades of theoretical and methodological advances, there is still little work of this kind in the field of education (for exceptions, see, for example, Siskin, 1994, and Bakkenes, 1996).

Social network analysts stress the primary theoretical significance of relations over individuals or social units. They focus mainly on the connections that are established and sustained among the different units that make up a social system, be they people, groups, organizations or even nations. These relations are conceived in terms of patterned structures, thought of as regular systems of interaction that Wellman (1983) calls "deep structures" and that exert a powerful impact upon social processes of communication.

Like people in other contexts of social life, teachers contact some of their school colleagues, even if just a few, in a relatively consistent mode over time, and this gives rise to a relatively stable communication structure within their workplace. With the emergence of computer-mediated communication, these developments are starting to reach well beyond the very walls of school buildings. A social network perspective helps us concentrate on the forms that these structures take, with a view to the opportunities they offer and the constraints they present to individual and group behaviour in schools. This helps us look at teacher isolation not as a matter of individual personality but, rather, as a structural feature of the networks of ties in which teachers are embedded.

STRUCTURAL FEATURES OF TEACHER NETWORKS

A structural approach to the professional cultures of teaching privileges the relational side of teachers' work lives and enables us to look closely at three major dimensions that make up the form of these cultures (Lima, 2002):

(1) *Density* - the proportion of theoretically possible relations that are activated among a particular group of teachers;
(2) *Centralization* – the extent to which there are teachers who are more prominent than their colleagues in the networks of ties in which they are involved;
(3) *Fragmentation* – the extent to which a whole network of teachers is segmented into smaller and more cohesive subgroups within which interaction is particularly intense. The term "fragmentation" is not necessarily a negative one. It is meant, simply, to describe educational organisations and communities, rather than produce a moral judgment about their divisiveness, internal specialisation or segmentation.

Let us look at each of these three major dimensions and see how each illuminates aspects of teacher cultures that have remained relatively forgotten in more traditional approaches to the study of teacher collegiality.

Density

Density illustrates the average *system connectivity* of a network (Rogers and Kincaid, 1981, pp. 174-175). In terms of this concept, networks may be *empty* (null density), *intermediate* (density between 0.0 % and 100.0 %) or *complete* (full density, indicating a state of network completion).

By these standards, it is very likely that most of the so-called collegial cultures that have been reported in the literature would fare quite poorly. In my own research, schools that were regarded by many informants as highly collaborative ended up displaying average densities that approached *emptiness rather than completion* (Lima, 1997). Of course, this varied with the type of collegial relation under consideration, but even in the cases where density was higher (in the networks of teachers' verbal interaction about students), it did not embrace more than about 6.0 % of the whole teaching staff of any of the schools that were studied. Moreover, in networks of more practical joint work relations among colleagues (for instance, in joint planning ones), density values were much lower.

Centrality and centralization

Central actors in a network are those who are especially active in a particular type of interaction. These actors occupy strategic locations within their networks because, since they are usually connected to many others or because they have a particularly intense relation with them, networks tend to be structured around them. Centrality measures are also useful for identifying more *peripheral* actors and, therefore, for characterising the phenomenon of teacher isolation that has concerned educational researchers and practitioners for decades.

In collegial networks in education, central teachers, as opposed to peripheral ones: are more visible and known in their networks; have a higher structural potential for developing communicational activity; are important intermediaries among other otherwise unconnected colleagues; have more opportunities for controlling the communication that occurs among these colleagues; are able to communicate more rapidly than most of their colleagues, and depend less on others for communicating or for receiving significant information.

These concepts hold promising possibilities for the study of teacher networks. In studies of teacher interaction, it would be interesting, for example, to determine how really central are informants who are regarded (or who present themselves) as especially knowledgeable in teacher or school ethnographies. In a study that I conducted, an informant that was recommended to me and who presented himself as particularly well-informed about the professional relations that existed among his peers turned out to be a mostly isolated individual that very few colleagues knew or seemed to want to interact with (Lima, 1997). If network analysis had not been used, this would never have been learned.

Therefore, we are set to gain important insights into teacher cultures by studying the quantitative importance and the social attributes of central and peripheral actors in teachers' networks. For example, when performed in two Portuguese large secondary schools, this type of analysis revealed that central and peripheral teachers were located in clearly distinct departments, with high-status ones comprising a much larger number of more collegially active and, therefore, influential individuals (Lima, 1997). Therefore,

network analysis in education can bring together, in a coherent overall framework, insights from studies of collaboration and those from studies of disciplinarization, departmentalisation and micropolitics in schools.

Fragmentation

One of the most promising domains for future studies of teacher collegiality is the determination of the degree of fragmentation of teachers' networks of ties and the investigation of the defining features of each of these network segments. For example, these analyses can provide effective measures of important concepts in the field, such as Hargreaves' (1994) "balkanisation", or Little and McLaughlin's (1993) "inclusivity".

With the aid of network techniques, at least two important forms of subgroups of teachers can be identified in their networks: components (independent subsets of members among which there are no connections) and cliques (often overlapping subsets of actors within which ties among colleagues are particularly strong).

In my research, results obtained on the number of components in secondary schools showed that teachers' informal networks become progressively fragmented, as modes of collegial interaction become more complex and demanding, and require higher levels of effort, coordination and interdependence. As to cliques, since they imply direct, face-to-face contact among actors and a high level of internal group cohesion, they are especially interesting for determining whether there are particularly strong forms of teacher collaboration in schools and school systems.

In clique analysis, two aspects are particularly important: the *level* of network fragmentation that they express, and the *nature* of this fragmentation. The former can be characterised on the basis of information regarding the number of existing cliques in a given network. Results point a substantially lower number of cliques in joint action networks, when compared to ones that are based mainly on verbal interaction. As to the *nature* of clique fragmentation, one of the most interesting aspects refers to its subject foundations. Available data on the subject department affiliation of clique membership points to three distinct types of cliques:

(a) *Homogeneous* (every teacher in the clique is a member of the same department);
(b) *Bilateral* (clique members originate from two different departments);
(c) *Heterogeneous* (members come from three or more different departments).

My research results show that the percentage of bilateral and heterogeneous cliques is much lower than that of heterogeneous ones, in networks characterised by more action oriented teacher collaboration, as compared to strictly verbal-communication. Therefore, in many schools, professional interaction and joint activity at higher levels of complexity tend to remain confined within the walls of subject departments. In this respect, fragmentation measures tell us a great deal about the difficulties encountered by schools in promoting and sustaining cross-disciplinary endeavours.

COMPUTER MEDIATED COMMUNICATION NETWORKS IN TEACHING

The growing use of computer mediated communication (CMC) in today's societies poses new challenges to the study of social networks in teaching. The extent to which these developments are already impacting on the structuring of these networks is

unclear, but it is likely that the effects can and will be profound and far reaching in the upcoming years.

In the research community, there are already some reports of experiments linking electronically teachers who are located in geographically distant places, especially in vast territories with extremely isolated schools (e.g., Uncapher, 1999). But, overall, it seems that teachers' traditional professional isolation continues to be the rule, even in a time when new communication technologies are creating new potential spaces for exchanging information and perspectives and for forging new professional identities.

Today, many professionals work in isolation in their schools because they do not find attractive partners with whom they want to get involved in the building, or simply because they do not enjoy opportunities for doing so. Others are involved in intense collegial contacts, but wish to extend their current pool of collaborators and to make contact with new people and fresh perspectives. In any of these cases, computer mediated communication offers the opportunity to develop a new type of collegiality, one that is nurtured by electronic means and maintained with people in diverse and often distant spatial locations. Consequently, CMC raises important questions regarding current conceptions of teachers' collaborative cultures, which are usually defined in strictly physical and organizational terms. What is really at stake in this debate is the very notion of the professional community in teaching, as we currently define it.

Therefore, serious reflection on the implications of CMC for teacher collegiality is due. I propose that we begin this reflection by identifying the main features that differentiate face-to-face from computer-mediated communication. This may help us understand the extent to which changes in the nature of the communication process, brought about by the new forms of communication that characterize contemporary societies, entail a need for reconceptualising meaningful professional interaction in teaching. Recent work on the impact of computer-mediated communication on interpersonal communication (e.g., Parks and Floyd, 1996) and on the evolution and organization of "cyber communities" (e.g., Smith and Kollock, 1999) provides important insights into this issue.

IS SIGNIFICANT INTERACTION POSSIBLE IN ELECTRONIC NETWORKS?

Today, the Internet is a global network connecting hundreds of millions of people worldwide. CMC through the Internet offers new opportunities and poses new challenges to the way individuals relate to one another.

Parks and Floyd (1996) describe two competing general views on relations developed through CMC. One view characterises these relations as empty, shallow and often hostile, stating that the best that people can aspire to in the Internet is an "illusion of community." An alternative view argues that CMC frees interpersonal relations from the limitations of physical location and thereby increases opportunities for the development of communities characterized by new and genuine forms of interpersonal relating. The two opposed perspectives reflect a century-old controversy about the impact of modern transportation and communication technologies on community ties. As Wellman and Gulia (1999) state, "both sides of the debate are often Manichean, presentist, unscholarly, and parochial" (p. 167).

These perspectives hold different views of the advantages and disadvantages of groups formed through CMC, when compared to face-to-face groups. Initially, dominant views stressed the many social disadvantages of CMC communication and

assumed that positive and intimate interpersonal relationships were very unlikely to develop in this medium. According to these views, when compared to face-to-face groups, CMC groups are characterized by higher degrees of difficulty in reaching consensus, by ruder and more aggressive communication styles and a by higher proportion of non-normative behaviours. According to the theory, this is due to CMC's filtering or exclusion of the transmission of social cues. Also absent in this type of communication are relational cues originating from the physical context and non-verbal cues, such as voice tone, body motion, facial expression and physical appearance. In short, according to this perspective, CMC is less rich in information because it develops in a narrower communication bandwidth and because it uses less or none of the contextual, visual and audio channels that characterise face-to-face communication.

But the idea that CMC is impersonal, hostile and asocial has been challenged. Some even hold that, because there are fewer concerns with others' evaluation of one's performance, this form of communication offers *more*, rather than less opportunities for forming significant social relationships. Studies cited by Parks and Floyd (1996) stress that there are clear interpersonal components in CMC. These studies suggest that people who form relations over the Internet view them as *personal* and *genuine*. Some even go as far as stating that these relations are *deeper* and *more satisfying* than those they maintain outside the Net. Importantly, this research also indicates that people usually find ways to overcome the technical limitations of CMC (for instance, by introducing symbols for simulating facial expressions in the screen).

As the authors cited above point out, although CMC allows for the emergence of deceptive and manipulative relations, it can also create new contexts for experimenting with newly acquired social skills. Moreover, it facilitates the overcoming of shyness and offers isolated and handicapped individuals the possibility of transcending the physical limitations entailed by face-to-face communication.

This emergence of close ties over the Internet poses important challenges to existing theories of interpersonal communication and relationship development. For example, uncertainty reduction theory (Berger and Calabrese, 1975) postulates that the development of personal relationships is achieved through the reduction of the uncertainty that partners feel towards one another. According to the theory, in CMC, where social cues are absent and *feedback* to one's messages is slower, uncertainty is increased and personal relationships are obstructed.

Moreover, traditional relationship development theories assume that this development depends on physical proximity and on frequency of interaction among people. The theories also underline the importance of other factors such as appearance and attraction, information on group affiliation and information on the more general social context of interaction. In the literature on collaborative cultures in teaching (e.g., Nias, Southward and Yeomans, 1989), these conditions are taken for granted. But are they really essential for the creation and development of personal relationships? Are they not more theoretical necessities of current models of interpersonal behaviour (which were developed at a time when CMC was not a reality) than fundamental requisites of truly meaningful social interaction in contemporary information societies? Instead of criticising relations that are developed in cyberspace, on the basis of previous arguments about social ties, don't we need to rethink our theories and assumptions about social interaction?

PHYSICAL SPACE: THE FINAL FRONTIER OF TEACHER COLLEGIALITY?

As Howard (1997) notes, "the spatial has served an important role in communitarian literature, often defining what is and is not a community" (p. 66). Likewise, traditionally, teachers' collaborative cultures have been characterized as emerging and evolving in specific physical locations (generally, a single school, or a department within it). Moreover, the physical layout of school buildings is considered a major factor curtailing opportunities for extensive and sustained teacher interaction (e.g., Lortie, 1975, Hargreaves, 1994). Researchers of department cultures, for instance, have regarded the physical separation of departments within schools as an important obstacle to more wide-ranging collaborative endeavours that span the boundaries of distinct subject areas (Siskin, 1994). Overall, in the literature, physical space is regarded as a fundamental infrastructure of teacher collegiality. Collaborative cultures are generally regarded as being rooted in given physical territories. However, in an era of electronic communication, it may be time to do away with this assumption of the immediate physicality of teacher collaboration.

As Howard (1997) also argues, there are three main reasons why a spatial notion of community is inadequate. First, it "does not account for what are otherwise commonly accepted as legitimate communities" (e.g., environmentalists, physicists) (p. 67). Second, it "presupposes the kinds of media a community can use for its communicative ties" (p. 67), privileging orality over text. Finally, "it doesn't address the status of the individual within the community, nor does it address the role of epistemological and ideological forces within the community" (p. 68). In short, the spatial notion of community excludes important communities, privileges orality over other communication means and underemphasizes the ideological and epistemological factors that sustain membership in communities.

It might be argued that despite the fact that CMC doesn't require close physical proximity, space and spatial metaphors are still important in online communication. Indeed, the term cyberspace has become widely accepted as a descriptor of the "place" where interactants "meet" and their communications are "located". For example, MUDs (Multi-User Domains) are presented as "text-based virtual realities that maintain a sense of space by linking different 'rooms' together" (Kollock and Smith, 1999). But, in this case, space serves merely as a useful metaphor that helps interactants make sense of their communicative experiences. The reality of cyberspace is perhaps better captured in visions such as the following, offered by William Gibson (cited by Kollock and Smith, 1999, p. 17):

> A consensual hallucination experienced daily by billions of legitimate operators, in every nation ... A graphic representation of data abstracted from the banks of every computer in the human system. Unthinkable complexity. Lines of light ranged in the nonspace of the mind, clusters and constellations of data. Like city lights, receding.

Clearly, there is more of "nonspace" than physical space in cyberspace. Therefore, instead of thinking of collaborative cultures in education as physically located communities, we need to view them as complex sets of overlapping communication networks with unstable, constantly shifting boundaries that largely transcend physical space.

ONLINE TEACHER NETWORKS AS PROFESSIONAL COMMUNITIES

But is it possible for teachers to find community online? Or, as Wellman and Gulia (1999) put it, "Can relationships between people who never see, smell, touch or hear each other be supportive and intimate?" (p. 167). Are the networks of people who meet in cyberspace to share information, discuss common concerns and seek solutions to common problems *real* communities? Or are they simply pale substitutes for real strong face-to-face ones?

The term "virtual communities" is becoming more and more widely used in the literature on electronic communication. Some even think of these "communities" as proximate substitutes for the ones we normally encounter when interacting in the "real" social world (Cardoso, 1998). But is this use of the term warranted as a descriptor of the kinds of networks that we currently find in cyberspace?

Rheingold (cited in Palloff and Pratt, 1999, p. 21) defined virtual communities as "cultural aggregations that emerge when enough people bump into each other often enough in cyberspace." This fairly simplistic definition does not do justice to scholarly work on communities, which characterizes these as groups of people with special characteristics that place them apart from more trivial or occasional forms of human association.

Many glorifications of community life in cyberspace overstate the actual nature of these electronic associations. Therefore, there is a real danger that the community metaphor becomes reified in discussions of online communication networks in education. As Howard (1997) warns, we should guard ourselves against "simply positing the existence of electronic communities" (p. 61), because the term is, in most cases, "merely a convenient analytical metaphor that unfortunately has been extended far beyond the bounds of acceptable analogical reasoning" (p. 115). This unproblematic view of communities in cyberspace is likely to damage genuine collaborative efforts in teaching, which should not be regarded as mere networks of occasional, inconsistent and superficial interactions. Therefore, it is important that we challenge current views that take for granted the actual existence of cyberspace communities.

Conceptually, a community is a group of people who share something in common. In an extended and thorough review of the literature, Westheimer (1998: 12-17) identified five major elements that integrate the concept of community: (1) interaction and participation, (2) interdependence, (3) sharing of interests and beliefs, (4) concern with minority points of view and (5) significant relationships. All of these are possible on the Internet. Therefore, "virtual" community seems to be a real possibility.

Besides, many critics of the community metaphor in cyberspace often ground their scepticism in a vision of community that is actually based more on myth than facts:

> Pundits worry that virtual community may not truly be community. These worriers are confusing the pastoralist myth of community for the reality. Community ties are already geographically dispersed, sparsely knit, connected heavily by telecommunications (phone and fax), and specialized in content. There is so little community life in most neighbourhoods in western cities that it is more useful to think of each person as having a personal community: an individual's social network of informal interpersonal ties, ranging from a half-dozen intimates to hundreds of weaker ties. Just as the Net supports neighbourhood-like group communities of densely knit ties, it also supports personal communities, wherever in social or geographical space these ties are located and however sparsely knit they might be. (Wellman and Gulia, 1999, p. 187)

In face of these considerations, notions such as the *discourse community* (Howard, 1997) or the *conscious community* (Shaffer and Anundsen, cited in Palloff and Pratt, 1999) seem more appropriate than geographical ones as descriptors of teacher communities that are not place-based, but rather formed around issues of identity and shared values.

ADVANTAGES AND SHORTCOMINGS OF TEACHER INTERACTION IN ELECTRONIC COMMUNICATION NETWORKS

Computer networks have created a whole new range of social spaces in which teachers can interact with one another. Potential virtual cooperative interactions that deserve special attention from educational researchers comprise phenomena such as information inquiry and response, dissemination of ideas and social networking.

Following Jude-York, Davis and Wise (2000, pp. 8-9), it is clear that members of virtual groups may experience benefits as well as barriers in their participation in electronic networks of communication. This participation allows for more flexibility in balancing personal and professional life, but it often implies being professionally active outside normal working hours. Also, although CMC permits shared accountability with team members, team spirit may be more difficult to establish than in face-to-face situations. Additionally, while it is true that the participants' knowledge base is enlarged, due to the access to information and to the experiences of others, it is also true that CMC presents technological challenges and therefore creates needs for personal investment in further learning, a process that may be long, uncertain and painful. Moreover, although this form of communication promotes higher autonomy and self-direction, sometimes this can come at the cost of increased local social isolation. Finally, while virtual team affiliation promotes dynamic membership (as people shift from group to group in response to changing needs), this can undermine feelings of connection to each group and to the overall work organization and its vision.

As we have seen above, critics usually point to the narrowness of CMC as a factor that impoverishes the quality of online interaction. But the traditional reliance of online communications on mere text is becoming more and more a thing of the past. Recent developments on the Internet suggest a move away from conversation and toward demonstration, with an increasing use of voice, colour, picture and motion (Chen and Gaines, 1998). These new tools extend the formerly narrow bandwidth of communication and thus overcome some of the cue limitations that were present in the past.

Besides, an important advantage of interactivity on the Internet, when compared to workplace interaction, is that in the former it is possible to develop much more complex discourse patterns (Chen and Gaines, 1998) from which the quality of teacher collegiality may benefit. Indeed, in a professional community using a computer-mediated channel, the originator of the messages may not direct them only to specific recipients, but to all members of the network. Also, each of these messages may engender multiple responses, and a response from a given recipient may trigger reactions from other recipients who were not involved in the initial wave of communication.

Furthermore, the fact that most online communication in these networks is text-based can actually be regarded as an advantage, because "people may pay more attention to the substantive content of messages on computer screens than to the same content delivered verbally" (Smith, 1999, p. 156). In turn, this improves reflection and

concentration and, therefore, the quality of communication and the extent and depth of problem-solving in teaching.

Therefore, the poverty of signals in online interaction can be viewed both as a limitation and a resource (Kollock and Smith, 1999). Although it makes certain kinds of interaction more difficult, it also provides the opportunity for teachers to play with their identity. Since physical appearance is usually not manifest online, teachers may be judged essentially by the merit of their ideas and contributions, rather than by characteristics such as their age, gender, school of origin or subject affiliation. It seems that the anonymity and the perception of safety afforded by this means of communication can help teachers explore and experience sides of their personality that they otherwise would not have had the chance to experiment with and develop. This may give rise to qualities and competencies that may be important for the creation or maintenance of sound, vivid teacher communities.

But rather than being wiped away by the apparent egalitarism of online communication, traditional identity cues such as race or gender may actually be reintroduced in CMC in an even more stereotypical manner than in embodied interaction. In a context of uncertainty about other participants' characteristics, teachers may tend to seek refuge in their more deeply internalised stereotypes and apply them to the new interaction situations in which they are involved online. As O'Brien (1999) argues in a more general context, in the case of gender, this often leads to a confirmation or enhancement of crystallised social patterns, rather than to new forms of identity. This is why the author argues that "Rather than encourage alternative forms of interaction, the relative anonymity of online interaction may be a site for the dismissal of the social norms that otherwise protect women from displays of outright predatory aggression and interpersonal hostility" (p. 91).

Thus, CMC is a coin with two sharply distinct sides. On the one hand, because of the disinhibition it promotes, it can encourage the development of strong, intimate relationships and deep feelings of interpersonal attachment among interactants. However, on the other hand, since the usual fears of retribution that are common in social life are absent in this form of communication, it can actually create conditions for members to feel freer to act out in hostile and violent ways (Reid, 1999). Therefore, by itself, it offers no guarantee of creating a healthy and worthwhile community of colleagues.

Indeed, different individuals bring different motivations to online interaction, not all of which are positive for teacher collegiality. For example, there may be deception and fantasy in online collegial interaction. As O'Brien (1999) puts it,

> There does appear to be a strain between those users who conceive of cyberspace as a realm into which one is invited to "perform" a variety of alternative realities and those for whom the advantage of electronic communications is the transcendence of time/physical space as a barrier to a range of personal networks. For the latter, one's intent is to remain "intact" as a "real person." Online communications are simply a means to extend the range that this self can travel to meet others. In the former, it is one's performative abilities that count; one's prowess as a choreographer of alternative realities. (p. 93)

Donath (1999), for example, has signalled numerous cases of identity deception in online interaction. The author stresses that identity cues given by participants in this medium of communication are not always reliable, because data can be fake, claims can be false and cues may be deliberately misleading. When this involves the deliberate dissemination of incorrect information or bad advice, it can undermine the feeling of

trust in a network. Due to its power, this dissemination of misinformation can have particularly devastating consequences in teacher electronic networks.

On the other hand, although cyberspace desinhibition may contribute to the development of online deception and conflict, it can also encourage truth-telling. Due to the protection afforded by physical distance and anonymity, many people find it easier to confide their needs, desires and secrets in virtual contexts (Smith, 1999). This can be a revitalising factor for teachers' collaborative cultures. The relaxation of norms of disclosure that is allowed by CMC may facilitate the revelation of particular difficulties and problems, which may subsequently carry collegial discourse into deeper levels of discussion and reflection than those that currently exist in many teachers' face-to-face cultures.

One of the defining characteristics of the strong forms of teacher collaboration that have been documented in the literature is the voluntary nature of teacher groups and each member's personal commitment to teamwork. But, as Wellman and Gulia (1999) argue, it is easier to withdraw from problematic situations when people interact online – people can simply "exit" the Net session- than it is to withdraw from face-to-face interactions. This can make online teacher networks less stable and may facilitate running away from problems, rather than actually confronting them collectively.

Nevertheless, the voluntariness and spontaneity of teacher interaction may be strongly enhanced in cyberspace, where the pool of potential partners is much larger and possibilities for rewarding interaction are thus improved dramatically. Of course, the total spontaneity and the absence of structure of much voluntary cyberspace interaction can carry important risks, namely, potentially higher levels of uncertainty and of communication inefficacy. Therefore, participants may consider the need to negotiate and agree upon basic operating principles, relative to access to and familiarity with the technology to be used, guidelines and procedures, minimum levels of participation, opportunities for discussing fears and insecurities regarding the communication medium itself, and mechanisms of evaluation that allow for the provision of reciprocal feedback on an ongoing basis (Palloff and Pratt, 1999):

> as norms would be negotiated in a face-to-face group or community, the same needs to occur online. In fact, in the online environment, those collaboratively negotiated norms are probably even more critical as they form the foundation on which the community is built. Agreement about how a group will interact and what the goals are can help move that group forward. In a face-to-face group, assumptions are made but not necessarily discussed, such as rules that one person will talk at a time and that a person should ask to be recognized before speaking. In an online group, we can make no assumptions about norms because we cannot see each other. Therefore, nothing should be left to chance, and all issues and concerns should be discussed openly. (Palloff and Pratt, 1999, p. 23)

Another important challenge facing online collegiality is diversity. As Smith (1999) remarks, online communities are distinguished from many face-to-face groups by their open boundaries, since participants can enter and leave without many of the costs associated with leaving in "real life" situations. This stimulates the possibility of great *social* diversity, for participants may have all kinds of age, gender, social, cultural and language backgrounds.

However, while CMC fosters within-group diversity in terms of the status of participants, it also promotes *similarity* of assumptions and concerns, since online groups are usually formed on the basis of the voluntary affiliation of members who share similar interests. Status diversity may be often replaced by ideological homogeneity. The voluntary affiliation of similar-minded interaction partners entails the

risk of eliminating a form of diversity that may be more important for educational change than the traditional status diversity (in terms of race, gender, sexual orientation or social class) that is usually the concern of most contemporary critical educationalists. Another key problem in teacher online networks refers to the unequal distribution of centrality in most professional cultures of teaching. In fact, many colleagues who are situated peripherally with respect to access to key people, important information and creative and effective teaching ideas have become marginalized in face-to-face teacher networks. Theoretically, this handicap can be overcome through their involvement in electronic networks. Access to information and to available technical assistance may empower these individuals to transform their roles from reactive to proactive ones. In this sense, CMC can function as "a tool for the collective action of small players" (Mele, 1999, p.304). Thus, online participation may increase the inclusivity of teacher networks.

But teachers who are less proficient in using these information technologies or who are kept from using them may be excluded from participating in these new potentially important collegial environments. Indeed, participation in electronic networks creates special communication challenges, most of which revolve around technology. Jude-York, Davis and Wise (2000) list the most common ones:

> technophobia (fear of working with technology), lack of technical skills, software and/or hardware incompatibility between team members, lack of technical support (from other team members or the work organization), varied writing skills (because of differences in cultural background, language, and education), uncertainty among team members about when to use the various communication channels, natural disasters (members cannot access communication channels because of power outages, disrupted phone lines, etc.), information overload and online shyness (some team members do not contribute on a continual basis). (p. 77)

This may create a new type of inequality in schools and, therefore, maintain their current fragmented organizational cultures. Technologically illiterate teachers may well become the cultural outcasts of the new networks of information exchange in education.

But there is one aspect in which CMC offers clear advantages over more traditional forms of teacher community: it has a greater potential for promoting cognitive conflict, an essential catalyst for truly dynamic teacher networks in education (Lima, 2001). Because most studies of teacher collegiality stress the importance of close friendship ties among colleagues, they underestimate the advantages of interacting with people who are dissimilar and with whom teachers have few or no emotional ties. Weaker ties may present a higher potential for innovation and change in teaching. These ties are much more likely to be found and developed in online communication networks than in school-building ones.

It is thus clear that online sites provide teachers with real opportunities to find a place in extended and complex networks where they can interact and experiment with others in a "safe" environment. But this raises an important question: does the presence of these virtual spaces guarantee that the outcomes of the interaction will be transported into the actual contexts of teaching where teachers are physically located? Unfortunately, the answer is no. There is a real danger that these electronic landscapes can work as ghettos of creative experimentation that inscribe further differences between "normal" isolated teaching and the cyberspace breaking of all established fundamental privacy rules of the profession.

On the other hand, however, not only can online teacher networks be strong professional communities; they can also support and help hold together *local* collaborative cultures. Indeed, online interaction may even stimulate *higher* face-to-face collaboration. As Palloff and Pratt (1999) have referred, with respect to student participation in online distance learning courses, "our students who are shy in social settings learn something about social skills by interacting in an online course. We have seen that begin to carry over to face-to-face classrooms" (p. 34). One may wonder if the same might occur with peripheral or shy teachers who usually refrain from involving themselves in networks of collegial ties in their schools.

It seems, therefore, that despite all the possibilities that online communication offers to teacher collegiality, personal face-to-face contact continues to be important. As Jude-York, Davis and Wise (2000) remark,

> Most new virtual team members probably will be cautious in granting trust to one another unless they already have a prior relationship. If most of their communications are in writing, members will be even more careful since the written Word is permanent and can be easily taken out of context. (p. 13)

This is why the authors advocate opportunities for face-to-face contact among team members, as well as "getting to know each other" exercises, which they see as "the fastest route to establishing trust" (p. 13). Other suggestions include conference calls, meeting in subsets and exchanging autobiographies, resumes and pictures.

In Parks and Floyd's (1996) research, it was relatively common for relations formed in discussion groups over the Internet to extend to other channels and contexts, such as email, telephone, ordinary mail and even face-to-face communication (around 33 % of all individuals, in the latter case). This suggests that rather than substituting traditional forms of interpersonal relating, online communication between teachers may become just another way of meeting colleagues. Many individuals do not seem to draw a strict line between their Internet relations and their "real life" contacts. Like them, teachers may simply use CMC as another ordinary, common life form of communication with others.

CONCLUSION

The concept of the teacher community is changing. Teacher networks are no longer mere space-bound groups of people brought together by a common involvement in the same local work context. With the rapid rise of computer mediated communication, the boundaries of teacher networks are becoming unstable, ever-changing and uncertain, and will be even more in the future. This presents important challenges to current conceptions of teacher collegiality.

Issues of density, centrality and fragmentation that have been traditionally addressed by social network researchers will take on new meanings in these radically new contexts of interaction. Due to the open boundaries of online networks, these dimensions will become much more fluid than they currently are. But the questions of inclusivity, democratic dissemination of information and group cohesiveness will remain relevant to our discussions of the power and the structure of teachers' professional communities. Therefore, the dimensions of network density, centralization and fragmentation will remain fruitful conceptual tools that will help our thinking about these communities. Despite the developments of teacher interaction into cyberspace,

where absolute individual freedom is usually presented as the keystone of interpersonal relating, structural concerns remain significant.

Given these developments and in light of the current knowledge on computer mediated communication, many teachers are (or will be, in the near future) able to establish professional ties with colleagues from other locations, even from other countries or continents, through interaction over electronic networks. Some of these relations are (or will be) "personal", interdependent, wide-ranging and deep in communication quality, predictability and commitment. Strong professional communities of teachers in cyberspace are, thus, a clear possibility. However, care is warranted in the characterisation of the actual nature of most electronic groupings. Not all networks of ties among teachers in cyberspace will deserve the professional community label.

Computer mediated communication presents many possibilities, dilemmas and risks to the development of contemporary professional networks in teaching. Despite the advantages it offers to teachers, CMC can also create room for intensified work, painful learning, increased social isolation, undermined feelings of connection, stereotype reinforcement, hostile and violent communication, deception and fantasy, dissemination of misinformation, low network stability, poor problem-solving, higher levels of uncertainty and of communication inefficacy, ideological homogeneity, the marginalisation of technologically illiterate teachers, and the creation of ghettos of creative experimentation that are disconnected from teachers' immediate work contexts.

Therefore, by itself, collegial CMC may not give way to significant and desirable teaching practice outcomes. This may be especially true if it remains confined to teachers who are connected to colleagues in other settings, in interesting but professionally platonic online relations that are totally disconnected from their immediate professional environments. This will only reinforce, rather than challenge, the established cultural rules of non-interference in teaching.

But if online networks, by themselves, cannot guarantee strong professional communities in teaching, they can be extremely powerful tools in the development of these communities. This will be especially true if they are combined with regular occasions for face-to-face interaction, focusing on significant areas of teachers' work. This is why it is so important that educational researchers and practitioners give due attention to this new and increasingly significant form of teacher interaction. Teacher online networks are not necessarily professional communities, but they can be such communities and become even stronger and more powerful than face-to-face ones.

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THE WORK OF THE NATIONAL WRITING PROJECT: SOCIAL PRACTICES IN A NETWORK CONTEXT[1]

The National Writing Project the oldest and probably the most successful professional development project in the U.S. now has sites in every state in the U.S. Their work is best understood by realizing that this network is tied together by a set of integrated social practices that connect intellectual work and relationships into a vibrant professional community. The loose structure of a national network with its local sites and the social practices that model its ways of working and leading make this an important example of *scaling down* (providing a model to be organized locally) in order to *scale up* (spreading the model to a larger constituency). How this looks is explicated by a study of two sites, an evolving site (6 years old) and a mature site (24 years old). Each holds the core values of the Writing Project even as they adapt certain practices to the differences in context.

INTRODUCTION

The research on networks for educational reform continues to grow teaching us just how these seemingly loose, flexible, organizational forms work to organize teachers and principals to participate in their own development (Adams, 2000; Lieberman & McLaughlin, 1992; Lieberman & Grolnick, 1996; Lieberman & Wood, 2003). We are learning about the need to build professional communities and how complicated, fragile and rare that is (Grossman & Wineburg, in press; McLaughlin & Talbert, 1993; Westheimer, 1998), but we still need to better understand what successful networks do, how they organize their work and what makes them endure.

In a two year study (1997-1999) of two sites of the National Writing Project (NWP), we learned how the most successful professional development network in the United States connects particular social practices (they way they work) to a network-like way of organizing (how they spread the work) helping it grow, deepen and continue to be responsive to its constituencies in the face of a rapidly changing reform environment. This paper discusses the social practices as they are developed in two sites and the network-like arrangements which develop around them. Issues of learning, leadership and commitment are discussed as are lessons, challenges and lingering questions concerning the role of networks in school reform.

GETTING INSIDE THE WRITING PROJECT

For two years we immersed ourselves in two sites[2] of the National Writing Project (NWP)[3]. We wanted to look at a more mature site, one that had been around for awhile and one that was relatively new. We were interested in seeing the differences between urban and rural sites and how, or if, adaptations were made to the NWP model in different contexts. With the help of the National staff we were encouraged to go to Los Angeles, a site that was 24 years old and housed at the University of California at Los Angeles (UCLA), and Oklahoma State University (OSU) in Clearwater, Oklahoma, a

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site that was six years old at the time of the study. We wanted to know what "the work" looked like and how this work connected to the building of a professional community among the teachers. Recognizing that there were thousands of teachers that were touched by the WP, we also wanted to understand the network arrangements that appeared to provide the organizational frame for "the work".

THE WORK OF THE NWP: CREATING A SOCIAL CONTEXT FOR LEARNING

Talking to members of the WP community, we invariably heard references to "the work" or "the model" and the importance of being faithful to it while extending it. In time, we realized that our informants tended to use the two terms interchangeably and that both connoted something essential and identifiable about the WP's unique approach to professional development. More than a set of teaching techniques or a foundational belief system, "the work", as a national director explained, is the "enactment of a culture" (Int., September, 2000). Anxious to see what she meant by this, we followed the advice of site directors and observed the summer institutes, the annual invitational inducting new WP members. As one of them explained, "it all happens there."

Observing the institutes, we saw firsthand that "the work" is actually a pervasive and powerful set of social practices leading to the creation of strong learning communities (Lieberman & Wood, forthcoming)[4]. Three core and recurring activities initiate institute fellows into these practices: teaching demonstrations, the author's chair, and writing groups. Rooted in the WP's dual commitment to writing-to-learn and teachers-teaching-other-teachers, these activities release professional knowledge and establish professional relationships. Each involves teachers teaching other teachers, and each requires public performance with audience feedback. In all three activities participants alternate between giving presentations and listening to others present. In short, all three stress learning as a *social* phenomenon (Wenger, 1998).

The teaching demonstrations, for instance, invite teachers, one at a time, to share a favourite classroom strategy with peers. Presentations, of course, draw on teachers' expertise, surfacing the practical wisdom that they build from practice. As one teacher consultant (TC) told us about the value of teaching demonstrations, "They force you to sit down and be very thoughtful about what you're trying to do and how you're going to go about doing it" (TC Int. Nov., 98). After each demonstration, the presenter receives oral comments and/or letters from peers who describe strengths, offer suggestions, ask questions, or imagine how they might incorporate what they've heard into their own work. Overall, presentations provide a means for teachers to share ideas and strategies; to recognize collective professional expertise; to build knowledge; and to rethink, revise, and adapt practices.

The teaching demonstrations we saw in the summer institutes ranged over wide territory. Teachers presented strategies for engaging students in all sorts of reading and writing activities. They demonstrated ways to embed state-mandated standards in classroom lessons without sacrificing a learner-centered classroom. They showed one another how to encourage literacy in students whose first language is other than English, as well as how to teach fine points in grammar, spelling, and punctuation without significantly interrupting the writing process. As the ideas and strategies poured out, we saw an ethic of privacy (Lortie, 1975) give way to an ethic of "swapping ideas."

Pride in collective expertise seems to overcome stage fright as the weeks progress and individual voices strengthen.

A similar phenomenon occurs when teachers take the "author's chair," a tradition seminal to the summer institutes as well as WP classrooms. The writing projects that institute fellows undertake over the five weeks range from personal writing, to position papers, to journal articles, to imaginative literature, to parent newsletters and curriculum rationales. Once an institute fellow judges a draft ready, he or she signs up for the "author's chair" and reads it to the large group. Colleagues' feedback informs subsequent revisions, and fellows see for themselves the benefits of developing a public voice and taking professional work to a public space for edification and critique.

To support these activities, every fellow belongs to a writing group during the summer institute. These small groups create a safe interpersonal context for sharing writing and receiving feedback on it, and they are lifesavers for those teachers who are at first particularly reticent to speak in public. As one TC told us, "My writing group was the best thing for me about the summer institute; they gave me courage." Another said, "You have to have a safe place to start" (Int.-T, UCLA,'99). Convening frequently and providing an interim space for sharing ideas and writing with a small group, the writing groups prepare fellows for the larger group presentations. They encourage sharing of the unpolished as well as the polished, and group members see firsthand how projects-under-construction improve through incremental feedback. One TC explained, "The best 'a-ha' was being in a writing group and having this chance to write and then people would respond to it very nicely, very sensitively, and provide really good criticism. This is wonderful" (TC. Int., Summer, 1999). The experience of writing groups, in other words, scaffolds the huge step of taking professional work to a public arena and provides experiential evidence that taking that step will be, after all, worthwhile.

These three activities serve as lynchpins to acquaint teachers with norms of the WP culture and bind community relationships within the institute cohorts. But there are other contributing factors. Tables in the room, laden with refreshments and teaching resources, provide nourishment for body and mind and deliver the message that people are cared for in the community. Every day a volunteer reads the log of the previous day's activities and provides an opportunity to relive them. This custom conveys a sense of the routines and rhythms of the institute, highlights the significance of shared experiences in building community, and reveals accumulating insights. Also, tucked into a typical day's proceedings are five-minute "quick-writes" to spark reflection or generate ideas. Sometimes fellows participate in special interest groups, like "grade-alike" groups, to delve deeply into issues of mutual concern.

The WP approach to developing good writers and good teachers underscores two important principles. First, deep understanding arises from *practice* –in both of its common meanings. That is, both writers and teachers learn from *doing*. Writers get better at writing by actually writing and teachers get better by teaching. Moreover, both improve by *practicing in public*. Valuing knowledge grounded in practice gives rise to the second principle: practitioners are the best teachers of other practitioners. Thus, writers are excellent teachers of other writers and teachers are the best teachers of teachers (Gray, 2000). Those actually involved in a practice gain contextualized understandings that make their ideas especially compelling and convincing to other practitioners. By taking the position that those who *practice* writing or teaching are most likely to be good at *teaching* it, the WP foregrounds expertise rooted in practice and elevates a non-

hierarchical, peer-to-peer approach to teaching and learning. An experienced TC explains what this means to her:

> Well, I think number one is that if I'm a teacher of writing I have to be a writer. That's, I guess, the biggest idea. And if I'm going to be a teacher of reading, I have to be a reader. . . Then, the next step I learned was I need to share my teaching with other people and not be afraid to do that. And to know that I do have some good ideas that other people would like to hear about. And to go on and do more sharing professionally.

SOCIAL PRACTICES LEADING TO PROFESSIONAL COMMUNITY

The social practices we saw operating in the summer institutes produced revitalizing and highly collaborative professional communities. Through them, teachers played the roles of both experts and learners, recognized and built knowledge from practice, and encouraged one another to continually seek better ways for reaching students. These practices are:

- Approaching every colleague as a potentially valuable contributor
- Teachers teaching other teachers
- Creating public forums for sharing, dialogue, and critique
- Turning ownership of learning over to learners
- Situating learning in practice and relationships
- Providing multiple entry points into learning communities
- Reflecting on teaching through reflection on learning
- Sharing leadership
- Adopting a stance of inquiry
- Rethinking professional identity and linking it to professional community

Before beginning our descriptions of these practices, we want to emphasize that isolating them for purposes of analysis unfortunately skews how they work in reality. In fact, we suspect that it is only in a culture that works consciously and persistently to integrate them that they truly reinforce and sustain one another. It is also important to stress that, having experienced the power of these practices in their own learning communities in the summer institutes and beyond, TC's[5] work hard to incorporate them into their classrooms.

APPROACHING EVERY COLLEAGUE AS A POTENTIALLY VALUABLE CONTRIBUTOR

It is one thing to speak of a participatory community rhetorically and quite another to create a community in which every member actually *does* participate. Just as good writing teachers try to draw on the authentic voices and experiences of potential writers, the WP approaches every teacher as if what he or she thinks and has experienced matters. A site director explains, "… it was intended in the WP community that in the summer institute… there be an unconditional acceptance of who they [teachers] are, what they believe, and what they think" (Int., November, 1998).

Treating teachers this way makes them more willing to take the risk to contribute and belong to a professional community. It provides a powerful antidote to the isolation and silence all-too-typical of many teachers' professional lives. One teacher

described the breakthrough she experienced from participation in the WP, "The big thing for me was recognizing I do know something and that others can benefit when I share it" (Int. TC, 98). In brief, this social practice invites every member of the community to develop and raise his or her voice so that everyone has the potential to make a unique contribution. Perhaps more subtly, it encourages teachers to be constantly growing professionally so they will continue to have something of substance to share.

TEACHERS TEACHING OTHER TEACHERS

Fundamental to the WP approach to professional development is teachers teaching other teachers. WP teachers teach colleagues in workshops, conferences, professional conversations, writing groups, teaching demonstrations, and so forth. This comprehensive practice topples traditional hierarchies, which seat knowledge in the authority of recognized experts or accepted theory. In the process, it releases what teachers have learned in, from, and for practice. One site director explains:

> We always start with what teachers know. The WP is really an invitation for teachers to share what they know… We *need* what other people know… This could be the person sitting next to us in the summer institute, or it could be the teacher down the hall. (Interview, Oct, 1998)

To adopt this social practice, then, requires a dual commitment from teachers. They must share what they know, and they must listen to what others know, the assumption being everyone has something both to teach and to learn. Most experience greater confidence in themselves as learners because they know they have capable peers on whom they can depend for advice and guidance.

CREATING PUBLIC FORUMS FOR TEACHER SHARING, DIALOGUE, AND CRITIQUE

Key to breaking through teacher isolation and silence are the public forums that the WP creates for teachers to share their work and then critique and discuss it. Throughout the summer institute, as we have described, teachers take centre stage to read their writing or demonstrate a teaching practice. What is more they become acclimated to seeing other teachers doing the same. We saw veteran TC's creatively establishing multiple forums to take their work public, such as presentations for parents and professional conferences, articles for professional journals, conversations via electronic conferencing, or contributions to local newsletters and newspapers.

Crucial to what WP teachers learn from going public with their work is the role of critical dialogue. In preparation for playing a more public role, institute fellows learn to give and take critique in a professional manner. They develop a common investment in the quality of their public contributions. Despite the potential for interpersonal difficulties, most WP teachers refuse to lapse into a comfortable "niceness" that obstructs opportunities to grow. They realize that if people are to learn from public performances, then critique must play a role. The practices of public presentation, critique, reflection, and self-critique become community norms.

TURNING OWNERSHIP OF LEARNING OVER TO LEARNERS

Wherever we went, we heard WP teachers talking about the importance of turning learning over to students so that they would develop a sense of ownership for it. Without that sense of ownership, they argued, learners are rarely truly engaged or motivated. In this spirit, the WP insists on professional development opportunities that are solidly teacher-centered. Teachers name their own problems and articulate their own problems and then have the freedom to design learning experiences around these.

A TC in a focus group summed it up this way, "The thing is to give responsibility to the students for their own learning, and then take responsibility for my own learning. That sort of says it all." Such an attitude turns the prevalent idea about teacher accountability, as assessed through standardized tests, on its head. WP teachers practice an accountability to their students, not in response to outside monitoring, but because they belong to a professional community which demonstrates repeatedly how professional learning and student learning are mutually dependent and intertwined.

SITUATING HUMAN LEARNING IN PRACTICE AND RELATIONSHIPS

Teachers in the WP learn from practice –the practice of writing and the practice of teaching. Through their experiences in the WP, they see that meaningful learning is both active and relational. Learning-by-doing and learning-in-relationships become for them essential conditions for the learning of their students and for their own professional development. We were struck with how many TC's told us they surrendered "teaching as telling" after the summer institute. One said:

> I build a community in my classroom every year, which is one of those things that was most valuable to me as a learner in the summer institute. You experience for yourself what's valuable to help you be a writer and learner there and you want your students to have the same experience (Sisley, FG, '99).

Creating the kind of community that nourishes learning is, of course, complicated work, whether it is in the classroom or in a professional development activity. When people learn, not just by listening, but by actively undertaking some project or task, they must take risks. They need a community tolerant and compassionate about mistakes and ready with constructive critique and suggestions. TC's, therefore, whether teaching students or other teachers place a high priority on learners' relationships with one another, not as a "feel-good" context, but as a vigorous intellectual context for learning (Wood & Lieberman, 2000; Lieberman & Wood, forthcoming).

PROVIDING MULTIPLE ENTRY POINTS INTO LEARNING COMMUNITIES

We were struck with how many ways teachers described the benefits of belonging to the WP community. We met teachers who came to the WP because they were searching for new ways to motivate students to read and write. We met teachers hungry for teaching strategies and resources. Some teachers came because they wanted to share their own talent and expertise with other teachers. Others wanted the opportunity to explore their own writing. Some expressed a need for a professional community. Still others simply felt honoured by the invitation and came into the community not knowing what to expect but deeply appreciating what they found.

By providing multiple entry points for engagement to meet all these needs, the WP avoids ideological singularity and, in fact, succeeds in promoting a kind of pluralism. The WP offers "no great truth" (Int., November, 1998), but they do offer an opportunity for teachers to come together to name and investigate their own challenges and problems. WP teachers tend to have little faith in readymade solutions purported to work in all contexts, but they are always in search of better ways to reach the particular students in their classrooms. Most WP teachers, in fact, learn to "embrace contraries" (Elbow, 1986) or to create new syntheses out of apparent dualities. They recognize that their own professional learning, for instance, necessarily encompasses both technique and philosophy, both personal responsibility and community involvement, both a concern for individuals and the community, both knowledge from the inside and knowledge from without. The needs of specific children demand a repertoire of responses and not adherence to a strict ideology.

REFLECTING ON TEACHING THROUGH REFLECTION ON LEARNING

Much professional development is based on a simplistic cause-and-effect, linear relationship between teaching and learning (Smith, 1995; Wenger, 1998). Consequently, in-services frequently promote "best practices" for teaching. The WP, on the other hand, begins with a focus on the process of learning by providing these experiences during the summer institutes. WP teachers told us, again and again, that by thinking and talking about what happened to them during the institutes, they came to see learning results not from being "taught" per se, but by allowing learners to feel efficacious in the context of learning community. It is their experiences and interactions with other professional teachers that helps them to recognize how motivating, inspirational, and practical learning-in-relationship can be.

In line with the idea that the best teachers of any practice are practitioners themselves –whether of writing or teaching, the WP holds that the best teachers for learners are learners themselves. As WP teachers engage in the learning process, they pay attention to the frustrations, fears, joys, and triumphs of being a learner. It is, of course, currently fashionable to recommend reflection on practice. But what seems especially valuable about the WP approach is that reflection begins with learning and then moves out to teaching.

SHARING LEADERSHIP

One of the most obvious practices of the WP community is the sharing of leadership. Starting with the summer institute, when each individual fellow takes a turn at taking the author's chair, demonstrating a lesson, logging activities, and so forth, the culture sets a norm for rotating leadership responsibilities. Acclimated to and practiced in playing leadership roles, TC's encounter a myriad of opportunities to continue the practice of leadership –both formally and informally- after the institute. A particularly strong leader describes how much she learned about leadership from the WP:

> … They [WP site directors] had a few… presentations from experienced people… We [institute fellows] were helping each other and practicing and learning and then they gave us feedback on our presentations… It was a growing experience… When I came into a suburban school, I was the youngest person on the faculty, and when I left there 8 years

> later, I was the second youngest person… And it was very hard for me to even see myself as a leader until the Writing Project.

Once having recognized their potential for leadership, many WP teachers practice it enthusiastically in a variety of ways. Some become leaders in their own buildings, in the state and in other professional associations and reform groups. Some contribute to the professional development of colleagues in their schools and beyond. Some even become involved politically, working to ensure that policies enable "the work".

ADOPTING A STANCE OF INQUIRY

Permeating the entire WP culture is the idea that constant questioning and searching are fundamental to good teaching. A veteran TC told us that the WP helped her, "gain this kind of inquiring stance into what I do, and to keep looking for answers when things aren't going in a right direction, to try to look at some evidence or data to try to figure it out. What could make it work better, or why isn't it working right, or, well, what else should I be doing here?" Such a stance, of course, leads TC's easily to engagement in teacher research. Perhaps this attitude also accounts for the uncanny capacity of WP teachers to stay positive. Repeatedly, we heard TC's praising their own community for not becoming mired in habits of complaining. As one site director put it:

> This kind of professional development invites teachers, me included, to share our best stories as opposed to the day-to-day talk in the faculty lounge. More negative talk happens there. In a Writing Project event, there's no time for the negative. But that isn't to say we don't look at the hard issues. It's just that we don't dwell in the negative. There's no time. There's too much to do.

This propensity to be positive, rooted solidly in a strong sense of responsibility to students, demonstrates the faith WP teachers hold that together they can find better ways to reach students.

RETHINKING PROFESSIONAL IDENTITY AND LINKING IT TO PROFESSIONAL COMMUNITY

A TC told us during an interview that she thought of "writing as a bridge" (Int. TC '98) that enabled learners to make connections with content, their teachers, and their colleagues. We saw the truth of her statement during the summer institutes when we witnessed how writing provides a bridge between individual fellows and the larger community. The self-disclosure necessarily involved in the sharing of writing creates a web of connections and draws the community closer. Because collegial exchange is so central to their experiences in the summer institutes, most WP teachers quite consciously internalize the value of professional community over time. Thus WP teachers tend to develop professional identities, which demand high levels of participation in professional learning communities. To be a WP teacher is to be a colleague.

A case in point occurred when we approached, somewhat reluctantly, a TC to help us with our research project, knowing that she was terribly busy. When we asked if she was certain she could take on this extra task, she commented, "Oh, I always know that I'm going to get more out of it than I put in whenever I get involved in something like this. Anything involved with the WP is always like that." Belonging to and participating

in a community seems to generate more energy than it drains. Quality teaching becomes for them not an individual but a group responsibility.

SOCIAL PRACTICES: LEARNING, COMMUNITY AND RELATIONSHIPS

The "work" of the WP is fundamentally about learning what it means to be a learner and understanding in important ways what it means to help others learn. In WP terms, however, both can only be accomplished by establishing a set of social practices that frame how people think of themselves and interact with one another in a learning community. Wenger (1998) has written about "learning as social participation" (p. 4), making the claim that participation in communities of practitioners "shapes not only what we do, but also who we are and how we interpret what we do" (p. 4). For him, such communities become arenas for professional learning because the people in them imbue activities with shared meanings, develop a sense of belonging, and create common identities. This is precisely what we saw happening in WP learning communities. The social practices adopted by the WP convey norms and purposes, they create a sense of belonging, and they shape professional identities. Because they are founded on principles of inclusion and pluralism, they tend to create learning communities capable of avoiding the ideological splits and conflicts with the potential to tear communities apart (Westheimer, 1998).

Currently, there is a great deal of public talk about teacher accountability in the United States, usually defined in terms of students' test scores. The WP in our view fosters a kind of teacher accountability much more likely to ensure productive learning experiences for students. WP teachers internalize the fundamental purpose for their professional community: finding ways to reach *every* student. This requires both sharing what one knows and seeking the council of others. An experienced TC talked about:

> … feeling empowered as a teacher to say that maybe I do know something about how students best learn. And that it's not just me by myself thing. There's been a lot of people who also are getting results or saying the same things. So I think that's also good to have a voice there. And to see, to be around successful teachers, to remain enthusiastic. The Writing Project, I think, keeps us all fresh. Keeps us caring and enthusiastic over the years.

Clearly, for this TC, it is the professional community that makes fulfilment of her responsibilities as a teacher a better possibility. The alchemy of the WP, then, is really the enactment of social practices capable of building relationships, stimulating learning, developing voice and efficacy, conveying intellectual breadth to the work of teaching. No one could say it better than this TC describing what "the work" had done for her:

> … It's changed my life outside my teaching, inside my teaching. It's literally changed my whole life. It's given me a support system; it's given me friends; it's given me my writing back; it's given me my classroom back (Focus group, April, 99).

The social practices that arise from the activities that teachers participate in are incorporated into their lives through the development of a network-like organizational structure. This structure provides a wide variety of formal and informal opportunities to grow and develop as teachers and leaders in the summer and throughout the year.

DEVELOPING THE NETWORK: AN ORGANIZATIONAL FRAME FOR THE SOCIAL PRACTICES

The summer institute sews the seeds for the network-like way of organizing by inducting teachers into ways of working on their own learning as part of learning a community (Cochran-Smith & Lytle, in press). It also provides opportunities for teachers to gain confidence and self-knowledge by teaching other teachers what they have learned in the context of their own classroom. As these seeds take root and flower they grow the network by spreading social practices and providing opportunities for new leadership to develop.

TEACHER CONSULTANTS: DEVELOPING LEADERSHIP IN THE WP

Some teachers find it rewarding to teach adults, sharing their teaching strategies and/or the dilemmas they face, seeking to engage their peers in finding alternative solutions to teaching problems. Many teachers find that as they share their practices with fellow teachers, they become quite articulate about these practices –practices that have been tried, honed and shaped over the years. Site directors look for teachers who have developed effective teaching strategies and who show, by their participation as learners in the Institute, that they have internalized the WP ways of learning. Some of them decide to become teacher consultants (TC's). In this way, the WP nurtures teacher leadership that can deepen its work at the site, enlarge the network and keep people connected beyond the summer institute. One teacher consultant explained: On one level TC's work a lot on their own teaching. The continued discussions with teachers about teaching, whether giving a presentation or at meetings regarding new WP projects… On another level, you learn a lot about teaching learning through experience. It is not explicit… you have to stretch your thinking as a presenter as to what texts and structures you can use to give your audience a chance to experience the presentation rather than to watch it. (Int. TC, 10/23/00)

At OSU, after the summer institute, TC's are invited to attend a "Workshop on Workshops" to learn how to organize workshop ways of learning. This is but one of many opportunities that TC's have to stay connected to the "work" as they become increasingly important to shaping it and the direction of the network. Organizing professional development in their own or other districts, starting special interest groups on topics of particular concern, leading her research groups, organizing summer writing programs for students, are only some of the activities that TC's lead and help develop. For every teacher who becomes a consultant fifteen other teachers are served by the WP –a ration that has remained constant over the last five years (St. John, 1999). While the process of becoming a TC varies, the figures indicate that a substantial leadership cadre develops in each site. (There are currently 169 sites in the U.S.). Since this group keeps the network grounded in the work of teachers, it is an important indicator of the health of the program and organization of the WP.

THE ADVISORY GROUP: SHAPING POLICY AND PRACTICE

Teachers participate in the leadership that shapes the network offerings at each site by being part of an advisory board. This board has the responsibility to continue to build the program of the network creating a variety of activities and opportunities for

teachers while being careful to keep the work rooted in practice and sensitive to the context of its particular site.

At UCLA, the advisory board has grown over the years. It now consists of a director and co-director, both housed at UCLA, three associate directors (all working teachers) and about 10 others in the university. They meet four times a year to develop both summer and yearly program offerings, trouble shoot existing problems and issues, and create policies that support the practices of an ever growing network. At OSU they have a Writing Council which also meets 3 or 4 times a year. While playing a smaller role regarding the vision and policies of the network, it provides important input into the Types of formats, places and ways in which the work is carried out. They also use these meetings to cultivate leadership, disseminate information and build the capacity of the site.

URBAN/RURAL ADAPTATIONS OF CONTENT AND FORMAT

Although all sites hold a summer invitational institute, the types of formats they develop and the content of their professional development may differ depending on their context. Each site must respond to the demands of the policies of its own state. Not-withstanding these differences, social practices appear to serve as core values in both sites, while allowing enough flexibility to make the necessary adaptations without losing what is central to their vision and ways of working. This is critical to understanding why and how this network continues to grow and deepen its practice. The strength of its core ideas about teachers and teaching and the flexibility of its practice enables it to adapt to the problems of both policy and geography. Comparing our two sites give us some clues as to how this happens and helps us to understand how, while the social practices keep the "work" similar across sites, the different contexts influence the nature of the relationships, formats and delivery systems that are all part of the WP.

THE UCLA SITE[6]

The flexibility of the WP allows them to respond to policy initiatives from the district and the state. Summer offerings by the WP at UCLA reflected these changing policy contexts for teachers. Some examples follow.

The State of California had recently offered a large financial incentive to teachers why apply for and pass the National Board for Professional Teaching Standards (NBPTS). The UCLA WP responded by creating a support group for teachers which began during the summer and meets throughout the year to help teachers through the certification process. From "Research to Reading", an initiative from the Governor's office, has also been taken on by the WP. Since it is an effort to increase literacy skills, the WP was well equipped to handle this initiative as part of their program. "Write From Day One", a summer workshop series for teachers working with second language learners, addresses their concerns about developing their students' skills and abilities in writing and reading.

The formation of new special interest groups are encouraged and organized reflecting the needs of the urban population served by this site. This year the WP formed a group to discuss Advanced Placement (AP) courses in secondary school. (These are courses for students who are preparing to go to the university). Because it

has become increasingly difficult for students to get into the University of California, the WP decided to provide a pre-AP workshop for secondary students and to find other ways to help teachers meet student needs for AP classes[7].

Since this is a 24 year old site, many organizational relationships and structures have been created over the years, including four different partnerships with school districts in So. California and some that even cross state lines. One of these, with teachers in the State of Washington, which like California has mandated state standards for schools, was formed by members of the WP in both states who joined together to discuss how to incorporate the standards using a WP way of working. Rather than destroying the work of the WP, the site has found ways to shape their responses to the policies: sometimes through special interest groups (AP), sometimes by nuancing policies that add to the work (adding standards to strategies teachers teach each other), and sometimes by embracing the gap between the policies and the necessary strategies to put the practices in place (implementing state mandates through WP programming).

At UCLA, the Five Week Invitational and the Open (another version of the Invitational) remain constant as the core offerings of the WP. Some summer initiatives, such as providing classes for young writers, continue to grow as others are phased out. This illustrates a major benefit of network organization: the ability of the WP to continually shape the network and its activities to the needs of its members and the social context of its community. When activities cease to be of value or sustain an audience, they can be dropped even as others are developed. This flexibility and adaptability that is characteristic of networks allows the WP to be both relevant and principled, which helps it not only to be effective, but to keep its members and continually attract new ones.

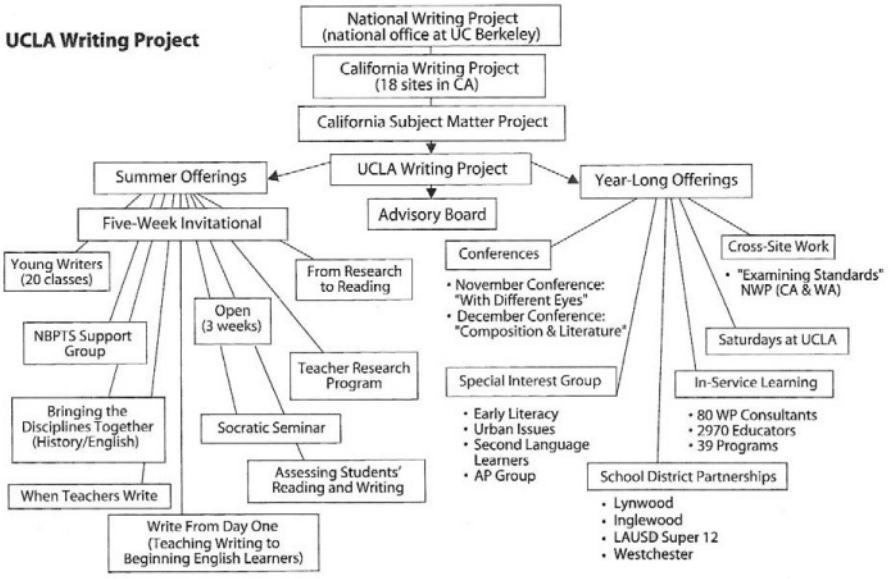

Figure 1. UCLA writing project

THE OKLAHOMA SITE

The service area covering the Northern half of Oklahoma is large and predominantly rural, which makes it difficult to concentrate a critical mass of TC's in one place (as in the UCLA site where the dense population makes this possible). Instead, the Co-director and TC's try to create a wide variety of offerings that seek to overcome the limitations of time, distance and density. They make special efforts to reach out by working with existing programs –piggybacking onto other meetings to make best use of time and travel- as well as by offering a wide variety of professional development activities suited to their time and place. The range of locations, from tiny towns and farm communities to affluent suburbs and impoverished urban areas, makes it necessary to budget both time and money, while increasing the use of computer technology wherever possible. Budgeting must often include lodging so meetings are planned to start late and end early to accommodate driving times. Technology not only plays a crucial role in keeping individual people connected to each other, but has made possible the organization of on-line book groups and an e-journal. These developments have added an important dimension to this rural site allowing the WP way of working to take place on line as well as face to face.

To provide a measure of consistency, OSU has created its own adaptation of the WP "work". They have constructed a model that all TC's can use in their travels throughout the state. Consisting of the organization of teacher demonstrations, encouraging teacher writing as a part of belonging to writing groups and developing teacher research in their own classrooms. It has been used for mentoring new teachers as well as for supporting the growth and development of experienced teachers. The "model" contains the essential principles of the WP: involve teachers in their own writing, have teachers teach each other, and build a community that honours teacher knowledge as the starting point for growth.

As at UCLA, OSU's work includes building programs that help teachers adapt to local and state initiatives. For example, two language arts institutes are given in two different parts of the state sponsored in cooperation with the State Department of Education. The WP also works with the Comprehensive School Reform Demonstration Program, a state mandated school reform effort. In addition, they collaborate with organizations such as the Oklahoma Council of Teachers of English, and foundation, sponsored events such as Rural Entrepreneurship Through Action (REAL), an Annenberg project involving students in a micro-community setting.

This eight year old site has been so successful in providing professional development that it has had to hire an in-service coordinator to manage the work and to make sure that the groups with whom they work have purposes compatible with their own. Having become an important influence in the state with the reputation for providing quality professional development with high teacher involvement, they have developed a thirty hour professional development program that deals specifically with literacy development taught by TC's. Although this site will never be able to build up a critical mass of TC's, they have learned to connect to existing initiatives, whether state, district or school. Isolation and distance, which will always be problems, are overcome by creating models and programs that are transportable by attaching themselves to local and state-wide initiatives, and by helping local districts define their needs for professional development. Because the OSU WP focuses on literacy, and because many mandates aim to get at this problem, it has become invaluable as a resource for the

state. In essence, the "net" of the network has been widely cast, recognizing that connecting to other existing programs while still giving their own summer institutes, keeps the WP true to its origins even as it collaborates with and connects to other existing reform and professional development efforts.

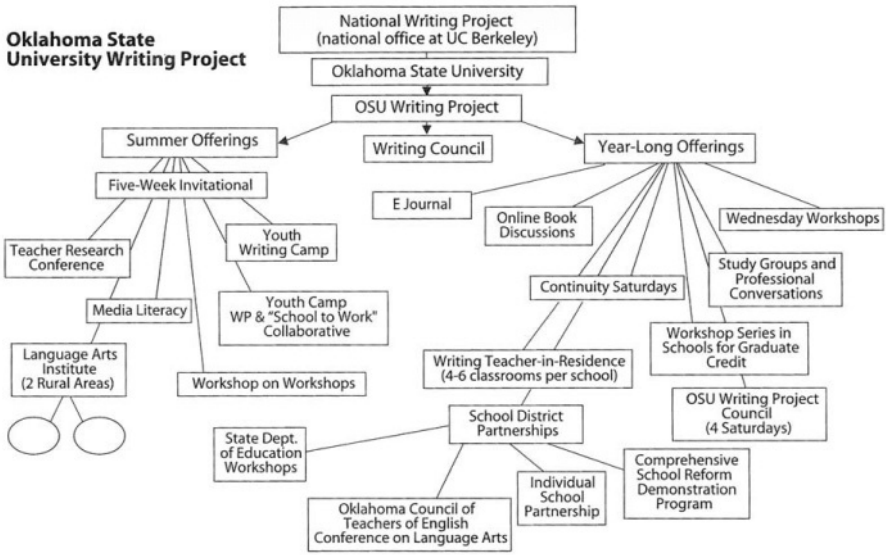

Figure 2. Oklahoma State University Writing Project

GROWING LEADERSHIP – THE WP WAY

In addition to its local sites, the National Writing Project has built special focus networks to deal with problems that are national in scope. The Urban Sites Network has organized teachers from 40 WP sites to focus on particular problems facing urban areas, and to reach out more effectively to teachers and students in underserved schools in WP sites. The Rural Sites Network, with teachers from 85 sites participating works on the particular problems of rural communities. A new network with 36 sites represented, the English Language Learners Network has recently been formed to increase knowledge and awareness of language issues.

The process of creating these new special interest networks coincides with the growth of the WP members who become teacher leaders up from 10,312 in 1997 to 12,748 (Annual Report, 1999). Because everyone in the WP is always "scouting talent" and because these new network opportunities create the need for further leadership, the WP speaks of its quest for leadership as "ubiquitous". Beginning with the summer institute and the development of teacher consultants, leadership opportunities are continually expanding with site directors always looking for and making possible new

opportunities for teacher leadership. As one person in national leadership expressed it "you can move mountains if you don't care who gets the credit." Those in national leadership, site directors and teacher consultants all speak the language of facilitative leadership. "The idea is always to build community, to resist a top-down mentality and to continue to find people who want to do "the work." (Int, national leadership, 2000)

SOCIAL PRACTICES AND NETWORK ORGANIZING: A KEY LESSON

The key to the success of the WP appears to be its social practices rooted in a community of peers that provides its members with rich and varied opportunities to learn and to assume leadership positions. The WP works as a network through its local sites housed in universities, but led by a collaboration between university and k-16 teachers. Norms of shared leadership, collaborative work and community are established practices experienced from the beginning by every member. These are not preached but are lived and experienced. Teacher leaders are not appointed, nor do they apply for the job – but they are encouraged to become teacher consultants through their attendance in the summer institute and/or their participation in network activities. Teachers themselves spread the word, do the work and continue to help formulate the contemporary needs of teachers –no matter what the context.

The network organizational structure encourages growth by providing a variety of ways to belong to a vibrant peer community. This loose structure allows teachers to be connected face to face or electronically, to come to an occasional meeting, or to commit themselves to leadership in local, state or national efforts. In effect, teachers go to a professional development workshop and become part of a professional community.

The social practices developed as an integrated set of activities and ways of working, keep the network anchored while making possible the various adaptations that the local sites make –without losing the essential core of the WP. The WP may indeed be a model for the process of "scaling down" (providing a model that can be organized locally) in order to "scale up" (spreading the model to a larger constituency) (McDonald, 1996). Understanding its success can help us deal with broad problems such as the dissemination of educational ideas and practices, as well as point the way to a more effective model for the professional development of teachers.

PROBLEMS AND POSSIBILITIES

On the face of it the National Writing Project may look like a strategy for improving teaching –one teacher at a time. But this conclusion oversimplifies the layered complexity of the network at both national and local levels. In some well developed sites such as at UCLA the WP is working with whole schools, groups of schools and districts. At OSU, we found that the WP was working with most major reform efforts in individual schools, districts and even state-wide. We suspect that a study of other sites will show that similar arrangements exist as well.

However, no strategy as complex as this national network is without challenge. For example, a major problem of this decentralized model of professional development is quality control. How does the national organization keep track of what the local sites are doing? One mechanism requires local sites to submit yearly reports of their activities, collaborations, membership growth, etc. On the basis of these reports the

national office does site visits as warranted. Furthermore, the National office has created a new role for one of the site directors that involves developing means for providing technical assistance to any sites in need of help.

Most important, how do we know what teachers are doing in their classrooms and what students are learning? In addition to anecdotal evidence, the WP has recently commissioned a three year study by an independent research group to find out whether students taught by WP teachers write more effectively than those taught by non WP teachers. The first year of the study has found overwhelming evidence that students in WP classrooms write more and do higher quality work than those who are not (AED, 2000).

Another important and challenging problem is the nature of school/university partnerships that are an integral part of the WP strategy. Seating the WP in the university has, in many instances joined the knowledge of the university with the knowledge of practicing teachers in mutually supportive ways. But there are universities that marginalize the work, seeing the WP as just another class for an instructor. Even in some universities where the relationships are better, keeping an independent "3rd space" while institutionalizing other parts of the WP, can be problematic.

As accountability is being reframed in the United States, the WP has been asked to show that their work results in higher test scores. While the WP has always been concerned about this linkage, they have begun to collect data that specifically addresses this problem. WP teachers, in common with many teachers throughout the U.S., believe that high stakes testing has begun to drive the curriculum undermining their more developmental and integrated approach to student learning.

Although the WP has accomplished a great deal in its 30 years significant questions remain to be answered. Can the WP's social practices be used successfully in other subject areas or is there something about writing that connects the personal to the professional in ways that are different from other subjects? Can a network like this one adjust to the press for standardization and routinization that is current in the U.S. without compromising the core of its "work"? As it continues to grow and expand can it cope with its ever increasing complexity? Can the school/university connection be improved? And can the WP form of teacher accountability gain the support of the public and policymakers in a high stakes testing environment?

These questions, both conceptual and practical, need further study and understanding. But the WP has already accomplished a great deal in its own right as an exemplar of professional development for teachers that is both effective and transformative. It remains to be seen if the WP is a unique entity in and of itself, with its own history and development, or whether some or all of its practices can be applied within different subject areas or network arrangements.

NOTES

[1] Paper delivered at the Social Geographies of Educational Change: Contexts, Networks and Generalizability, Barcelona, March 11-14, 2001.

[2] A site is where a university and school person have applied for and received funding from the National office to hold an Invitational Five Week Institute if they pass review procedures. Beginning sites receive $25,000 and must document both their plans and their work and keep accurate information on who comes, how many, who becomes teacher consultants (TC's) and the nature of their formats for work during the year. A university and a school-based educator must be involved in the leadership.

[3] The National Writing Project is a national network whose purposes are:

- to improve student writing abilities by improving teaching and learning;

- provide professional development programs for classroom teachers;
- expand the professional roles of teachers. It has served over 2 million teachers and administrators from 1973-2000.

[4] Portions of this paper were adapted from a forthcoming book entitled: Inside the National Writing Project: Network Learning and Classroom Teaching: A New Synthesis.

[5] Teacher consultants are those teachers who volunteer to lead professional development workshops, or lead special interest groups, or in some way take leadership in the site.

[6] The UCLA site is situated in the second largest school district in the U.S. Its public school population numbers 800,000 and has become increasingly multi-ethnic (65% Latino, 14% African American, 12% Caucasian, 1.9% Pacific Islander and Native American).

[7] A group of parents have sued the city of Inglewood because the schools have no AP courses and therefore, they have argued students are less likely to be admitted to UC campuses.

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WIEL VEUGELERS & HENK ZIJLSTRA

NETWORKS OF SCHOOLS AND CONSTRUCTING CITIZENSHIP IN SECONDARY EDUCATION

For changing upper secondary education in the Netherlands, we stimulate bringing schools together in networks. Schools learn from each other, analyze each other's practices, develop various joint initiatives, and try to influence together educational policy. In this article we will present our experiences and analyze critical elements in creating and sustaining networks. We will focus on the political, cultural and educational climate that stimulates starting networks, the rise and fall of networks, the internal structure of the network, the pedagogical identity of the network and in particular the kind of citizenship we want to develop.

INTRODUCTION

For restructuring upper secondary education in the Netherlands, we stimulate bringing schools together in networks. Schools learn from each other, analyze each other's practices and develop various joint initiatives. In this article we will present our experiences and analyze critical elements in creating and sustaining networks.

In particular we will focus on the following issues:

(1) *The political, cultural and educational climate and the rise and fall of networks:* What political, cultural and educational developments stimulate the arising of school networks? What are positive impulses and negative constraints? The development of our and similar networks in the Netherlands will be analyzed.
(2) *The internal structure of the network:* What are the internal structural characteristics of school networks? Our network aims for a shared ownership and actual participation of both schools and university at all levels. An important question is how to keep the network a flexible organization and at the same time structure the network and network participation (Veugelers & Zijlstra, 1998a)?
(3) *Identity of the network:* Like schools, a network has its own educational philosophy. This philosophy will at the same time steer the activities of the network and will become concrete in practice. This philosophy binds the participants and creates an outer world. According to us one learns in a network a lot from differences. What is the balance between differences in the network and the own identity of the network?
(4) *Network participants and the other members of the school:* Networks, as we organize them, can create an aristocracy of involved and powerful members. Even when a network promotes democratic education in which it emphasizes the empowerment of teachers, students and parents, the effect in practice may be that it empowers an elite in the schools. Lieberman (1996) speaks of in- and outsiders. What kind of activities in schools can enhance the participation of all members in school development?

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, 65—78.

THE POLITICAL, CULTURAL AND EDUCATIONAL CLIMATE

We begin with analyzing the political, cultural and educational climate in which our school network started.

Growing up in Modern Society

Growing up in modern society demands of youngsters that they have different knowledge, skills and attitudes than before (Beck, Giddens & Lash, 1992). The amount of knowledge is growing rapidly; in a formal way it is easier to get entrance to knowledge. But getting access to knowledge is not the same as getting a more theoretical insight into knowledge. Students have to learn to construct their own working theories; they have to give their own meaning to the outer world. The growing amount of knowledge and the fast changing character of knowledge, asks for youngsters who can construct their own meaning and can build their own theory. In these construction processes, they use the cultural notions and commodities they find in their surrounding world and in the media. In giving a personal and authentic meaning to their life, they position themselves in their social world.

But in modern society, youngsters also have to find a way to adapt and to participate in social processes: in their own community and in the global world. However, both these communities and the global world are changing rapidly. Through the growing mobility of people, both the local communities and the global world are becoming more divers, even if there are still processes of cultural and ethnic segregation. Modern society needs citizens that contribute actively to maintaining and transforming society. In present-day society, youngsters have a greater responsibility for finding their own way in the social world. But this responsibility is not a choice: to survive in society means to get actively involved, to take your own responsibility (Dieleman et al. 1999).

Bringing Ideology Back into the Educational Discourse

To a certain extent, the described development of society and identities seems a natural process. A process that has its own logic and that is not based in different ideologies. However, ideologies give their own signification to the more general trend, they propose their own solutions and their own educational philosophies. For understanding the relation between educational change and identity development, we use the concept of citizenship (Giroux, 1989; Van Gunsteren, 1992; Turner, 1993). We distinguish three main types of citizenship: the adapting citizen, the calculating citizen, and the critical-democratic citizen (Veugelers, 2000; 2001). In the vision of the adapting citizen, a person has to accommodate to society and the traditional values it is trying to maintain. Changes in society are at best incorporated in traditional ways of life. The local community is celebrated, and in education the emphasis is on the traditional curriculum and on character education.

In the vision of the calculating citizen, society is a liberal market in which each idea and every person has to find his own way. The individual has his own responsibility and is accountable for its competences. It is a technical rationality based in a liberal philosophy. In education, it emphasizes choice, individualization, self-regulation and accountability. The vision of the critical-democratic citizen tries to combine individual

and social development. A person is seen as a social being that actively participates in society and is critically engaged in the transformation of the community, in working with cultural differences. In this, a balance has to be found between personal development and social commitment and emancipation. The educational foundation for critical-democratic citizenship is critical pedagogy or critical theory and certain forms of cooperative learning and moral education. For education for Democratic citizenship see for example Goodman (1992), Apple & Beane (1995) and O'Hair, McLaughlin & Reitzug (2000).

Educational Policy and Citizenship Development

Of course, in the concrete educational policies of governments, schools or teachers, one will not recognize these three types of citizenship in their pure forms. One will always see a specific articulation. We believe that at present in the philosophy of the policymakers the calculating citizen is the dominant form in the western world, but elements of the adapting citizen and the critical-democratic citizen are also part of that educational policy. We will describe the educational philosophy as it has been worked out in senior secondary education in the Netherlands.

From the vision of calculated citizenship (the dominant type of citizenship) it borrows:

- Stimulation of self-regulation of the students' learning processes;
- Support for individual learning routes and flexibility;
- Focus on learning skills;
- Stimulation of the use of information technology;
- Measuring student development on 'objective' assessment.

From the educational view of the adapting citizen it retains:

- The emphasis on traditional subjects;
- Traditional methods of assessment;
- Disciplinary practices;
- Keeping control over schools, educational goals and the learning process of students;
- Conformity to local community.

From the critical-democratic view, it incorporates to a certain extent ideas of:

- Authentic learning with space for personal signification processes and extracurricular activities;
- Critical thinking, but often in a formal - value-neutral way - not in a transformative way;
- Cooperative learning as a way to learn to work together;
- Attention for cultural differences.

These ideas on changing education show many similarities with the restructuring movement in the USA (Newmann, 1993; Lieberman, 1995). They have the same broad scope of theoretical possibilities; central in them is the more active learner and a constructivist vision on learning. But concrete educational policy practices may still

differ a lot from the more idealistic vision. The policy can even be to some extend different from the philosophy. Schools in the Netherlands have the freedom, within certain boundaries, to work out their own interpretation of national policy. They can, for example, focus more on the adaptive perspective, or they can emphasize more the critical-democratic perspective.

MANAGING EDUCATIONAL CHANGE

Similar Processes at Different Levels

In education, government sets out a cultural policy in which it steers the development of certain educational practices. To a certain extent it is a top-down operation: top-down first from the government to the schools, than from the principal to the teacher, and from the teacher to the learner. But this policy allows schools room for developing their own interpretation of that policy: in formulating their own educational views, in making choices in interpreting the formal curriculum, in organizing the learning process. Modern educational ideas as presented in the first part of this article ask however for an active learning process in which the learner co-construct his own education. At the micro-level there is therefore not only a top-down movement at play, but also a bottom-up movement from the learner to the curriculum and to the school. The concrete process on the micro-level of the learning process is a combination of top-down and bottom-up.

Similar processes can be seen to play at the school level between the principal and the teachers (Hargreaves, 1994). The teachers together co-construct the curriculum, the culture and the organization of the school. On this meso-level too, there is a combination of top-down from principal to teachers and bottom-up from teachers to principal. Together they create the learning organization in which school development and professional development coincide. The same processes can be seen at work between the government and schools (Hartley, 1997).

Education in the Netherlands

In 1988, the Dutch Ministry of Education started a restructuring process for senior secondary education. In senior secondary education, students of the age of 15-18 prepare themselves for a study at an university or polytechnic. There is a pre-university variant (VWO) and one for entering polytechnics (HAVO). About 40% of the youngsters of that age group are in senior secondary education in the Netherlands. The other 60% are in vocational education. In the Netherlands, the curriculum and assessments are centralized and well controlled by government. Only 30% of the schools are public schools. The 70% 'private' schools consist of 25% Catholic, 25% Protestant and 20% with some special pedagogical vision like Montessori or Dalton. These 'private' schools are public funded and have to follow the national curriculum and assessments, but they do have some space for religious or humanistic education. All schools may appoint their own teachers and have some room for an own pedagogical vision and education.

The government formulated the problems in senior secondary education in the beginning of the 1990's as:

- A lack of motivation among a lot of students;
- Traditional teaching methods;
- Insufficient flexibility in the school organization and in teachers' tasks;
- Insufficient level of the curriculum;
- Too many choices between subjects for students.

In the first half of the Nineties there has been a broad discussion about these problems and a search for 'solutions'. The solutions chosen by the government can be summarized with:

(1) Reduction of choice by introducing four learning 'profiles': culture, economics, health, technology;
(2) New curricula with higher standards and with more learning skills;
(3) More centralized assessments;
(4) Introducing new forms of teaching methods for more active learning;
(5) More opportunities for schools to organize their own way of teaching.

Before the new curricula were formally introduced in 1998, some schools experimented with the introduction of more learning skills in the curricula, new forms of teaching and other ways of organizing their education (more flexibility in the timetable and in grouping students). In 1998, all schools started with the new curricula, the 'profiles' and the new exams. In this process of educational change we can roughly distinguish four periods (of course there is some overlap):

- 1988-1992. Analysis
- 1992-1995. Formulating possibilities
- 1995-1998. Experiments in schools and making the national curriculum and exams
- 1998-2004. Implementation of the new curriculum and exams

This is the educational context in which our network started and created a practice of change.

THE ARISING OF NETWORKS

In 1988, we started our network. We invited schools we worked with in earlier projects and schools that were partners in the teacher education of the University of Amsterdam. We started with discussing the first text published by the Ministry of Education on restructuring secondary education. This text was called 'Modularization of secondary education' and was really a technical approach to education so popular at the end of Eighties. The vision in it was that of a calculated citizen, but without any moral or pedagogical ideas. In monthly meetings we analyzed in the network this text and formulated a critique that we later discussed with several officials of the Ministry of Education. In this analysis and in the discussions, schools were also looking at their own educational practice. They tried to find out which problem is being articulated in 'my' school and what kind of solutions 'we' want to work on. Right from the beginning, we wanted to create in the network a learning culture in which there could be a reflexive practice with all participating in, in which we could dream about possibilities,

in which we could find communalities in experiences, and in which we could support each other.

At that time, we were referring to our group as a 'workgroup'; at the beginning of the Nineties when our group became 'institutionalized', we called ourselves a 'network'. We believe that a network has to be constructed; you cannot just declare a network. People have to experience themselves that they have something in common and that they can contribute to each others' school development and professional development. After a few years working, we were able to formulate several functions our network has for the participants.

Functions of the Network

Several functions distinguish our network (see also Veugelers & Zijlstra, 1995a; 1996a):

(1) *Interpretation of Government Policies.* Discussions among teachers from different schools can provide greater insight into consequences of governmental policy and the various possibilities for restructuring education and implementing policy.
(2) *Influencing Government Policies.* A network of schools can also try to influence government policies by giving feedback as a group.
(3) *Learning from Other's Experiences.* In our view, learning from one another is the most important difference between professional development in networks and other forms of professional development.
(4) *Using Each Other's Expertise.* A participating school may invite expertise from another school or from the Center for Professional Development.
(5) *Developing New Educational Approaches and Materials.* Participants create products other schools can use. For example guidebooks, curriculum timetables, bring some coherence to the teaching of skills, or changing the moral climate in the school.
(6) *Creating New Initiatives.* In a true partnership, both schools and university can benefit from the collaboration and can develop new initiatives together.

When we compare the functions of our network with the characteristics of networks in the US as described by Lieberman and Grolnick (1996) and by Pennell & Firestone (1996), our network is focused more on policy; on analyzing policy, but also on trying to influence policy. In particular in the period of formulating solutions, our network had many meetings with officials of the Ministry of Education. At one point we received an invitation from the Minister of Education herself to talk about our ideas about assessment. The cause was that we had sent a letter to parliament, in which we argued for more influence of the schools in the assessment. The Minister, a social democrat, mentioned to us that educational traditionalists were already feeling threatened by her new policy proposals, and she hoped for our support and not creating a radical attack on her views. We regarded this even as a stimulation to oppose her policy and to counterbalance the traditional attacks on the restructuring ideas.

Organization and Practice of the Network

At present, 20 schools participate in the network. From each school two persons (usually one of them being a vice-principal) participate in the regular network meetings. These meetings are held once a month. The meetings focus on the educational vision

of the schools, the school organization and the implementation process. Besides that, we also have thematic workgroups. First, in the period of experimentation, we had groups on career education, self-regulated learning, and moral and democratic education. Now, in the period of implementation, we have four working groups that are subject based: humanities, social studies and economics, health and technology, and career education. The former topics are now integrated in these groups. In each group, eight teachers from different schools participate. Beside the secondary school teachers, teachers of the University of Amsterdam are members of these workgroups. These groups focus on the content of the curriculum and on the pedagogical-didactical teaching methods. These groups meet six times a year. Furthermore we have two conferences each year, sometimes with student panels of the schools. From the 20 schools, approximately 120 teachers have participated in the network over the past two years.

Staff members of the Center for Professional Development in Education of the University of Amsterdam chair these groups. Some of them, like the second author, are working in one of the schools of the network but are hired by the University to chair groups in the network. The chair and three teachers from the schools prepare the sessions. The network facilitates these teachers for doing this work. All the meetings are on Thursday afternoons; most of the meetings are at the university because its place is really in the center of the area, some of the meetings are at different schools. These school based site visits are prepared together with the school.

In each meeting there is a specific topic. Someone gives a presentation of that topic, and together we reflect on that practice and everybody bring in their ideas and experiences. The presentations can be about plans, ongoing projects or evaluated projects. For the teachers it is a kind of action research in which they reflect on their work and collect data. We prefer to monitor such developments in the network or the workgroup. About every second year we bring examples of 'good practice' or a good description of failures together in a book. In each book we have about 20 different contributions. The four published books have sold quite well and have been important sources for other schools (Veugelers & Zijlstra, 1995b; 1996b; 1998b; 2001). For the first book, the network became in 1996 the first winner of the price for the best project in secondary education in the Netherlands

Networks in the Netherlands

Our network has been a model for starting more networks. A principal of one of our schools was assigned by the government to stimulate the start of networks nationwide. The government has been giving grants to start networks. By the mid Nineties, there were about 30 networks for secondary education in the Netherlands. The arising of more networks was an opportunity for schools to choose between networks. In our region, most traditional protestant and catholic schools are members of an alternative network of the Christian university in Amsterdam.

EVALUATION OF THE NETWORK

What Participants Appreciate in the Network?

How do the participants assess the functions of the network? We conducted a survey-research in our network. For collecting data we developed a written questionnaire in which the participants could indicate how the network provides the different functions for themselves.

According to the participants, the network mainly provides the functions of 'learning from other's experiences' and 'using each other's expertise'. Learning from other's experiences gets a high score: 61% of the respondents regard this to be fairly or strongly important and another 26% of the respondents credit it with at least some importance. Moreover, 54% of the participants use the network to 'use each other's expertise' and 23% of the respondents say that this is more or less the case.

Table 1: Importance of network functions according to participants (percentages)

	Not	*Little*	*Some*	*Fairly*	*Strongly*
Interpretation of government policies	13	16	18	46	7
Influencing government policies	56	24	13	7	0
Learning from other's experiences	4	9	26	26	35
Using each other's expertise	7	11	28	26	28
Developing new education	22	24	33	15	6
Creating new initiatives	13	15	27	38	7

N=57

53% of the respondents stress the importance of a joint interpretation of government policies, yet the chances of influencing government policies are considered minimal: 44% of the respondents feel that the network can provide this function only in a very limited way. Several years ago, government policy with regards to secondary education was still being developed. But presently the government has made its decisions. During the period of policy development, the network, we believed, had more influence on procedure and content than when policy decisions are actually being implemented. Working together in the network can lead directly to a joint development of new initiatives. 45% of the respondents thinks this is a fairly or strong function. It is, though, a stimulus for new initiatives in one's own school and own practice. 67 % of the participants recognize this function more or less strongly.

In reply to a question regarding the differences between meetings of the network and traditional ways of teacher education, many respondents (42%) pointed at the importance of an exchange of experiences and learning from someone else's practices. The meetings were characterized by 'equality amongst participants who discuss experiences from a practical view and with emphasis on finding solutions.' The exchange of experiences was in no way limited to the Thursday afternoon meetings at the university. 40% of the participants indicate that they also consult, phone, or visit each other outside the meetings to ask and give information. The network is mainly associated with active participation and continuity of activities, as 'giving and taking.'

Traditional teacher education, on the other hand, is often 'passive' and oriented towards 'taking.'

Going In and Out the Network

Another important parameter for evaluation of the network is the participation of the schools. In 1989 we had 20 schools in the network. And now, in 2001, we have 20 schools again. Most of the schools are the same ones. But over time a total of 42 schools have been in the network for a longer or shorter period. Two groups of schools joined the network but left again. The first group consisted of six schools coming from the north of Amsterdam, a rural and more traditional area. They were mixed with some other new schools in a new sub network. After a few years they left the network partly because they had to travel too much to get to Amsterdam, but also because of their educational philosophy. They themselves emphasize more adaptive ideas and less the critical-democracy ideas that were then the dominant view of the network.

The second group consisted of six gymnasia. They wanted to have a sub network of independent gymnasia. We agreed as an experiment for one year and we hoped that they would later on want to integrate more in the larger network and our working groups. For them too, the educational vision of the network was too critical-democratic and they found that schools that have different types (levels) of education in their schools dominated the network. Some of these schools also provide vocational training and there are even some comprehensive schools. For us, as directors of the network and for the old network schools, their departure was not a great problem. Schools that want to join our network are always welcome, but we do have our own educational vision. Of course there is space for other educational visions but within some common foundation. This foundation is not always well articulated but is the 'local colour' of the network; it provides the boundaries of the educational vision. We are even proud that people recognize our vision and from a democratic and plural perspective it is good that they make the choice for their own vision.

But also some schools left because the participants found that their school had blocked their development and they felt that they could not contribute anymore to the network. We tried to support these people by accepting their passive participation for a while but mostly they left one or two years later, with the hope of coming back in better times. A few schools left because they believed that they did not learn enough from the network. Mostly these schools themselves where not the most innovative schools. Two, for us interesting schools left because they prefer to concentrate on their own development. So the network creates an identity that attracts schools and thrust out schools.

DISCUSSION

The Network in its Educational Environment

Bottom-up Flow in Formulating Possibilities and Doing Experiments

Networks are powerful tools in circumstances where schools have possibilities to shape their own education, when they can think and work together in finding out how education might be arranged. In the second half of the Nineties we had that opportunity in upper secondary education in the Netherlands. Schools could experiment with their pedagogical and methodological approach. Students, and sometimes parents, got involved in thinking about desirable changes and evaluated ongoing experiments. Despite a lot of criticism, the involvement in schools of quite a lot of students became much better. Occasionally, student panels of different schools meet as a network. Also many teachers got involved in their school and in the network activities. People got a feeling of empowerment.

The type of citizenship teachers could officially work on was the calculating person, but a more humanistic version with emphasis on self-responsibility, creativity and personal development. There were also possibilities for a critical-democratic citizenship in cooperative learning and in students' own research projects in and outside schools.

Top-down Restriction in Implementation

The final curriculum with its high standards and centralized assessments that started in 1998 restricted the possibilities for restructuring secondary education. The content is strictly controlled by the central assessment and the curriculum is overloaded. Teachers really have to concentrate on time-on-task. They do not have much time for more experimental learning and they have to intensively monitor students' progress. Traditional subjects and traditional content in subjects maintained their position in the curriculum. The new learning skills, the research activities for students and the more social oriented themes came on top of the traditional curriculum instead of being substitutions for parts of the old curriculum. When the Ministry had to diminish the overload in the curriculum, it even further reduced the new content.

Another restriction for a possible bottom-up process was the changes in assessment. More subjects are now being assessed nationally (for most of the students more than seven subjects). Even the school-based assessment is more strictly regulated. Schools themselves feel monitored too, because the role of the school inspectorate has been intensified. Teachers have the feeling that there is an enormous intensification of their work. And this is not only a subjective feeling.

Possibilities for citizenship

The type of citizenship that is aimed for now is still that of the calculating person, but now a more adaptive one as a result of the traditional curriculum content and the intensive monitoring of students. The possibilities for a more critical-democratic citizenship are still there, but marginalized. It is interesting to see that, for the common

Dutch secondary school, there is compared with the era before more room for personal, humanistic and also more critical-democratic education. For the majority of Dutch schools, education has been changed to the better. But the opportunities for the more innovative schools like we have in our network, to shape their own education in more critical and democratic ways of learning, are even smaller than before under the old system.

Consequences for the network

For the network, all this means that the era of experimentation is over and that, now the time has come for implementing the new curriculum, schools have to defend their achievements. In the network the discussions are often about how still realize a more critical and democratic education with opportunities for students to do their own research projects and in choosing their learning activities.

The intensification of teachers' work and that of principals means that they have less time to come to meetings of the network. The schools that are still in the network want the network to continue, maybe with fewer meetings a year. They still appreciate working together and they want to benefit from the mutual trust and expertise in the network.

We needed this contextualization of the network in the educational landscape, because making and sustaining a network is not context-neutral. We have seen that a bottom-up movement in a period of exploring possibilities and experimentation provides better conditions for a network than a top-down movement during implementation. Also schools must have the possibilities, the conditions and the subjective feeling that they can articulate their own educational vision, organization and pedagogical-didactical method. Networks can benefit from an educational and political climate in which schools can give their own interpretation of the national policy and the official curriculum. Where they can learn from differences and similarities. It might be phrased in another way too. Networks can flourish in an era when people can have their educational dreams, when they can do their own projects, in which they can function together as a collaborative group.

In periods of a strong top-down movement, the strategy of a network is more defensive: defensive in its educational goals but also in its chances for survival. We still try to learn from each other, now more from the small steps each school takes. We also try to give participants in the network new possibilities to experience educational practices in other countries. For that we actively participate in The International Network of Networks for Democratic Education. With 20 teachers and principals we went in 2001 to Finland to meet the networks of the universities of Helsinki and Tampere. In 2003 we visited the network of the Autonoma University in Barcelona.

And of course we work hard to get more room for a bottom-up approach for active learning of students, for professional development of teachers and for school development. Maybe developments in society, the more 'objective' and the more ideological, force this bottom-up approach. The type of citizenship modern plural society needs cannot be only a calculating one. Society has to organize its moral and democratic support, a type of citizenship that is needed must be more critical-democratic.

Developments in the Network

The development of the network depends not only on the educational policy. Internal factors are important as well. In this last part of the chapter we will analyze them.

Shared Ownership of the Network

Schools and university both must have a feeling of ownership in the network. Networks cannot be organized top-down. In our network, we try to combine the influence of schools and the university on all levels. We have two directors (the two authors), one from one of our network schools and one from the university. Teachers and principals of a school chair some of the groups. When we receive grants, a great part of the money goes to the schools so they can facilitate teachers to participate in the network and to do action-research. All participants together formulate the agenda for the year program and for each meeting.

Most networks for secondary schools in the Netherlands that started in the Nineties, in the period of experimentation, stopped their work. Often they didn't succeed in sharing power in the network. And unfortunately some universities and Institutes for Professional Development of Teachers never had the intention of empowering the participants and in sharing grants. They wanted short time profit of money and research possibilities or they even still believe in top-down implementation strategies.

Important factors for networks to sustain successfully are:

- A shared ownership and a sense of belonging among all participants;
- An established tradition so it is really a decision to break;
- Continuation of participants;
- Being productive so participants receive concrete products and they themselves can show their own products;
- Finding new challenges all the time.

Network Participation and the Other Teachers in the School

We believe that networks are powerful tools in restructuring education. But in the way we organized our network, only a small part of the workers in the school participate actively in the network. One might even say that we focus mainly on the management of schools and that we support those change-agents in their work. Another possibility for a network would be to have the whole staff involved. Some of our network schools have sometimes conferences together. Although promoting democratic education, a network like we have supports in particular the most powerful people in the school. Other ways of school development and professional development have to be added to networking.

Extended Professionalism

A final remark is about the professionalism that networks develop. Working closely together with colleagues of other schools can broaden teachers' perspectives. Teachers are experiencing to be part of a larger educational community. It helps to see the particular and the common in your own educational experience. You have to reflect on your educational practice together with colleagues that become 'critical friends'. It gives you information about other practices. You know better what to do or what not to do in your classes and in your schools. You become a critical reflective practitioner, maybe to some extend a critical-democratic practitioner (Liston & Zeichner, 1991; Beyer, 1996). The network gives teachers a collective voice. However, a changing practice is the proof of the pudding. And of course we realize that the network cannot realize all its intentions, neither can it explain all changes in the teachers' practice.

When university teachers and researchers are working together with schools, they have to make their theoretical notions more concrete. For them, participating in networks is a kind of action-research too. It gives them practical knowledge. The work relations between university based staff and school staff in networks is more equal than in traditional research or restructuring projects. Schools and universities can both benefit of this kind of partnership. For us, and then we mean all network participants, the challenge is now to continue under a less stimulating educational climate.

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Part 3. Gazes on education protagonists

NIEVES BLANCO

CULTURES OF SCHOOLING. NO PLACE FOR WOMEN?

Since 1970, education has included both sexes in the classroom, but it was only after 1985 that coeducational schooling per se was explicitly pursued. However, many studies show that, as is also the case in other countries, schooling in Spain is designed according to male criteria, norms, and patterns; the cultural selection of subjects included in the curriculum is also male-based. Pedagogy of sexual difference could give us a new and more comprehensive meaning to the school in order to understand better what is happening and to teach in a more responsible and educative way.

FROM MALE SCHOOLING TO *NEUTER* SCHOOLING

In Spain, compulsory education is only 150 years old (Ley Moyano, 1857). It came into being as segregated schooling regarding its contents, agents, and physical spaces. However, the demand for a mixed-sex education or, under some circumstances, truly coeducational schools began before the end of the 19th century, although the conceptions and practices were not always homogeneous. Up to 1970, mixed-sex education was implemented only during brief periods of time and never reached all schools.

Furthermore, the general implementation of mixed-sex education towards the end of Franco's regime was not the result of educational debate or feminist struggle, but the last attempt to legitimate the educational system so that the dictatorship could perpetuate itself by appearing to keep up with the times. Since then there has been an increasing, albeit complex, interest in creating a truly coeducational schooling. In the last two decades, the achievements in providing schooling for girls and women are self-evident, not only in quantitative but also in qualitative terms. Although women in Spain have been incorporated in education later than in other western countries, the data suggest that their current situation is quite similar: there is an increasing number of women attending school up to higher education, their success rates are high, and their range of academic options has widened. We have to be pleased about these results, achieved via strong feminist struggles to obtain equality in all fields of life.

These achievements should not prevent us from continuing to analyse the real situation in schooling in relation to its dominant culture and forms. This mixed-sex education model reflects the needs that liberal and social democrat societies have for the participation of women and their abilities in order to develop adequately. However, neither the pedagogy of such schools nor the social system supporting them are aiming at changing the relationships of the sexes in a significant way. What is more, as Elena Simón (2001, p.63) states, the aim of schools and society is, on the one hand, that "girls move towards personal and labour freedom of choice, as well as towards personal betterment", but also that "sexual division of labour continues to exist both at a deep level in attitudes and at a more superficial one in the actual practices, but without being

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, 79—90.

explicit in the discourse". As this author points out, this means "we, girls and women, do not count in schools, even though we support them with our work, performance, and efforts". Indeed, we do not count because schools and society subscribe to the discourse of equal opportunities, but do not take into account the existence of two different sexes.

Nowadays, the prevailing way of educating is no longer based on an explicit hierarchy and a sex-gender split; rather it is based on the adoption of a neuter model which pretends to be all-inclusive and valid for all. With the use of this neuter model (although it is in fact a male one), androcentrism is claimed to be overcome. This is often the case when we claim to be teaching from a position of equality, just because we are not making distinctions between students. In our daily work, we consider that it does not matter whether we are male or female teachers or whether we are teaching a boy or a girl; in short, we think that with this stance we are considering just people.

This passivity regarding gender issues is tantamount to supporting and reproducing a patriarchal male order, which is not abstract but tries to represent –by inclusion- the female aspect: "The neuter is not so much the exclusive domain of the male aspect trying to be universal, but rather a way to include the female in a social and symbolic order inspired by democratic and pluralist principles but still blind to free sexual difference, in the first place, female freedom" (Piussi, 2001, p.149). It is also blind to male freedom because the neuter does not represent anything other than a dominant way of masculinity, which is increasingly less common and more unsatisfactory (Connell, 1996; Tomé, 1998).

What are the consequences of conceiving schools in this way? How can we understand what is happening within them? How can we analyse the problems we are faced with in schools and classrooms without taking into account that men and women are there, and that this is not an incidental but a fundamental fact? I will illustrate this with a current problem, which is a matter of great concern to the administration, researchers, teachers, families, and students: violence in schools.

VIOLENCE: A SCHOOL PROBLEM? A BOY'S PROBLEM IN SCHOOLS?

In many countries, violence in schools is becoming a prevalent issue. Spain is not immune to this, especially since compulsory education was extended to the age of sixteen throughout the entire country in 1995. Recently, two of the most important Spanish education journals have focussed on this issue: *Revista de Educación* (1997, nº 313) –aimed at academics- and *Cuadernos de Pedagogía* (1998, nº 270) –aimed at primary and secondary education teachers.

Under the title of "Violence in schools", the *Revista de Educación* includes several research studies carried out in Spain, Sweden, France, Holland and Germany. All of these state that the perpetrators and the victims of violence in schools are mainly boys. This assertion is based on the authors' research, reviews of previous works, and even "daily experience" (Campart & Lindström, 1997, p.99). It is a problem of such magnitude that "the egalitarian French model has been even called into question", and so this issue is expected "to be the core issue in all the educational debates in France for some time to come" (Debarbieux, 1997, p.91).

However, in none of these works has sex been more than a mere descriptive variable. In no instance has sex been considered a category to be analysed in its own right, nor, in some cases, have social class or ethnic grouping. Thus, it is not surprising

that although it is stated that violence in schools "is mainly a male issue" (Debarbieux, 1997, p. 84), the analysis does not reflect this. Violence is spoken of in general terms and the subjects who originate it or/and suffer it are also generic: people, pupils, peer groups**,** etc.

Cuadernos de Pedagogía analyses the intervention proposals carried out in Spain (Proyecto Sevilla Anti-Violencia Escolar) and in Great Britain (Sheffield Project) to deal with violent behaviour in schools; i.e., bullying. In none of the six papers included is it made explicit whether bullying involves boys more or girls. In their analyses the authors always speak of boys and girls in general terms. With these kinds of data, the reader will no doubt get the impression that bullying affects boys and girls in the same way, that boys and girls attack or are attacked to the same extent.

Within the framework of the implementation of Compulsory Secondary Education in Andalusia, I have carried out a case study in a school where 12-year-old boys and girls have recently enrolled and the social composition of students has also changed (Blanco, 2002). The students attending this school are younger than before, education is now compulsory, and there are more students coming from depressed areas, 25% of whom are immigrants. Teachers are very concerned about discipline, up to the point that it is very difficult to talk about anything without discipline becoming the focus of conversation. According to our data, the following are the disciplinary measures adopted to deal with such conflicts (in fact, they are practically the only ones adopted):

(1) The most serious measure, expulsion, was applied to 12 students (4% of the students in the school): 10 of them were boys, 8 belonged to the same classroom (there are 12 groups in this school) and 4 were Maghrebi boys. The reasons for expelling the boys were more serious than those for expelling the girls –girls were expelled for accumulating several disciplinary warnings while boys were expelled for attacks on their classmates, and lack-of-respect offences or threatening teachers.
(2) Official warnings for not attending school were given to 17 students: 11 boys and 6 girls, but girls did not attend school because they were ill or because their families prevented them from attending –their absences lasted two or three weeks. This was not the case with boys: their absences were intermittent and lasted either alternate full days or took place during specific lessons.
(3) There were also 36 students reprimanded for other reasons: speaking during lessons, not bringing the school material, etc. 27 of them were boys out of which 15 received warnings many times (in fact, 83% of the warnings were given to boys); on the other hand, 8 out of the 9 girls reprimanded had only one warning.

Teachers know these facts, but find it difficult to take them into account in their analysis. They do not "work" with all of the data despite being aware of it. So, when I spoke with teachers trying to make a deeper analysis of the situation, they state that the discipline problems are closely related to the socio-economic background of students. And regarding immigrants, they establish clear distinctions between different ethnic groups: Chinese students, unlike Maghrebi or Gypsy ones, are not troublesome. Furthermore, teachers analyse violence and discipline issues in terms of antisocial behaviours, i.e., they consider them to be a problem of individual maladjustment. However, when I asked the teachers if there were differences between boys and girls in relation to violence or discipline, none gave me an affirmative answer. Sex is a feature that they do not take into account in their analysis.

However, I wonder why we overlook the existence of boys and girls and their unequal participation in school violence? Even though we know that this is mainly a male problem, why is it treated as if it were a *student* problem or even as if it were a school problem? I also wonder what chances we have of solving the problem if we overlook such as fundamental data as who offers violence and who receives it?

There are other ways to approach violence in schools. Marina Subirats & Amparo Tomé (1992) worked out some guidelines to identify violence in schools that take gender into account, and types of aggression not considered as such (verbal aggression or violence via graffiti). Later, Xavier Bonal & Amparo Tomé (1997) analysed aggressive behaviours in different schools. They state that, although violence is not an exclusively male problem, boys attack and are attacked to a greater extent than girls do. They have also discovered important differences regarding the reasons for aggression, the types of aggression, and how it is experienced by those who suffer it. For these researchers, violence in schools has sex.

Graciela Hernández & Concha Jaramillo (2000, p.92) go further by claiming that "the hierarchical interpretation of differences and the assumption of violence as a legitimate method to solve conflicts arising from such differences is rooted in the difficulty in acknowledging the first difference between human beings; i.e., sexual difference". For these researchers, violence is part of the way men –more than women- have learnt to relate to the world; i.e., with the environment, other men, and with women. However, the differences between men and women, sex being the first, are part of life. Differences are not the ones to cause difficulties; rather the difficulties arise because of the inability to accept them and the decision to resort to violence to solve the conflicts within a relationship instead of turning to dialogue, negotiation or making pacts.

The school usually transmits and practices this way of relating to the world. We usually find that boys learn that "sex difference is not really difference between the sexes; rather, girls are different while they, boys are 'normal'" (Hernandez & Jaramillo, 2000, p.93). Nowadays, this lack of recognition is preventing boys from learning to live with girls as their equals, rather than as "the others". However, they cannot learn this because they are constrained to a false role, which cannot be sustained and causes suffering both to them and to us women.

Analysing violence in the light of sexual difference allows us to have a more understanding and richer perspective of schools. This is so because, first and most importantly, in this way we do not "dilute" the problems, i.e., instead of talking about violence in schools, we have to talk about male violence in schools. Second, we can view and deal with other aspects of violence –its roots have to be sought not only within the individual's personality or the social environment in which the individual lives, but within the actual school and ask ourselves whether we are developing "poisonous pedagogies" (Kenway & Fitzclarence, 1997).

The pedagogy of sexual difference enables us to see that the dominant culture in schools favours power relationships (among researchers and teachers, teachers and students, and teachers and families), excluding non-dominant voices from choosing the knowledge taught; it uses verbal, emotional, and sometimes physical violence to discipline and control students and overrates the rational aspect of human beings to the detriment of the emotional one.

This pedagogy also allows us to understand the different ways in which boys and girls, and male and female teachers exert and suffer violence. In short, it seeks to pay

attention to the individual who exerts violence or suffers it and to the fact that this individual is, first of all, a male or a female who also belongs to a social, ethnic or religious group. Paying attention to sexual difference does not mean avoiding other differences that also operate in the school. I would rather say that it enables us to reveal them, because sexual difference is the basis upon which the uniqueness of each person is built.

WOMEN IN THE CULTURE OF SCHOOLING, WOMEN'S CULTURE IN THE SCHOOL

How has the presence of women in schools –as teachers and students- and their academic success changed both the contents and procedures of schools? Further to their physical presence, is there also a symbolic presence? That is, have their values, interests, achievements, conception of reality, and ways of understanding science –in other words, their culture- become part of how schools are understood?

First of all, we have to point out that, as in other countries, Spain is far from having reached this equality many people have struggled for. The achievements gained do not prevent us from seeing the mismatch between women's' level of education and training and their presence in the labour market. Neither do they explain why there is so much difference and exclusion when girls choose the career they like. Thus, despite the good academic results of girls in all subjects, when reaching the end of secondary education or university, they mainly choose humanistic or certain scientific fields; but a girl who chooses Industrial Engineering will find herself quite alone among male classmates.

In the last two decades, many studies have shown the sources of inequality in schools, which in many cases comes from sexist practices. Sexism takes shape and reproduces itself through the *curriculum*, the interactions in the classroom, the language, the organisational structures, the distribution of spaces, etc.

Textbooks, given their widespread use and role within the school, are essential for analysing the cultural choices offered to students of both sexes. In Spain, there is sufficient research evaluating the presence of women and female culture in the selection of knowledge (Garreta & Careaga, 1987; Moreno, 1992; Subirats, 1993). I will refer to one study I have carried out because it is the most recent one (Blanco, 2000). In this research, I analysed 56 school textbooks on different subjects –Natural Sciences, Language and Literature, History, Maths and Physical Education-, for students of Compulsory Secondary Education.

The results show that men feature more (32%) in the textbooks than women (10%); half of the men were important figures identified by their names and their contribution to knowledge and social progress, while only 16% of women were identified by their names. These singular women belong to the following categories: 34 mythological or literary important figures, 20 goddesses from different religions, 7 sportswomen, 20 writers, 6 queens, and 6 female scientists. On the other hand, men belong to all fields of knowledge, though there are more writers, scientists, and political leaders.

The cultural, artistic, and political fields are the most represented, and the presence of men in these fields is much higher than that of women. To find women you have to go to the domestic and the religious domains. The number of jobs performed by men is very high (334 different jobs) and they have high social status, compared to the narrow range of female jobs (94), very few of which need specific skills. Further, 80% of male jobs are exclusive to men, while 70% of women's jobs are shared with men.

These results show the scarce and insufficient presence of women, their values, interests, and contributions to school knowledge. These women appear with very stereotyped features concerning their activities, social definition, and character traits. In these textbooks, men are the main characters and women, when not absent or invisible, can be found –above all- in domestic life: as mothers, housewives, daughters, etc. There is not enough recognition of the contribution of women to social progress; the variety of their activities and their participation in all fields of life are not reflected anywhere. In these textbooks, public life (male) prevails over domestic life (female), and the former is favoured.

Likewise, and based on the knowledge offered in these textbooks, women do not have a "genealogy". The suppression of women's genealogy deprives us of the key element of social identification, because it creates a context in which it seems that every woman who reached a specific position in society was the first one to do so; it seems that no woman had preceded her and might lead one to think that this woman was there by chance or thanks to the benevolence of men.

This assumption is far from true. In all countries and in all fields, feminist researchers have carried out the very important task of "rescuing from the indignity of self-interested oblivion all these women who proved with flying colours that the word `existence´ was not too large for them: scientists, thinkers, humanists, reformers, writers, polemicists, painters, composers, sculptors…and all those women who showed excellence in whatever they chose to do. They need to be rescued, not to be included in a parallel hagiography, but to be rightly included together with their work in the collective memory " (Valcárcel, 1997, pp. 84-85).

How can we include women, their genealogy, and culture in the culture of schooling? Although retrieving women's knowledge is very important, it might not be sufficient; especially if, as tends to happen in schools, we have to do so by using a patriarchal approach, i.e., we will be retrieving intellectual, abstract, theoretical, and written knowledge. But in this sense, women's knowledge is special not only because it has a lower profile, but because it has a different quality and focus. Furthermore, in the patriarchal point of view, the dichotomy between knowledge and nature, which defines masculinity and femininity is not broken.

This is the approach the textbooks I have analysed follow. When they include women, they do so by adding to the main body of information explanations that refer to the state of women, daily life or religious beliefs. Sometimes, when dealing with particular conceptual or research fields, they include biographical notes on or specific sections for women. However, this does not mean a change in the quality of the culture presented –the presence of women takes place within the same logic and the same dominant male values. What is more, this presence can even strengthen them because it authenticates a complementarity that sometimes imposes men's authority on women. Patriarchal and androcentric logic is not broken, because masculinity continues to be the referent for humankind and femininity is defined from the male point of view.

The studies of Mª Angeles Durán (1982), Donna Haraway (1995), or Evelyn F. Keller (1991) have analysed and questioned the dominant model in the field of science and have disclosed its androcentric bias. Therefore, changing the spectrum of scientific culture on offer does not mean just including some or all female scientists along with their male counterparts. Rather, it involves changing the very conception of science, i.e., the criteria establishing that science is about objectivity, abstract thought, and

distancing. It also involves modifying the criteria that define what problems are important and the relationship between the one who knows and what is known.

It is not only a complex, but also an extraordinarily delicate task. In order for women and their culture to be included, knowledge must consider the existence of sexed individuals who are subjects of that knowledge and over whom it has consequences. As the historian Mª Milagros Rivera states (1998, p.193), "in traditional epistemology, the individual who desires is a human being with male sex but who declares himself to be a universal *neuter* representing both men and women, that is, humanity. According to sexual difference thought, the subject of knowledge and desire would not be a universal individual, but a sexed and partial one". In this context, partial does not mean incomplete or complementary, because although there is one world, there are two sexes, which are complete in themselves.

This sexual difference model does not suggest replacing androcentrism by gynocentrism, basically because it is outside the old dualistic framework and the notions of inner hierarchy and complementarity. On the other hand, it does not defend homogeneity among women, nor does it attempt to put aside or trivialise other differences. On the contrary, taking into account sexual difference is very important, but as Rivera suggests, equally important is "the complex articulation of such differences within different cultural contexts and historical traditions" (p.192). So, we cannot talk about "one" culture of women. There is no homogeneity among them (because there is nothing "essential" to being a woman); women are not all the same, but are both similar and different.

How can these theories be included in the curriculum and pedagogy? How can they become educational practices? It is very difficult to answer these questions; it is even more difficult if we take into account the specific situation of Spain. Having left a dictatorship behind in 1975 and, since 1978, having had at our disposal a Constitution that guarantees and protects equality has shaped the way feminism has developed in Spain and the way its theories have taken root in schools.

In Spain, feminist pedagogy does not refer to educational practices driven by feminist ideals, in the sense the Anglo-Saxon community does (Gore, 1996; Weiner, 1999). Rather, there is a focus on "true" coeducation, or better, on education for equality. Since the eighties, many initiatives –either as specific activities or as more global projects- have taken place in this line. Some of them are well known and have been published (although often as proposals rather than as actual practices); others continue to be less accessible to mainstream teaching, while still others have never been described or given theoretical shape. Thus, there is no analysis available which identifies their common or differing features. So, in Spain, there is not a feminist pedagogy identified as such and thus it is very difficult to decide how the presence of women in the culture of schooling manifests either in the curriculum or in the pedagogy.

However, a pedagogy of sexual difference has been developing in the last few years. This name was coined to refer to a pedagogical and political practice undertaken by some groups of women in the Italian schools (Piussi, 1990, 1999). Their practice takes different shapes depending on the context, the individuals taking part or the subjects involved (Arnaus, 1999; Jaramillo, 2000; Longobardi et al., 1997; Piusi & Bianchi, 1996; Spencer et al., 1997). But they always bring together ideas and action, content and form, and ways of making them accessible to students, taking the value of one's own experience as the starting point to establish a relationship of dialogue with reality, and

using relationships of authority rather than of power between the individuals who teach and learn.

This issue of authority –women's authority- is, in my opinion, one of the key elements to understand the significance of the presence of women in schools and the difficulties and problems we face when wishing to include women in the culture of schooling. Too often the issues of power and authority are not only interlinked but they get confused.

AUTHORITY RELATIONSHIPS VS. POWER RELATIONSHIPS

In an important study where the controversial relationships between critical and feminist pedagogies are analysed, Jennifer Gore (1996) considers the issue of authority as one of the key points. Regarding feminist pedagogy, she draws attention to the complex relationships between authority and power. She also describes the difficulties and contradictions encountered when we try to organise authority relationships within the framework of institutions and pedagogies based on power relationships.

More recently, Carmen Luke (1999) has examined the dangers of feminist proposals that reject or step back from "claims of pedagogical authority and institutional power" (p. 284). This "leaves itself wide open to the theoretical impossibility of having a "foundation" from which to arbitrate knowledge, student voices and experiences, and the teacher's own epistemological position".

Although many Spanish and Italian female authors working in the framework of sexual difference would not share with Carmen Luke her conception of authority (I think she does not establish a clear difference between power and authority), they would agree with her in the need to analyse the existence of power and authority in our practices. In this sense, Nuria Pérez de Lara (1999, p.78) has stated: "I think that refusing to speak thoughtfully about authority is one of the main problems in our current pedagogy, which mistakes authority for authoritarianism…" In her opinion, it is necessary to think about the usual way we, female teachers, have contact with authority: we have always hidden and subordinated our real authority by delegating the solution of conflicts to the power of men. Thus, we have agreed with the division that men have made between relational authority and authority linked to power. In fact, in many instances, the attitude of women has permitted power to be more bearable, subtler, and "acceptable".

For the philosopher Luisa Muraro, authority and power are not synonyms, although in our society they have gone together for many centuries. In the West "this confusion is a reality, the reality of mixing the power to give orders and to decide for others, with the ability to bring order, to understand, to decide for oneself, assert and discriminate. This is a civilisation where teachers, besides teaching, fail their students; and judges, besides deliberating, condemn people; and the majority of us think this is natural behaviour. However, this is nothing more than a historical reality" (1994, p.86).

But in this historical reality, authority and power have been difficult to separate. This is shown by Hannah Arendt (1996) and her studies on the Roman origins of authority, as a concept and as a practice: within these origins authority is linked to specific forms of government and exercising governing tasks. So, it is easy to understand why, for Arendt, authority is linked to the idea of hierarchy and always calls for obedience (although within this obedience, men preserve their freedom). According to her, this is why authority is usually mistaken for power and also violence. "Faced

with the egalitarian order of persuasion, authoritarian order, which is always hierarchical, imposes itself" (p.102). Therefore, Arendt's conception of authority has to be understood within this context, i.e., the neuter-male authority linked to governing tasks and therefore, as a principle of social order.

Luisa Muraro holds a different position because she conceptualises authority as practised in women's politics: as a principle of symbolic order. Authority is not hierarchical but rather it has a relational, mediating quality and therefore "it is a giver of symbolic rather than social order" (1992, p.60). That is why in sexual difference politics, authority is understood as a quality of relationships –it can only manifest within relationships that can be either authority or power relationships. Authority does not belong to anyone and no one is "the authority". Making authority relationships (via our voices and exchanges) prevail over those of power (supported by norms and silence) is a clear and positive consequence of women's presence in education.

No doubt this is a controversial position because it challenges a widely spread idea in theories of schooling. Indeed, the difficulty women have in supporting power relationships, their refusal to prioritise the power of norms over people's voices and negotiations, and their rejection of power itself (this is called "feminisation"), is understood as a loss of value and status of the profession and the educational activity itself.

The lack of acceptance of authority relationships, more common among female teachers than among their male counterparts, seems to be controversial for the more traditional pedagogical theories and practices, upon which the institution of school stands although in an unstable equilibrium. This lack of acceptance, which sometimes becomes explicit rejection, is evident in the existing difficulties to acknowledge female authority in education; that is, to accept theories and practices as they are understood by women within the school. This lack of acknowledgement takes different forms: from invisibility to rejection or disdain. However, this attitude is a waste of energy and resources, which could be better used to understand what is happening in schools and find solutions to their many conflicts.

Many women and some men are already basing educational activities on relationships, or rather on authority relationships. On some occasions, these refer to their relationships with students in the classroom (Jourdan, 1999; Montoya, 2000); others, to exchanges between families and the school (Rambla & Tomé, 1998); to teachers' training (Jaramillo, 2000); or even to relationships with knowledge (Arnaus, 1999; Diotima, 2002; Hipatía, 1998). Very often, these relationships are established in difficult contexts, where "teaching" is almost impracticable if we follow the traditional norms, rules, and concepts regarding the authority of academic knowledge. However, Milagros Montoya and her partner, Maxi de Diego, have proven otherwise by creating a textbook of great educational value for students in secondary education who, according to the educational system, were failures (Montoya & de Diego, 1998). Marta, the teacher with whom Zulma Caballero (2001) has been learning and working, is also teaching in a difficult context: a depressed zone in Barcelona, where she teaches immigrant girls and boys with difficulties in learning, great identity conflicts, and, sometimes, with psychological and social problems that are far from being solved.

These are female and male teachers fully committed to "guarantee the supremacy of the relationships, in the production of knowledge as well as in the social and personal domains" (Sottosopra, 1996, pp.53-54). These relationships are based on the priority of what Anna Maria Piussi (2000) calls "first mediations" over "second mediations". First

mediations are those based on the direct exchange between people using dialogue and negotiation; second mediations are based on norms and rules; in short, on power relationships. In schools it is not always possible to disregard the latter or to elude power relationships and their practice. However, there is the option of putting into practice the following principle: "Maximum authority with minimum power" (Jourdan, 1999, p.16).

Acknowledging the presence of these women in schools involves far more than accepting them and bringing them out of obscurity and isolation. It involves acknowledging female authority in education, i.e., analysing their presence in schools as a positive thing, rather than as a threat. This acknowledgement of female authority in schools means appreciating other practices, which can enable us to think about and understand education from other perspectives that seem to provide viable and suitable ways of dealing with the problems we are facing.

However, we must bear in mind that these practices are not all-powerful and will not solve all the problems. The aim is not to turn them into norms to regulate other practices. If this happens, they will lose their quality and ability to transform: every problem is different and must be solved within its own context and by the people responsible for dealing with it. Undoubtedly, there are principles of action but principles should guide our actions, but they have to be interpreted in specific, special, and unique practices.

The decision to move away from this concept of omnipotence and not turn practices into norms allows a change, a radical change, in the way theory and practice are linked. We are not referring to bringing external knowledge into schools; whether it is gathered by women or men is irrelevant. Our aim is to bring into schools the idea that

> the creation of knowledge that arises from within [the schools] makes it possible to break the thick wall of words –uttered by experts, pedagogues, trainers, and bureaucrats- that separate teachers from teaching, from their ability to embody spontaneity and efficiency both in the school and in themselves, and from their capacity to speak about this publicly and with authority. (Piussi, 1996, p. 29).

MOVING TOWARD THE FUTURE

Analysing schools and the cultures of schooling from a "neuter" perspective, as an abstract group of students, teachers, and administrators, instead of "seeing" women and men who teach and learn there, hinders our understanding of the situation and finding alternatives that could bring substantial, suitable, and long-lasting changes. At the same time, it conceals the alternatives that are already taking place.

Ana Mañeru (2001) warns us about the dangers implicit in such omissions, while she states that acknowledging sexual difference does not mean denying the importance of feminist achievements that have allowed women to have access to education, nor ignoring that there has been –and still is- discrimination, oppression, and subordination in many fields and contexts. For her, "speaking of sexual difference in the context of everything else is to speak about female freedom, something which is and has always been present in the world; but we have to learn to see it" (p.133). Acknowledging sexual difference does not mean undervaluing or being unaware of the relevance of critical theories and practices that are emerging in schools which are seeking to build a fairer and more democratic world.

Without undermining the value of all this, the advocates of a pedagogy of sexual difference insist on the significance of women's roles in schools (and outside it). This is not achieved by demanding more women in schools or just making visible those who are already there. These actions can be important in some situations, but irrelevant in others. The importance of their role cannot be established according to quantity. We are referring to acknowledging female authority, and the fact that from this space of female freedom –self-legitimised and not needing "transferred" or "delegated" legitimacy- a new school is being created. This does not attempt to replace or deny the significance of men's roles and freedom.

Is it possible to enjoy a culture of authority relationships where we can pay attention and listen to each individual as unique, where we acknowledge every student or teacher as a legitimate interlocutor? Is it possible to acknowledge female authority in our school system? Yes, it is possible because it is already happening. However, we have to analyse the difficulties and obstacles we face, which always are rooted at a very deep level. It is not easy for the dominant school culture to accept authority relationships because these are not based on norms or rules, on increasingly "judicial" exchanges. Authority relationships are rooted in the exchange between unique but differing individuals; in the necessary negotiation between real people in order for them to grow and nourish their freedom. The criteria for success are not based on results, but on the quality of the actual process. Obviously, any relationship is established because "something" is expected from it, but this "something" is not defined; it cannot be either stated or predetermined.

I think that the acknowledgement of female authority in schools and the practice of a pedagogy of sexual difference brings –at a time of deep and dramatic change- hope to schools because it can give it meaning and renewal in a more inclusive, responsible, and humane way.

I think, like Anna Maria Piussi (2000, p.111), that it is time to focus our "vision" on and see ourselves in the women who, despite adverse conditions, "know how to make of the school a friendly, understanding, and interesting place thanks to their ability to not identify themselves fully with bureaucratic rules and power; their willingness to put before the need for power and self-affirmation their love to do well even in small daily tasks, for no other reason than their intrinsic value in the here and now; thanks to their ability to connect rather than split teaching and learning, life and knowledge, body and language, intelligence and emotions establishing thus social links through their teaching and putting themselves in what is taught. In this way, they make culture and society". This model is visible if one knows how to look at what is happening in schools and is open to every man and woman.

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FERNANDO HERNÁNDEZ

MAPPING VISUAL CULTURAL NARRATIVES TO EXPLORE ADOLESCENTS' IDENTITIES

By using the notion of 'geographies' as a metaphor to represent the variability and mobility of people's positions involved in processes of social change, in this chapter I will explore how visual cultural narratives are contributing to drawing and establishing adolescents' identities. We particularly pay attention to these narratives related to visual popular culture because, as several authors (Giroux, Buckingham, Steimberg and Kincheloe) have noticed, they contribute to building a cultural pedagogy that is opposite, in many ways, to school pedagogy. Besides this consideration there is an emerging stream in the study of educational changes that claims to give more relevance and recognition to the subjects' biographies and self-narratives. This relevance could be used as strategy to understand how school changes take place (or not) and to give more space to adolescents' positions (making explicit their personal stories) into school innovations.

DRAWING NEW MAPS TO EXPLORE CONTEMPORARY IDENTITIES AND SUBJECTIVITIES

At the beginning of this new century, we are able to experience and observe what authors like Goodson (in Hernández, 2000), Castells (1998), Gergen (1991) and Giddens (1991), among others, have considered as the crisis of the modern notion and representation of human identity. As we have mentioned (Hernández, 2000a) this representation of the notion of "crisis of identity" goes beyond Erikson's (1968) consideration of personal crisis during adolescence because it has introduced the doubt into the assumption of an existing personal essence and the idea of the self, considered as the owner of a list of objectively identified attributes. Rationality, emotion, inspiration, personality and volition can be considered as examples of these characteristics.

This crises of the self have their roots, as Keith Moxey (1998) has noticed, in the Poststructuralist tradition. Authors such as Roland Barthes, Jacques Lacan, Michel Foucault, and Jacques Derrida

> have argued that the autonomous subject of the humanist tradition, a subject capable of knowing both the world and itself, was a utopian dream of the European Enlightenment. This view of human subjectivity had to be abandoned in a period that recognized the existence of an unconscious mind, the opacity of language, and the role of discursive practices in the dissemination of social power.

Within this framework, it seems relevant to remember that the self was examined under a modern perspective as something unified and stable. This idea has its roots in the Rationalist philosophical movement, until reaching the predominance of developmental psychology in the conception of the modern notion of self (Barker, 1999). It has been particularly notorious under the influence of Piaget's theory, and his interpretation of

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the structure of human intelligence as a sequence of regular and universal stages until reaching the stage of formal operations.

This notion of the self, as social constructionists (Burr, 1995; Gergen, 1991) and critical educationalists (Kincheloe, 1993) have argued, has implicit the essentialist assumption of the pre-existing nature of self-identity. In contrast to this postulate, these authors argue that the identity of the self is socially constructed and changes over time, societies and groups. As Castells (1998: 29) says:

> all identities are constructed (…) The construction of identities used materials from History, Geography, Biology, productive and reproductive institutions, collective memory and personal fantasies, power structures and religious revelations. However, individuals, social groups and societies process all these materials and reorder them from their meanings, according to the social determinations and the cultural projects implemented in the social structure and the spatial/temporal frame.

In this context, the subject assumes different identities in different moments of her/his life because identities are not unified around a coherent, ordered and rational self. This approach to the subject, as Castells says, "raises up a series of contradictory identities, moving in different directions, and producing a "dislocation" effect in the subject's self-perception, and perplexity in his/her relations with others." From this perspective the unified, complete, secure and coherent modern notion of identity seems inadequate for understanding how different kinds of people, in diverse contexts, are building their identities. In our case, it affects adolescents in particular.

As consequence of this previous position, the 'subject' is considered as a social construction. "It is to say, that this collective definition are the outcome of social and discursive process" (Buckingham, 2000: 6). In this direction, different authors, from social constructionists like Gergen (1997), Burr (1996) and Walkerdine (1999) to sociologists like Giddens (1995) or Castells (2001), and critical educationalists like Giroux (1991), Luke (1999) or (Hernández, 2000, 2001), have all argued that the 'subject' is not a fixed, static entity, nor does he/she possess characteristics that can be identified objectively, nor can he/she be classified according to phases or stages. The 'subject' progressively constructs and assumes different identities throughout his/her life, which are the result of the relations he/she maintains with the world surrounding him/her.

In this process of self-construction, as Moore (1994: 4) has mentioned, identities are learned and interpreted 'intersubjectively', that is, through social interactions with people and cultural texts as a 'lived anatomy' taking place in an extensive and multiple personal geographical space made by different locations and positions. Moore (1994: 3) considers a 'lived anatomy' as the ways people learn their gender identities and ethnicities through their bodies in relationships with other people and cultural texts of representations (Pauly, 2003).

In a similar vein Butler (1990: 145) suggests that the rules that govern identity such as "gender hierarchy and compulsory heterosexuality, operate through repetition" of bodily gestures, clothing choices, social practices, and word choices that are enacted within certain times and spaces. In a parallel direction, Burr (1996) points out that the 'subject' positions himself/herself in different identities at different moments, which reflects that the subject is in constant "re-location". This means (as opposed to the classic theory of socialization based on the discourse of development according to stages or phases) that the subject's identity is mobile, "formed and transformed continuously in relation to the forms by which we are represented and summoned in

the cultural systems that surround us" (Hernández 2000b: 13). In other words "subjects are dynamic and multiple, always positioned in relation to particular discourses and practices and produced by these" (Henriques at al. 1984: 3).

However, if we continue thinking in terms of a unified vision of identity it is because our conceptual background and the narrative forms presented over previous historical periods are still strongly alive. This makes it possible to create, as Gergen (1991) suggests, a comfortable story about us, a comfortable narrative of the self. In contrast to this dominant trend (particularly in educational contexts and in developmental psychology research) Castells (1998) defines the notion of identity as a process of construction of meaning, paying attention to one cultural attribute or an interrelation of them and emphasising them among other sources of meaning.

ANALYSING IDENTITIES THROUGH VISUAL CULTURE STUDIES

The From our view, the visual universe can be considered as one of these cultural attributes, particularly because of its relevance and influence not only in the characterisation of our postmodern world, but in the construction of identity and self-representation of the individuals. As Tavin and Anderson (2003: 21) have noticed

> Knowledge of self and the world is often constructed, in part, through particular forms of popular visual culture, from animated films to television programs. These representations are ideological texts that provide pleasure, communicative information, influence consumption, and arbitrate power relations. These texts play a significant role in the symbolic and material milieu of contemporary society by shaping, and often limiting, perceptions of reality and constructing a normative 'vision' of the world.

From this consideration our aim is the development of a critical understanding of the visual universe of adolescents, and its mediation in the production of power relations, social functions and roles, and in the representation of identity. Under this approach it seems necessary to consider the following aspects as a framework for our study:

- The need to reassess the notion of adolescence, due to the evident difficulties of understanding it in global terms, as a period of life that is subject to biological changes and organized according to foreseeable stages. We consider that these difficulties are an overall expression of the visions that stem from our Western society's history and culture.
- As a result, we would like to see adolescents reassessed in terms of 'Diaspora identities' (Stuart Hall) as determined, for example, by the artefacts of visual culture. In this sense, a new approach would stress the importance of taking into account the relevant events occurring during adolescence.
- Special attention is given to the role visual universe plays in the construction of adolescents' representation of their identity process.

If we put in relation all these notions (adolescence, visual culture, visual universe, identities in transit) together it is because, as Pauly (2003: 264) has mentioned,

> Visual images emerged in the last century as one of the most pervasive forms of communication, their enormous social, historical, and cultural power as cultural texts is largely ignored in schools. Yet, visual images, and the experiences associated with seeing or being seen, saturate public and private spaces and influence how children, adolescents, and teachers learn, perform, or transform their identities, values, and behaviours.

Visual images contribute to what Habermas has called as 'lifeworld' that consists of a "culturally transmitted and linguistically organized stock of interpretive patterns". It is the result of three simultaneously occurring processes, namely, "cultural reproduction, social integration, and socialization". These processes produce the structural components of the lifeworld: culture, society, and person. These components are socially constructed concepts, acquired by learning (Efland, 2002: 121) and define how people (in general) and children and adolescents (in particular) construct their identity.

As Michael (1996: 11) says in his commentary on the seminal book by Shotter and Gergen (1989), Texts of Identity, there is a multitude of ways of analysing identity from a social constructionist social psychology. However, he establishes "two ends of an analytical spectrum" of these different methods, called "representational" and "interactive" formulations of identity. The first perspective is concerned with "the representations of the identity, how they are mediated (by certain institutions), and how they come to constitute individuals". That is to say in the praxis of the analysis explore "the historical (or genealogical) evolution (or, rather emergence) of these representations, and the means by which they are 'inscribed upon' bodies and thereby constitute persons of particular sorts" (12). The second approach is represented by the microsociological, ethnomethodological tendencies that focus their interest "on the situated reproduction of identity through local discursive interaction" (11).

Considering the difficulty of fixing a clear border between these two approaches, the discursive interaction "produces" and "uses" identity representations; and the representations of the identity are created in social contexts. Nevertheless, we use this conceptual distinction to specify that in our research, we reconstruct the identity of adolescents socially mediated through images taken from their visual universe. A visual universe that is not, once more, individual, but social, and projects gender attitudes, consumer values, and symbolic and real fears, social and cultural identifications on the subject who, because of his or her appropriation and construction of meaning, produces a fractal representation of his or her personal identity.

The decision to consider the role of the visual universe in the adolescents' identity in our research is not because I work partially in the field of Visual Arts Education. The main reason, as Mirzoeff (1999: 1-2) has mentioned, is because I believe, "Human experience is now more visual and visualised than ever before, from the satellite picture to medical images of the interior of the human body (…)".

However, our interest is not the superficial content of the adolescents' selected images, the number and the kinds of objects and situations represented in these images, in order to make a sociological study, for example, from a Cultural Consumer approach (Featherstone, 1991). Our intention is to explore the meanings of these visual universes, both considering adolescents' points of view and using some of the interpretative approaches developed by the Visual Cultural Studies (Walker and Chaplin, 1997; Mirzoeff, 1999).

To define a conceptual framework in which to place our research, we consider, with Walker and Chaplin, (1997: 1-2) the field of Visual Culture Studies as

> A hybrid, an inter or multidisciplinary enterprise formed as a consequence of a convergence of, or borrowings from, a variety of disciplines and methodologies. Visual Culture Studies tackle an object of study characterized by material artefacts (…) produced by human beings with aesthetic, symbolic, ritual, or political-ideological purposes. Or with practical purposes aimed at the sense of the gaze, or at an expanded meaning.

The representation of this field of research as a crossroads of disciplines and methodologies is a result of the nature of the visual events and the necessity of their interpretation. As Walker and Chaplin, (1997: 2-3) have commented

> "Visual culture can be roughly defined as those material artefacts, buildings and images, plus time-based media and performances, produced by human labour and imagination which serve aesthetic, symbolic, ritualistic, or ideological-political ends, and/or practical functions, and which address the sense of sight to a significant extent."

This is to say, with Mirzoeff, (1999: 3), that "Visual culture is concerned with visual events in which information, meaning, or pleasure is sought by the consumer in an interface with visual technology". In this perspective, image representations as part of visual culture

> participate within networks of culturally mediated processes and power relations while they appear as common sense or 'the way it is'. (…) The meanings of most images today are commonly learned in multi-modal 'televisual' environments in which interpretations are linked to dramatic stories and music. (Pauly 2003: 164).

On the other hand, for Duncum (2001: 106-107), the term visual culture suggests that our interest is directed

> to objects that are basically visual artefacts and to the social conditions in which those artefacts have been produced, distributed, and used. Images are considered in their contextual richness, as part of a social discourse that implies their influence in social life.

Among the possible approaches to study adolescents' visual culture, our research has followed "the hermeneutic of the vision" approach which "designates an analytic attitude towards the field experience in which visual experience is approached as a socio-historical realm of interpretative practices" (Heywood and Sandywell, 1999: xi). The emphasis of this hermeneutic turn is the study of visual experience (in our case taken from adolescents' visual universe) as a strategy for interpreting the contexts of meaningful human action, considered as socially significant social practices (socially organised, historically shaped, and politically informed achievements).

From this perspective Visual Culture is conceived as a study approach that aims at establishing connections between problems, places and times to understand (personal and cultural) representations of the visual world and themselves. In this approach the active role of interpreters (in our case adolescents) is fundamental because they are the result of concrete socio-cultural environments, with particular biographies, knowledge and representations of society and of themselves, that helps them (and us as adults) to create critical understanding of different constructions of reality, and of the elements of their visual universe (films, advertisements video-games…).

The aim of our work is to develop a critical understanding of the visual universe, particularly in its mediation capacity to produce power and social functions and identity representations. When we use the term 'critical' it implies, as Walker and Chaplin (1997:4) have noticed, "a process of evaluation and judgement. (…) The goal of critical understanding is reached in part by the application of various modes of analysis". Traditionally, the analysis of visual experiences in postmodern culture has been studied independently considering each different visual media. Faced with this reality, what is required is an interpretative approach to the postmodern globalisation of the visual as everyday life (Mirzoeff, 1999:3).

This approach makes it necessary for consumers to develop a disposition of critical understanding via "the study of concrete examples in specific historical and social

contexts". This means that "every artefact is the result of multiple determinant factors – economic, political, cultural, institutional, technological, human need, creative will or desire, etc.– consequently the amount of information that could be relevant to an explanation is enormous" (Walker and Chaplin, 1997: 4). In this context, visual culture, as Mirzoeff (1999: 3) describes it, is, "A tactic with which to study the genealogy, definition and functions of postmodern everyday life from the point of view of the consumer, rather than the producer": a consumer to whom the visual universe affects the scaffolding of his or her identity, particularly during adolescence.

As we have mentioned (Larraín and Hernández, 2003) we must not overlook the importance of the visual in our culture; our surroundings are increasingly visual, they claim the sense of sight more and more. This affects the way we perceive and get to know the world. Through the artefacts of visual culture we represent ourselves and others represent us; we are observed and are observers; we establish social relationships and we experience pleasure or discomfort. Even our pastimes are visual (going to the cinema, playing video-games, window-shopping, etc.).

EXPLORING CHANGES IN ADOLESCENTS' IDENTITIES THROUGH THEIR VISUAL UNIVERSE

From this hermeneutic approach we have collected and analysed both the series of images (as representative of their biographies) chosen by a group of 16 adolescents, and their comments and considerations of these representations of different aspects of their biographies, in order to find some answers to the following questions:

- What is the notion of the self, mediated by the images collected by adolescents from their visual universe?
- How are the current social and cultural values both presented and mediated by these images and how do they contribute to the creation of adolescents' identity?
- How could these meanings explain the gap between the school's values and the adolescents' culture meanings?

We have explored these questions initially organising 16 case studies, where we were able to understand how visual imaginary has a relevant influence on their construction of identity. This visual imaginary reflects their personal identification with some aspects of the postmodern reality, and because they mirror how contemporary forms of culturalisation are mediated by this visual universe. In particular the following characteristics are mentioned by Hargreaves (1996: 85):

- The expansion, increasingly globally, of information and knowledge sources.
- The increasing changes in the world and in our way of understanding it, particularly because of the reorganisation of time and space made by technologies.
- The increasing contact among individuals, beliefs and cultures because of emigrations and travelling facilities.
- The increasingly more powerful relation and interaction between research and social development, because of the speed of communication and the reorientation of and constant knowledge development.

Under this umbrella we try to analyse how contemporary forms of culturalisation mediated by adolescents' visual universes are projecting persuasion strategies linked to a global culture of consumption. As Laura Chapman (2001, in Efland 2002: 154) observed:

> The visual messages that target today's youth are designed by professionals who excel at what visual imagery does well, namely, direct attention, create desire, tap into emotions, all the while suppressing critical thinking. Artful techniques are used for profit and political power. She also noted that advertisers spend about $3,000 a year per child to win hearts and minds, which approximates what we spend per pupil on classroom instruction in the United States.

This is the reason to consider visual universe as a global supermarket where all kinds of products are persuasively presented through their visual appearances. This is a key notion in our research: this strategy of persuasion acts as form of Cultural Pedagogy (Steinberg and Kincheloe, 1997) or Advertisement Pedagogy (Sánchez-Ferlosio, 2002) transmitting signs of identity beyond objects and images. They try to produce effects on adolescents, creating global consumers' attitudes, fixing gender patterns and projecting fragmented and contradictory identities. This is the reason why Efland (2002: 154) has mentioned the relevance of paying:

> Attention to their impact and influence (on cultural pedagogy) should become part of contemporary education. One should learn to recognize how visual metaphors work and why they can be persuasive. At the same time, political pressures on the schools seem intent upon directing attention away from the visual aspects of the social environment.

In our study, the main focus of visual culture approach is the study of human visualisation (cultural practices of the gaze and vision experiences), in all its extension, and without any separation between scientific, artistic or daily manifestations.

METHODOLOGICAL APPROACH

Arriving at this point it seems relevant to ask: how could it be possible to establish a relationship between visual universe materials (considered as evidence), Cultural Pedagogy (as persuasive ideological strategy) and adolescents' identities? To answer this question we have interviewed 16 adolescents: 8 boys and 8 girls from different social classes; who are resident in rural, urban and metropolitan areas; who attend public and private schools and, with different spending power.

Each adolescent was informed about the relevance of his/her participation in the study and about the main objective of this research: to reconstruct his/her biography through relevant images of his/her life: images that represent objects, experiences and meaningful people for them. Their response to our invitation was fully collaborative and in each case these images representative of their biographies have been collected and commented on over two meetings. The first one took place in their rooms through an open conversation, surrounded by the images fixed on walls and the objects on the shelves. During the second encounter the transcription of the first conversation and the photographs of the objects and images were given to them. After reading it, they made some comments and suggestions and we propose to choose the three most meaningful images from the whole set.

The transcription of all the interviews (adolescents are frequently laconic in their initial comments) represented around 140 pages of evidence, and 600 different objects and images collected. In order to represent and communicate what we called above a

critical understanding of adolescents' images, this material was organised as an "ordered matrix" (Miles and Humberman, 1985) on two levels of analysis: (a) chronological cultural meaning and (b) personal identity interpretation. Later on, this information gave us the opportunity of writing a series of case studies and a comparative analysis of adolescents' visual experiences based on the main coincidences and differences among them related to the above-mentioned changes in contemporary society.

In the analysis of evidence (both images and content of the interviews) we run away from a simple account of objects and meanings. We have considered all this material as mediators of social representations and, at the same time, of identities and representations of the self. For the purpose of this paper some aspects and meanings related to changes (personal and social) taking placed in adolescents' identities have been considered, particularly these changes linked to social changes in contemporary societies.

The construction of identity based on adolescents' personal history of images is presented to us as a form of dialogism, in terms of a constitutive strategy to give meaning to their personal biographies, and, to some extent, to some representations of their identities. Images told us about boys and girls' sources of visual culture, and reflect how the visual culture surrounding them has a significant role in the construction of their identities. Through the interviews adolescents give a social and personal meaning to the images they have selected. As it was pointed out, in our research, some of these meanings have been rescued in order to analyse the visual culture implications in their construction of identity. On our way to understanding adolescents' positionality we try not to forget that most people consume and construct meanings about images and discourses using narrative forms to think about people like or unlike themselves. As Hall (1996: 16) suggests: "Identity is within discourse, within representation. Identity is a narrative of the self; it's the story we tell about the self in order to know who we are". Some examples of these narratives are presented in the following paragraphs in order to work out the role of visual universe in adolescents' representations of their self and the world around them; as representations of their 'lifeworlds'.

LEARNING GENDER ROLES (AND BEYOND) DURING THE INFANT YEARS

The infant years (3 to 6) of most of the group members were characterised by two main influences: those associated to gender and childhood values, from a local and international perspective. This manifest tension is noticed by Castells (1998) in his study on the contemporary identities representation in a world where local and global influences are acting permanently. On the one hand, television series, like the American "Sesame Street" and Japanese "Ninja Tortoises" and "Dragon Ball", act as mediators of a particular idea of stabilised notion of knowledge, hierarchical group collaboration as well as social order based on a permanent physical competition. On the other hand, from these early years, most of them remember marks of their gender identification process, coming from the Walt Disney universe: through cartoon films such as "The Beauty and the Beast" (mentioned by four girls) they initiate a process of gender identification from a perspective where the "goodness" of woman's social role is represented as rescuer of the "wickedness" of man, and a suffering and patient personality.

At this same period boys started to mention their games with model cars, which were associated by one of them with the desire for collection: "I collected all of them" and the passion of speed ("I love speed. I just used them in racing competitions") and toys like "Playmobil", "Action man" and "Madelman" (mentioned by four cases) linked with war games. These objects could be associated with some of the more valuable male qualities: individualism and capacity of decision.

It seems relevant to consider that during these early years, and especially between the ages of 7 and 10 the results of a global strategy of social values associated with the culture of a global consumer are emerging. At that age all the members of our sample begin to collect different kinds of objects reinforcing the importance of the consuming and buying of commercial products as a way of peer socialisation. Stickers, "gogos", "tazos" and "cromos" of "Dragon Ball", football players, and more recently Pokemon, Digimon, and The Simpsons are collections of products associated with commercial brands (Matutano crisps, McDonalds products, etc.) as well as forms of participation in games with peers.

"They (gogos and tazos) were important, because everybody played with them, and after school we met up with whoever owned them to play. The important thing in the game was to beat the others and to see how many more you had than the others", says Víctor who is now 14.

As for the girls, the dominant image of this period is associated with the Barbie doll (four girls mentioned it). This American (and now international) popular culture icon has received a lot of attention and criticisms from feminist studies (Peabody and Ebersole, 1993; Rakow and Rakow, 1999) to critical pedagogy because Barbie represents the mediation of current contradictory social values. Values that have been summarised by Mitchell and Reid-Walsh (1997: 114) in the following terms: "Barbie as a doll to be played with by little girls and occupying a "sexuated" space; Barbie as manifestation of impossible standard of beauty; Barbie as having it all—an impossible standard of beauty, occupying a sexuated space, and maintaining a full-time glamorous career; and finally, Barbie in a world of heightened consciousness regarding the environment, social justice, and social action, and yet occupying the space of heightened consumer and glamour" In our cases, Barbie appears as mediator, both of girl identity and consumer reference as Ruth remembers:

> I started with Barbie dolls when I was seven. I remember I had a wardrobe with a lot of clothes (…) I played changing their clothes, for going to a party, and to comb them. With so many cars, houses, and supermarkets, it was like having a town (…). I liked playing with Barbie dolls very much. I had all Barbie's products. I organised different Barbie families in a house, in a mall, in a shop, with the doctor and so on. Sometimes I played the role of one of the Barbie dolls, and left others at school (…). I was embarrassed that somebody could hear me (…) I had 20 Barbie dolls (…). I just played with them until I was 12, and I was always talking, talking too much, and embarrassed that somebody could hear me.

In both gender groups, consumption seems linked to forms of socialisation, and it is considered from our interpretation as a learning strategy, that when it is fixed, it will last all their lives as a permanent behaviour pattern. To illustrate this interpretation it seems meaningful to remember that, "children aged 14 and under spent an estimated $24 billion in direct purchases and influenced another $188 billion in family purchases in 1997" (McNeal, 1998, quoted by Macklin and Carlson, 1999: 4).

At this point it seems relevant to remember that, "childhood is lived in this intertextual net of consumer goods systems and visual symbolic signs"(Luke, 1999: 62). This means that a certain children's film produces sub-products that range from

picture-card albums, dolls and soft toys to household products, clothes, and food. Since they are very young, children live in an intertextuality produced by popular culture. From here, they build their own image of the social world, their values and themselves, based on these representations. In other words, the visual representations (such as films and cartoons, and all the artefacts derived from them and their interrelations) teach children what this social world is like and what it should be like.

THE APPEARANCE OF THE BODY AS SELF-IDENTIFICATION

Between the ages of 10 and 11, our group of adolescents shows us some of the most relevant changes in the construction of their identities. It is this period where male and female roles are starting to play a different meaning in their lives beyond childhood's meanings. Through teen music and the "Beverly Hills" television series, or playing sport or supporting football teams, girls and boys learn new approaches to gender socialisation. Now the experiences of gender exchanges seem more relevant than the individual female or male personification. Girls pay attention to male sexual symbols like Antonio Banderas, Brat Pitt or Marc Owen. The significant value boys give to sports and competition (five of them) show us some of explicit models from where they learn to experience emotions of admiration and fear.

From this period, the main attributes of their visual universe have made their appearance. Attributes that will be manifested during the following years, with new "faces" to represent male models (Luis Enrique -a Barcelona football player- and Leonardo di Caprio, as symbols of gender masculinity); to explore alternative female imagery (The Spice Girls as symbols of a rebel femininity); or new "places" of socialisation (pin badges, television series and shows, and horror movies). And, of course, the recognition of the companion role and social group identification played by popular music (from local and international groups, from 'techno' to flamenco) and its constant presence in their lives.

There are also additional identity representations mediated by their interest in international fashion commercial symbols ("Benetton", "Nike" and "Lacoste") as indicators of middle class social status and in association with being and looking cool and comfortable. And, of course, the appearance of computer games in boys' lives and the mobile phone (in boys and girls' preferences), both as a powerful symbol of adolescent self-recognition and vehicle of alternative forms of communications.

Passing fast through their chronological visual itinerary we are able to identify how adolescents have been constructing their identity. In our cases, the meanings of the images and objects selected by them seem to us to be something more than an illustration of their rite of passage, or sources of socialisation. Through their visual stories, adolescents from our study give us some personal meanings about why these images and objects have a significant value in building their gender identities as members of a social group. It basically occurs around their families (girls) and their peer group (boys). In this context, images are expression and mediators of adolescents' cultural experiences and represent their visual culture.

Nevertheless, their trajectories also illustrate how adolescents' identities are being influenced by international strategies of consumerism and marketing, and how these strategies are fixing middle class and gender values. Our stories also tell us how many adolescents are building their cultural identities by not following rigid and unique patterns, but combining different cultural traditions and experiences (from Japan to the

States or the closed environment, from international to local pop figures). In all this analysis images are more than symbols; they are fragments of identity in a process of creating flexible, open and multiple dimension contemporary identities. Identities that are represented by different values and symbols from those offered by schools (only in two cases did adolescents from our study make references to their school world, and in both cases associated with art lessons). It seems relevant to pay attention to this difference between school and consumer society because it creates a distance, a gap between these two universes, and between Cultural Pedagogy and School Pedagogy.

SOME NON-CONCLUSIONS TO DRAW A POSSIBLE ITINERARY INTO ADOLESCENTS' PERSONAL MAPS

The idea of including this chapter in this book on social geographies of change was to draw attention to both the itineraries of learners and to the variability of their socio-cultural biographies. On these lines it seems important not to forget that one of the new concerns in the study of educational change is the importance of people's personal trajectories in understanding their reactions and positionalities. When forces acting from cultural mediations (particularly those with audiovisual representations) are so active and influential on children and adolescents' subjectivities and identities; when the learners have been the silent voices of most of the studies on educational change and school improvement initiatives, situating the influence of visual culture on adolescents' biographies seems necessary in order to go beyond cognitive explanations on learning or social characterisation of school failure and disaffection.

The process I have attempted to represent in this chapter has substantive value in understanding adolescents' positions in the school environment. Most schools consider teenagers basically as learners, lazy and not interested in what teachers consider they should learn, not at subjects who are taking in the world in a different way to how the school is presenting it. On the other hand, adolescents are, more than anything, visual learners. Google is their first tool for collecting information. They think visually and present themselves as visualised subjects. This visual positionality takes its roots from images that circulate both globally and locally; in this context images that contribute to creating new geographies of the self and to constructing their subjectivity.

This assertion is connected to Butler's view on the constitution of subjectivity. She argues (Butler, 1990) that subjectivity is both constituted by discursive practices (in Foucault's terms) and empowered by them to act upon the processes that gave them shape. Butler signifies the instantiation of subjectivity by means of the concept of performance, considered as an art of repetition and as an act of personal agency. Into this performative frame subjectivity is thus a process whose script has been prescribed but whose enactment is necessarily varied. A good example of Butler's considerations is the discursive role that visual culture representations play on children and adolescents' subjectivity. Visual culture images and artefacts give young people a sense of identity and, at the same time, give them space for their own agency.

If teachers and educators do not pay attention to the ways adolescents are drawing their own personal maps, to find their place in this contradictory world, the gap between the school culture and teenagers' culture will increase. When adults start paying attention to children and adolescents' visual culture, we are restoring the broken bridges, "between the schooling that codifies children as students or those who

consider them as subjects, with a biography, desires, fears and doubts, that do not exclude but incorporate as a part of educational process" (Hernández, 1999: 5).

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ANDY HARGREAVES & SUE LASKY

THE PARENT GAP: THE EMOTIONAL GEOGRAPHIES OF TEACHER-PARENT RELATIONSHIPS[1]

This chapter explores the deep sources of the anxieties teachers can experience in their interactions with parents. Interview data from 53 elementary and teachers from Ontario, Canada are used to analyse teacher perceptions of their emotional relationships with parents. The theoretical framework for the study is grounded in two basic concepts: emotional understanding Denzin (1984), and emotional geographies. Our analysis draws on five dimensions of emotional distance and closeness –sociocultural, professional, moral, political, and physical- throughout the presentation of our empirical findings, then pulls them together in a more focussed way in the closing discussion. Our analysis begins by examining teachers' reports of positive emotion. It reviews the reported patterns of positive and negative emotion that teachers experience in their encounters with parents, and identifies then analyzes key differences between secondary and elementary teachers in these relations. Candidly acknowledging the source and extent of the difficulties many teachers experience in their relationships with parents is essential if we are to build successful parent-teacher partnerships that effectively address and allay the professional anxieties that otherwise undermine the best intentions of school-community reform efforts.

INTRODUCTION

When an angry parent confronts a teacher about the letter they sent home about a child's behaviour or lack of progress, conflict is difficult to avoid. When a child comes to school hungry, with little sleep, it is difficult for teachers not to judge parents. The rhetoric that teachers should treat parents as partners in their children's education is widespread (Epstein, 1995; Vincent, 1996b; Webb & Vulliamy, 1993; Sanders & Epstein, 1998), but while more than a few positive partnerships exist in practice, conflict, cold war and cool diplomacy are the more pervasive realities. In his masterly work on *The Sociology of Teaching* in 1932, Willard Waller was characteristically blunt about the matter:

> From the ideal point of view, parents and teachers have much in common in that both, supposedly, wish things to occur for the best interests of the child; but in fact, parents and teachers usually live in conditions of mutual distrust and enmity. Both wish the child well, but it is such a different kind of well that conflict must inevitably arise over it. The fact seems to be that parents and teachers are natural enemies, predestined each for the discomfiture of the other. (p. 68)

Establishing strong partnerships between teachers and parents is a more complex task than it may first appear. There are longstanding social and institutional beliefs and practices that have served to create separation between them. Throughout the last twenty years there have been several forces that have influenced the ways educators and parents perceive each other and interact with each other (Lasky, 1999). These include: policies that redefine parents' roles in the schooling of their children (Whitty, Power, Halpin, 1998; Crozier, 1998); academic research and it's ensuing literature that

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, 103—122.

inadvertently sustains deficit models of parents, and promotes primarily one-way communication between parents and teachers (Epstein, 1995); and the impact of cultural beliefs, socioeconomic status or immigrant status on parent engagement in schools (Bourdieu, 1977; Ogbu, 1993).

The more important connections between teachers and parents are moral and emotional. They are grounded in long-term relationships; strong, mutual understanding; and a shared commitment to and idea of what is best for the child (Henry, 1995; Hargreaves, 1998). Teacher-parent partnerships that include all parents (not just unrepresentative or market-driven minorities) and are rooted in strong, informal relationships and not merely formal decision-making procedures, are an integral part of many school reform and improvement programs, especially in urban areas (e.g. Slavin, 1996; Comer, 1988; Epstein, 1996; Beresford, 1996; Meier, 1998).

Notwithstanding the optimistic possibilities that such partnerships represent, many teachers remain profoundly anxious about their communications and relationships with parents (Hargreaves & Fullan, 1998). Relationships rarely move beyond mutual surveillance (Crozier, 1998) or patterned school-based interaction (Walker & MacLure, 1999). Increasing cultural diversity, differences in socio-economic status (Levin, 1994; Griffith & Smith, 1986) changes in family composition (Epstein, 1998), increased power of parents over teachers with school councils (Kozolanka, 1996) and parental choice of schools (Vincent, 1992) have all served to add to the distress parents and teachers often experience when they interact. This paper explores the deep sources of these anxieties by analyzing 53 teachers' perceptions of their emotional relationships with parents. Candidly acknowledging the source and extent of the difficulties many teachers experience in their relationships with parents is essential if we are to build successful parent-teacher partnerships that properly address and allay the professional anxieties that otherwise undermine the best intentions of school-community reform efforts.

THE STUDY

The data on which this paper is based are drawn from a study of the emotions of teaching and educational change which comprised interviews with 53 teachers in a range of elementary and secondary schools in the province of Ontario in Canada. The sample was distributed across 15 varied schools of different levels, sizes and serving different kinds of communities (i.e. urban, rural, suburban). In each school, we asked principals to identify a sample of up to four teachers that included the oldest and youngest teachers in the school, was gender mixed, contained teachers with different orientations to change, represented a range of subject specializations (within secondary schools), and (where possible) included at least one teacher from an ethnocultural minority.

The interviews lasted for 1 – 1 1/2 hours and concentrated on eliciting teachers' reports of their emotional relationships to their work, their professional development and educational change. A substantial part of the interview drew on methodological procedures used by Hochschild (1983) in her key text on the sociology of emotion, *The Managed Heart: The Commercialization of Human Feeling.* It asked teachers to describe particular episodes of positive and negative emotion with students, colleagues, administrators and parents. This paper is based on teachers' reports of such episodes in their emotional relationships with parents. While one-time interviews do have

limitations as ways of getting people to access and disclose deep emotions (and we are therefore now complementing our methodology with long-term discussion groups), they do surface new topics and themes in previously unexplored areas, and they enable us to identify patterns and variations in teacher emotion across different school contexts, and different kinds of teachers.

The interviews were analyzed inductively with the assistance of the computer program *Folio Views*. Data concerning teacher-parent relationships, were extracted electronically, then marked, coded and grouped into increasingly larger themes, ensuring that all identified pieces of data were accounted for and included in the framework. While length considerations prohibit including all data items in the text, the number of each teacher interviewee is displayed in brackets after each quote to indicate the range of data on which we have drawn.

CONCEPTUAL FRAMEWORK

The theoretical framework for the study is grounded in two basic concepts: *emotional understanding* and *emotional geographies*. According to the sociologist, Norman Denzin, emotional understanding

> is an intersubjective process requiring that one person enter into the field of experience of another and experience for herself the same or similar experiences experienced by another. The subjective interpretation of another's emotional experience from one's own standpoint is central to emotional understanding. Shared and shareable emotionality lie at the core of what it means to understand and meaningfully enter into the emotional experiences of another. (Denzin, 1984:137)

Teaching, learning and leading involve emotional understanding as people reach into the past store of their own emotional experience to interpret and unravel, instantaneously, at-a-glance, the emotional experiences and responses of others. One of the key ways in which emotional understanding develops is through long-standing, close relationships with others. Without such relationships, teachers (indeed anyone) will experience emotional misunderstanding where they "mistake their feelings for the feelings of the other" (Denzin, 1984: 134). In schools where such close relationships do not exist, where teachers do not know students well (Sizer, 1990), they will frequently misconstrue student exuberance for hostility, or parent respect for agreement, for example. Successful teaching appears to depend on strong emotional understanding, on establishing close bonds with students, and to a lesser extent, with colleagues and parents as well.

Emotional understanding or misunderstanding is created and organized by what we term_*emotional geographies* of schooling. We define the concept of *emotional geographies* as referring to the spatial and experiential patterns of closeness and/or distance in human interaction and relationships that help create, configure and colour the feelings and emotions we experience about ourselves, our world and each other. *Emotional geographies* help us identify the threats to the basic emotional bonds and understandings of schooling that are posed by excessive distance or closeness in people's interactions or relationships. Analysis of data from the emotions project points to several forms of emotional distance (and closeness) that can threaten emotional understanding between teachers, students and parents. These are sociocultural distance, professional distance, moral distance, political distance and physical distance.[2]

Our analysis draws on these five dimensions of emotional distance and closeness throughout the presentation of our empirical findings, then pulls them together in a more focussed way in the closing discussion. Our analysis begins by examining teachers' reports of positive emotion. It reviews the reported patterns of positive and negative emotion that teachers experience in their encounters with parents, and identifies and analyzes key differences between secondary and elementary teachers in these relations.

POSITIVE EMOTION

Appreciation and Gratitude

People like praise. They value receiving positive feedback on their achievements and their efforts. Yet, praise and positive feedback are sadly wanting in many people's working lives. Goleman (1995: 117) observes that "for many people, getting performance feedback can be frustratingly difficult because of the unquantifiable nature of their work". Yet superior performers, he notes, "intentionally seek out feedback: they want to hear how others perceive them, realizing that this is valuable information" (p. 67).

Teaching has been notoriously poor at providing teachers with positive feedback about the impact of their efforts. Lortie's (1975) classic study, *Schoolteacher*, identified how this created endemic uncertainties in teaching. The results of teachers' efforts, he argued, were difficult to quantify, could not be reduced to or captured easily by test scores, were often long term, and were not always clearly attributable to teachers' own actions compared to all the other in-school and out-of school influences on students' lives. Lortie's work found that while most teachers' classroom isolation protected them from evaluation and scrutiny, it also insulated them from the positive feedback and support that colleagues could offer. Faced with this uncertainty, Lortie's teachers looked for their psychic rewards in the classroom –especially in the spectacular successes they achieved with individual students, and in the tributes paid by "gratified graduates" who visited their teachers years later to acknowledge how they had affected their lives (Hargreaves, 1999).

If feedback from the young matters to teachers, praise (and criticism) from adults can matter even more. The parents of teachers' students are, in this respect, a potentially powerful source of the praise and recognition that teachers want as validation for their efforts, expertise and effectiveness. Not only do teachers find parents' appreciation emotionally fulfilling in its own right, that appreciation also reaffirms teachers' purposes for them. It supplies teachers with evidence that they are on the right track, that their purposes are being achieved, and that notwithstanding all other uncertainty, they deserve at least some credit for their achievement.

> I am not looking for a pat on the back for the things that I do but just to have what you do recognized by a parent… what it does for their kids is really important to me, because that is why I do it. (2)

> The more comments that I hear back, then I know I am still after 25 years, on the right track and still somehow getting to the students and still relating to the students in a very positive way (1)

> Her mother… wanted to tell me that her daughter likes me…. I know that I can't take all the credit but it's still nice to know that…. I guess when a student does well, a lot of it is the student — you know, they do their homework, they're responsible, they understand the material. As a teacher I think that I also take pride. Maybe some of it is my influence (27)

Teachers value displays of appreciation, recognition, and gratitude from parents very highly indeed. Direct or indirect expressions of appreciation and gratitude occurred in all but eight of the 40 episodes of positive emotion with parents that teachers reported. This analysis indicates that parents made three kinds of comments here. First, they complimented teachers on how much their children were enjoying or benefiting from the teacher's classes in general. They remarked, for example, on how their child "actually said that chemistry was really fun and that she really enjoyed coming to the class on a daily basis" (1), Or, "any number of people come up on parent's night to say how much their kids really enjoy my course." (30) They might say that their daughter was looking forward to having the teacher for another year (13), or write notes "to the principal explaining how happy her son was to be in my geography class." (43)

Second, some teachers commented more concretely on how parents praised the quality of their program and on how well they had helped their children's learning. A family studies teacher reflected

> I always look forward to Parents' Night…. It's your thoughts, your program, because there is so much that the students learn to do over the course that changes them and they change at home. It's nice for me to hear what's going on in the classroom is being transferred over into the home. (21)

An elementary teacher related how

> This morning I was totally spoiled with parents who were saying that I taught their kids a lot. In the fall, they were kind of stressed out. There was this new teacher (her) coming in and they were upset. And they let the principal know…. And we were cleaning Lego today… and they said to me, "we weren't going to tell you but we were really stressed out when we heard you were coming in the Fall, but it couldn't have turned out better". And I felt really good about that. (44)

A third way in which parents showed their appreciation to teachers was in relation to special efforts they made for their own children in particular — when teachers helped with a special difficulty, went the extra mile for them, or turned them around in some way. They included writing supportive references for students (6), being especially considerate to a student who needed to make up work after being absent with a broken leg (16), helping a child who had moved from the private system to build his self confidence (11), and successfully conducting "a difficult interview" with parents of a child with a serious learning disability whose brothers and sisters were "gifted" (7).

Many writers have observed that there is a widespread equality ethic in teaching which makes teachers reluctant to acknowledge openly that any teacher is better (or worse) than anyone else (Campbell, 1996). Yet, teachers in our study took pleasure from parents singling them out as being special, different from or even better than their colleagues. Four teachers regarded one indicator of positive feedback being parents' requests for children to be in their class. Five others referred to parents who had testified to their expertise or dedication in public or to their administrative superiors. These included a mother in the parent council who "told the council that every student should be in my class at some point because I was so enthusiastic and positive" (2); parents who wrote to the principal and donated money to the school library in

appreciation of the teacher's commitment to working with and programming for their "very bright" child, who also had behaviour problems (32); and a mother who "wrote a note to the principal explaining how happy her son was to be in my geography class" and that, as a new teacher, the school was very fortunate to have a teacher with "youth, exuberance and enthusiasm" (43). While teachers may be reluctant to parade their achievements in front of colleagues, parents can do this for them by proxy –bringing the excellence of exceptional individuals to the attention of the community as a whole.

Positive feedback from parents helped confirm that teachers were taking the correct approach to students. It reduced uncertainty. Such feedback also validated the moral purposes that guided teachers' actions, it acknowledged teachers' dedication and efforts, and as four teachers reported, it could even spur them on to greater dedication and achievement. Being appreciated, they said, is "energizing –it makes you want to go out and try new things. It opens up creativity and make you want to risk" (12); it "picks you up –makes you feel good. It erodes some of the stress that has come along with all the other changes that have happened in education" (5); "you're encouraged to try harder and do more in your program" (29).

Yet a number of teachers felt that much as they welcomed positive feedback from parents, it was all too rare. Teachers, they said, do not hear enough positive comments from parents (1); parents do not see them often enough (3). It was "too easy to shut your door" in teaching (2), and as Lortie pointed out, this made teachers have to fall back on the uncertainty of long-term student feedback instead

> I don't think that we get a lot of instant feedback in our job. It's not like… hitting a tennis shot and it going over the net and you go, "yes it's in"…. Our job is a very long term thing, like that kid coming back and talking to me five years later. (36)

Positive parental feedback is embedded in a scarce emotional economy of parent-teacher relations. Ongoing feedback from parents seemed all too rare for many teachers, especially at the secondary level. Yet only one teacher reported making planned efforts to solicit more feedback. She sent a questionnaire to parents asking them to comment on her course, how their child was responding to it, and what suggestions they might offer for improvement. She reflected

> I got some really amazing letters back saying what they felt I had done or worked on with their child and how I had improved whatever it happened to be.... they felt that their child was happy at school, they had a thirst for learning and an enthusiasm that I seemed to have instilled in them… (3)

If positive parental feedback can be so rewarding for teachers, why don't teachers seek it out and solicit it more vigorously instead of waiting for it to come to them? Although time and overload are real obstacles, especially in secondary schools where there are many parents to contact, not all strategies for increasing feedback require additional time-consuming meetings or telephone calls. Our data suggest, rather, that the chief impediment to improved feedback from parents lies in the particular kinds of feedback that teachers most (or least) want.

Agreement and Support

After relationships characterized by appreciation and gratitude, the second strongest theme in teachers' accounts of positive emotional relationships with parents, was where teachers experienced agreement, backing and support from them. Teachers were

pleased when parents supported what teachers did with the parents' own children, especially when these children were difficult, posed discipline problems or had exceptional learning needs. In other words, teachers particularly valued agreement and support when conflict and dissonance about how to deal with children having difficulties might easily have prevailed. Teachers were therefore especially glad when parents deferred to their judgement and expertise –when they were prepared to say that "I trust this school implicitly" (25), or when they communicated their concerns in tones of clear respect (28).

Sometimes, support was practical as well as more broadly emotional. Teachers appreciated practical assistance from parents –such as the parent who 'backed up' the teachers "all the way" during a Spaghetti dinner at the school and "did anything that was asked" (51); or the parent who accompanied the teacher's class on school trips, turned up at meetings, and "supported everything we do" (10). One teacher was also thankful for the parent representative on school council who advocated for the teacher's theatre project to be approved (2).

Vincent & Tomlinson (1997) show that most teachers want parents to work with the school as *supporters* or *learners*. They enlist parental support in terms of raising funds, organizing special lunches, preparing materials, mixing paints, hearing children read and so on. This approach to partnership leaves existing versions of the teacher's professional authority intact. What teachers do not seem to want, says Vincent, are partnerships where they learn as much from parents as parents do from them; where communication, learning and power run in two directions. In our own data, teachers experienced positive emotion when parents thanked them, supported them or agreed with them. On no occasion did teachers cite a source of positive emotion as being when they actually learned something from parents.

Summary

In summary, teachers experience positive emotion when they receive gratitude and appreciation from parents or find agreement and support from them. In line with the literature on the emotions of happiness (Oatley, 1991), they are patterns which validate or help teachers' fulfil their purposes. There appears to be a moral closeness or agreement in the emotional geography of positively perceived teacher-parent relations. But a second possible source of positive emotion to which Oatley also refers –engaging in rich relationships with others- was largely missing in the accounts the teachers provided. Close relationships involve more give-and-take around purposes, more reciprocal learning among the people involved. Our data suggest that teachers may find this difficult. Yet, by not seeking out and actively cultivating closer relations with parents, teachers deny themselves the very positive feedback from other adults that they most crave. The deeper reasons for many teachers' damaging reluctance to build such relations with parents become clear when we look at the data on teachers' negative emotional relationships with parents.

NEGATIVE EMOTION

According to our data, negative emotion in teachers' relations with parents largely arises when teachers' purposes are questioned or thwarted, when their efforts are unappreciated, when their status is challenged or denied, or when relationships with

parents are disturbed because parents' treatment of their children appears to teachers to be morally incorrigible or incomprehensible. Analyzing these patterns of negative emotion will help explain further the irony of why, when teachers really value positive feedback from parents, they often seem to do so little to cultivate it.

Questioning status and purposes

Teachers do not like to have their expertise and judgement questioned. They respond adversely to parents who appear ungrateful or complain about their efforts. They do not like to be unappreciated or undermined. The most frequent indications of negative emotion in teachers' relations with parents fell into this terrain of ingratitude and unwanted questioning and criticism (21 episodes in total). Out of 18 instances where teachers reported experiencing emotions of anger and frustration in their relationships with parents, 14 (or 78%) involved occasions where teachers felt their expertise or judgement had been questioned or where parents provided no back-up for (or actively undermined) their purposes.

When teachers complained about parents questioning and criticizing them, this usually involved issues of academic learning, teaching approach and curriculum content (11 out of 16 cases). Questioning things of this sort (rather than behavioural issues) strikes at the core of teachers' work, at the foundations of their purposes and their claims to professional status and judgement. Teachers complained about moments when

- a parent challenged the judgement of a teacher who made a student who had failed to complete homework, finish it aside from the main class (with other non-completers) and thereby miss what the parent regarded to be vital class instruction as a result (6)
- a parent complained that their child had missed making an assessed class presentation because of a minor operation and had not been allowed to present later (and thereby attain a significant mark) because the teacher said she should have been notified in advance. This teacher was especially angry that the parent believed the student's counter-claim that notification had indeed been given (18)
- a parent who did not understand current teaching approaches and why their child may not be achieving, demanded to see curriculum documents and insisted that the teacher should be teaching differently (47)
- a parent volunteer in elementary school who was seen as ambitious for her child, went behind the teacher's back to solicit additional, more difficult work from the teacher of the next grade. "She went to the next grade up hoping that if he knew all of this material then the next year he would just breeze through it. She has sort of lost the purpose of having a program that is current" (4)

Across all these cases, teachers were questioned about their competence, expertise, program decisions and assessment practices –at heart, their very purposes. Teachers were angry, outraged and upset when their judgement, expertise and basic professionalism were criticized by parents. They did not like it when parents challenged their judgement directly, bypassed them to consult other teachers, or believed their children's versions of events before the teachers' own. Reflecting on the significance of the episodes that they described, teacher after teacher was irate or incredulous about

parents' failure to understand teachers' practices. A secondary teacher who had previously worked in industry portrayed the inviolable and almost sacrosanct nature of his expertise in the following way.

> Parents think that they're the experts in education and it amazes me. I sent a note home saying that (the father) wasn't qualified (to criticize the teacher's assessment practices) and this got him a little annoyed. And we had conversations. And I said, "what would you think if I presumed to walk into your office and tell you how to do your job after you've been there for however long you've been at your job. And yet you think you can comment on my job? You're not even qualified. Good, you're concerned about your kid. But don't think you're going to intimidate me into giving him more marks, because you're not…. (Parents) have such naive expectations. And yet they have no problems commenting on what's going on in the classroom. And I think that's a sad reflection on the public's perception of teaching and what's going on in teaching. They don't trust teachers. They think that we're lazy and that we're largely responsible for a lot of the problems with their kids, and they're wrong. (45)

When teachers reported their expertise being questioned, they rarely seemed to entertain doubts about whether their own judgements might have been flawed or incorrect. They made remarks such as, "I am the one with the education. I'm the one with the expertise" (5), "I was so sure that I was not wrong" (26), "they still felt that they were right and I still felt I was right" (6) and "the only thing that has really changed has been my attitude towards her (the mother)" (4). In only three cases of disputes about teaching, learning or curriculum, did teachers blame themselves, express sorrow for the parent or acknowledge that parents may have had a point. Where teachers did accept responsibility for wrongdoing and apologized to parents was on matters of professional misjudgement or impropriety in dealing with their children such as calling them a name (14), or using an unwanted nickname on a report card (17).

In his analysis of the social psychology of human emotion, Oatley (1991) argues that negative emotion is often precipitated when we are unable to achieve or are prevented from achieving our purposes. When parents set seemingly unreasonable expectations for what the teacher should demand of their late-adolescent children; when they have different ideas from the teacher's about the instructional purposes of computers; when they challenge the teacher about homework or assessment practices or openly doubt the validity of split grades –then teachers' core purposes and the sense of achievement that comes from fulfilling them are threatened or undermined.

These differences of purpose between teachers and parents provoke and exacerbate negative emotion among teachers (and presumably parents too), when parents feel they have legitimate claims to knowledge about what teaching entails –claims that sometimes run counter to the teacher's. This raises a second issue concerning parental challenges to teacher expertise –that of how transparent teachers' practice seems to parents.

A fundamental and double-edged problem underlying teacher-parent relationships is that to parents, teaching and learning can seem either undemandingly ordinary or unnecessarily abstruse. Having spent 13,000 to 15,000 hours of their earlier lives in classrooms (Rutter, Manghan, Mortimore, Ouston & Smith, 1979), most parents do not see teaching as needing to be particularly extraordinary. Teaching seems to be something that most people, with effort and attention might reasonably able to do (e.g. Labaree, 1999). Anyone, it seems, can be an expert on teaching –much to the chagrin of the teacher respondents we cited earlier. When the expertise and language of teaching seem elevated too far above this apparent ordinariness (as parents recall it) of the work, its resulting abstruseness in school reports or teachers' talk can expose teachers to

criticism (Nespor, 1997). As one teacher in a culturally diverse elementary school reflected

> We do a lot to communicate regularly and to help parents understand what's going on in the schools, but with the change in the curriculum and teaching methods and the cultural diversity, most parents really don't understand current teaching philosophies, and they don't understand how their kids are being taught. And we do a lot to try to educate them and get past that, but it makes for difficult times sometimes when their child isn't performing (47)

Parents' and teachers' purposes may therefore be discrepant, setting a moral distance between them. When parents feel, from their own schooldays, that they know what teaching entails, teachers and their expertise can be regarded as fair game for criticism and attack. In return, teachers regard such parents as ungrateful and "naive". At a time of increased educational accountability when many parents are more aware of and attentive to their educational rights and in an uncertain world where many parents are prone to status panic (Mills, 1951) about their family's loss of position in society, then the potential for emotional conflict between parents and teachers, and for threats to teachers' expertise and sense of professionalism are great indeed. Building stronger partnerships between teachers and parents must therefore address the issues of how to bring together or work through their different purposes, and how to align parents' images of teaching more closely with the realities of teaching and learning today.

Insufficient Support

Teachers, we have seen, become angry and frustrated when parents intrude on their academic and pedagogical expertise, questioning their professional judgement. By implication, what many teachers most prefer is a silent partnership between home and school on academic matters, where parents maintain a discrete, respectful distance, encouraging their children academically at home, but leaving all judgements about learning in school to the teacher (Hargreaves, 1999; Biggs, 1996; Shimahara & Sakai, 1995). With student behaviour and attendance, however, teachers must sometimes rely on more active parental support to achieve their goals.

Not surprisingly, therefore, parents' failure to support or 'back up' teachers in relation to their children's attendance or behaviour problems was a second source of negative emotion for them. Out of seven citations of such emotional episodes, six concerned behavioural or attendance matters and all but one involved secondary rather than elementary teachers (the remaining example occurring at the middle school level). Teachers of younger children (who have closer, more extensive relations with students) did not complain about lack of support for dealing with attendance and behaviour.

Episodes prompting negative emotion in this area included phoning home to report extensive absences only to discover that the parents "don't say anything" (8); parents lying for their children by writing that their absence was due to sickness when the teacher could actually see the student smoking in the school parking lot (15); suspending a boy for three days for poor attendance (!) then discovering that when he did not return on the fourth day, this was because his father had taken him to buy a new truck (20); and phoning a father about his daughter's excessive talking in class to get the response that "you just have to earn her respect" (27). This last teacher might easily have spoken for the rest when she said, "I guess what surprised me was that I was calling for support and he was telling me, 'I have a hard time dealing with her also!

Basically 'deal with it yourself!"'. And as the teacher who had to deal with the swearing child summarized the problem, "when you call home on a discipline issue, they just don't get it. They don't support you in any way, shape or form… it's like, there's no back up!" (51)

In the face of this missing support, teachers felt exasperated and powerless. If parents refused to cooperate, teachers felt they could not coerce them legally into doing so -"the law ties our hands on it. If the parent allows the kid to stay home, there's nothing I can do about that" (8). Or they might be afraid of parents -"I don't have the nerve to… confront the parents about lying" (15). Or they would feel powerless to combat the extensive socialization effects of the home

> I thought I had their support in how to deal with this situation. When he is getting these sorts of rewards at home for negative behaviour there is very little that I can do here…. I felt a sense of hopelessness in working with this child to help him solve some of his problems (20)

Overall, these data on insufficient support and back-up for teachers raise three issues of wider importance for understanding teachers' emotional relations with parents. First, the findings are the mirror image of the agreement and support from parents that teachers said were a source of positive emotion for them, and they also confirm Vincent & Tomlinson's (1997) findings that distanced respect and active support are the two kinds of relationships with parents that teachers prefer most. In the emotional geography of schooling, teachers prefer to be politically superior to parents, securing their active support, rather than parents having power over them. Second, complaints about poor support on attendance and behavioural matters occur almost exclusively at the secondary level where, our data elsewhere show, teachers' relations with their students appear more fragmented and less emotionally intense than in elementary school (Hargreaves, 1999). Third, almost all these negatively experienced interactions with parents took place indirectly, at a distance, on the telephone or in writing –raising questions about the adequacy of these physically distanced means of communication for building the face-to-face relationships and emotional understanding necessary to work through difficult and potentially threatening issues that could cast serious doubts on parents' competence.

This last issue is especially significant where parenting practices diverge sharply from teachers' expectations –where what parents do seems incomprehensible or incorrigible to teachers. This difficulty is at the centre of a third frequently cited source of negative emotion among teachers –where teachers find it hard to empathize with or are even directly offended by parents' attitudes to their own children or by these parents' demeanour in general.

Unknowable or Unlikable 'Others'

Seventeen of the reported incidents of negative emotion in teachers' relations with parents included perceptions by teachers that parents were not properly carrying out their responsibilities towards their children, were 'giving-up' on or not caring for their children, or were generally behaving towards their child (and the teacher) in ways that appeared to be "crazy", "strange" or "nuts".

Teachers' characterizations of parents and their interactions with them here fell into three broad, occasionally overlapping categories. First, were a group of eight cases (all but two at the secondary level) where parents seemed unable or unwilling to fulfil their

proper responsibilities towards their children, and in doing so, made the teacher's job more difficult. Many of these also amounted to cases of poor support or back-up discussed earlier. These episodes involved parents who allowed their child to stay home for extensive and unwarranted absences (8); lied to cover up the child's absences (15); allowed their daughter to drive irresponsibly at home even though they complained about the after their daughter was in an accident while driving for a school fieldtrip (21); admitted having no power to prevent their 14 year old from drinking and smoking (27); refused to give their son responsibility and completed his homework projects for him (22); and purchased their child a tutor instead of helping her themselves (even though "it's not like they're busy –she's their only child" (7)). These accounts insinuated that parents did not only make the teacher's job difficult, but that their moral conduct and standards as parents and adults were wanting. When parents condoned swearing, lied in the letters they wrote, or failed to prevent under-age smoking and drinking –this occasioned teachers' disapproval of the parent, as well as frustration about the lack of support for their own work with students.

In a second set of cases, teachers went further and criticized some parents' unwillingness or ability to care for their children properly. Because care is at the heart of many teachers' work (Noddings, 1992; Nias, 1989; Acker, 1999; Hargreaves, 1994) teachers see parents' failure to care for their children as not just as a matter of faulty conduct, as an inability to carry out their responsibilities, but as a failure of moral character that disturbs, dismays and even disgusts them. Parents' apparent failure to care for their children provokes negative emotion in teachers not just by obstructing teachers' purposes but also by threatening their relationships with students and by placing children's selves, emotional well-being and basic security in jeopardy.

> When I do feel disappointment, it's because I love their child. I care about their child and I give the assistance, help trying to make them love their child as well…. This little girl, she's really weighing heavily on my mind where her parents feel very strongly (that the best way to solve her problem is) this removal of their love…So that has been a source of disappointment for me because this child, I feel frightened for her (25)

> I find the most frustrating experience when you phone home and you can tell by the tone of the parent that they don't care. They too have given up. If the parent has given up on their own child, it's going to be very difficult for a teacher to get across to a student as well… we deal with that on a daily basis (43)

> One of the parents… is in the middle of a nervous breakdown, I'm sure… I taught… the youngest daughter, who she wants to possibly give away…. I've been so positive and so supportive of this family over the years and all she does is complain about the school… I dread talking to this woman because she's such a downer (10)

> One … I worry about him, I guess. I see him in four or five years down the road running away or decking her… (I feel) disgust towards his mother (13)

> The child was just a joy… lovely girl. She was the oldest of five kids. She was in grade four. She was given so many responsibilities at home that she seldom had a chance to do her homework. And I keep on at mom -"she's got to get her homework done, she's in grade 4, she's going to get more and more"…. Don't you understand that?" "I'm a working mom. When I was her age I had to look after the kids." … Anyway at the very end of the year, the mom took me to the office… and she said, "Jenny's never had such a bad teacher…. You say that she's below level in language and that's a lie. I know she can do it –she's just lazy"…. I couldn't understand where this mom was coming from… (I felt) just so incredulous…. I understand that she must be busy –five kids, she's busy… and yet the

> child… has to have an education. And why isn't the mom understanding this?…I was hurt because the mom didn't realize all that I was doing; but angry and upset at the fact that the mom didn't realize what a gem she had in this child" (32)

These perceptions of parents' lack of care for their children provoked incredulity, hopelessness and even disgust among teachers. There was a difference, an otherness about these parents that teachers found hard to understand or penetrate. Notwithstanding all the pressures and demands that some parents demonstrably had to endure, how could they fail to love their children, not care for them properly, or be unprepared to support their education? Teachers were at a loss to know where these parents were coming from. The sociocultural distance between them seemed just too great.

In a third, overlapping set of instances, the 'otherness' of parents and their attitudes toward their own children, is more than mystifying to teachers. It is viewed as a source of danger and personal threat. Six of these seven cases were reported by elementary teachers whose characteristically more frequent and intense interactions with difficult or argumentative parents were experienced as more imminently disturbing to them. Here parents were not just socioculturally distanced from the teacher, but also physically too close! Teachers' comments communicated a sense of intrusion into, even pollution of their world that the 'otherness' of some parents threatened. In all these cases, teachers made negative judgements and psychologized about 'problem' parents and families, viewed the differences as deficiencies, and stigmatized parents as "mad" or "crazy" – thereby undermining the rationality and legitimacy of their opposition and criticism. Negative attributions to parents and families by teachers included:

- a parent who reported a teacher to the principal because of her "terrible" approach to teaching spelling –a parent whom the teacher described as "kind of crazy, anyway" and "a screamer" (26)
- a Caribbean father from a "split family –father doesn't talk to mother, mother doesn't talk to father" who, when offered a separate interview, "started to ask me ridiculous questions and grill me over the phone about things that were completely unreasonable and wouldn't take no for an answer … and it was just crazy. They're just venting on you. And that happens fairly frequently unfortunately" (47)
- a teacher who described how "what we find with kids who have severe behavioural problems is that very often you'll see these kids come out of single-parent households and sometimes you'll find that the relationship between the child and let's say, the mother, is an extraordinarily close one, to the point where the child has… almost kind of a special role and… the mother inadvertently makes a career of advocating for the child", of her child's "dysfunction" giving "her an opportunity to organize her life around that"…. "This particular child is very bonded to his mother, and it's a black family" (in this instance, the mother had felt that this teacher's refusal to grant hall passes to her son was "a racist issue") (28)

In these cases, parents were not only different, they were irrationally and incomprehensibly dangerous. They were "screamers" who "blurted" into the teacher's face, or "grilled" them about their judgements. One teacher put it quite succinctly, "I don't mean this in a derogatory way, but I think she is nuts!" (13). In today's rapidly changing postmodern world, more and more children belong to cultures that are different from and unfamiliar to those of their teachers. Coming predominantly from

lower middle and upper working class backgrounds (Lindblad & Prieto, 1992), in a profession of limited ethnocultural diversity, teachers are socioculturally distanced from many of their students' families. They often find themselves teaching "other people's children" (Delpit, 1988). Students' families are also changing in their structure and form (Elkind, 1997), and now increasingly comprise single-parent families, blended families, families with parents who spend much of their lives apart, families without parents at all and busy families entrapped in what Hochschild (1997) calls the "time bind" where the demands of work place emotional pressures on commitments at home.

What all this means for many teachers whose mean age is well into the 40s in most Western countries (OECD, 1997) is that their students today are, in Bigum and Green's (1993) words, "aliens in the classroom". Likewise, to teachers, these students' parents are "aliens in the community". All too often, teachers look at students and parents with growing incomprehension. They are physically, socially and culturally removed from the communities in which they teach and do not know where parents and students are coming from.

The changes in parents and communities that teachers see are not in their imaginations, but many educators see them as largely changes for the worse. As our data confirm, they tend to have assumptions and expectations about parental interest and support that are socioculturally biased –misconstruing problems of poverty as problems of single-motherhood (Levin & Riffel, 1997), regarding failure to attend meetings or other officially organized events as parents' failure to support their children or the school (Central Advisory Council for Education, 1967; Burgess et al, 1991), and measuring all parenting or "sensitive mothering" of young children against a yardstick of practice that is culturally skewed towards middle class norms (Vincent & Warren, 1998). In too many cases, teachers see only obstacles in the changing lives and cultures of their students, families and communities, rarely opportunities (Earl, Bascia, Hargreaves & Jacka, 1999).

None of this is meant to deny the reality that some parents, as a cross-section of society are indeed violent, abusive, drunk, criminal, self-absorbed or inclined to blame others for their own failings. Many parents are far from perfect. But without stronger efforts to bridge the sociocultural gap between teachers and many parents, and create better emotional understanding between them, then parental deficiencies are likely to be exaggerated in teachers' eyes, deficiencies will sometimes be imputed inaccurately and unfairly, and teachers will have less access to the knowledge and emotional understanding that would help them deal more effectively with the conflicts that their most troublesome and hostile parents can provoke.

Summary

The patterns of negative emotion in our data are firstly, ones in which teachers' academic purposes and expertise are challenged or questioned by parents –threatening the autonomy of their professional judgement on teaching and learning issues, and their ability to achieve their purposes by expressing that judgement without interference. This seems to be the chief reason why teachers paradoxically avoid soliciting the feedback from parents that might supply the praise they otherwise crave. More interaction and feedback might mean more challenges to their expertise and professionalism –a risk that many teachers are unprepared to take. Second, on behavioural matters, teachers want more than silent, distanced respect from parents.

They need to solicit parents' active support to get their children to comply with school attendance policies and meet approved behavioural standards. Negative emotion occurred when such support was missing –when parents were seen as failing to meet their responsibilities. A third source of negative emotion intensified the problems highlighted by the other two. Oatley (1991) argues that in addition to unfulfilled purposes, negative emotion arises when people have weak or poor relationships. The sociocultural distance between some teachers and parents in our study made relationship-building difficult, interfered with teachers' and parents' ability to empathize with each other's purposes and work more closely together, and undermined the emotional understanding on which successful partnerships depend. One further factor exacerbates these differences and difficulties even further –the professional and physical distance that often exists between teachers and parents. We examine this next as we turn to variations between elementary and secondary teachers in their reported patterns of emotional relationship with parents.

ELEMENTARY AND SECONDARY EMOTIONS

While many of the core activities of teaching and learning require close emotional understanding between teachers, parents and students, the "classical" idea of professionalism has been modelled on the traditionally male preserves of medicine and law which require professionals to avoid emotional entanglements with their clients' problems and maintain professional distance from them (Grumet, 1988). The dilemma for teachers is that while they are supposed to care for their students, they are expected to do so in a somewhat clinical and detached way –to mask their emotions with parents and control them when they are around students. Our data on teachers' emotional relationships with students that we report elsewhere, suggest that secondary school classrooms are experienced by teachers as less emotionally intense (both positively and negatively) than elementary ones (Hargreaves, 1999). Our evidence here shows that these differences are reproduced in teachers' relations with parents.

In secondary schools, reported communications with parents were overwhelmingly episodic and infrequent, and either took place in staged meetings or through non face-to-face mechanisms of written notes and telephone calls. Twelve out of the 21 incidents of positive emotion reported by teachers took place at parents' nights when they received praise and thanks for their efforts. This pattern was more likely to occur among older secondary teachers (over 40). In England, Walker and MacLure's (1999) study of secondary school parents' nights shows that teachers tend to set the agenda, dominate the talk and show little responsiveness to parents' knowledge about their own children. Only two citations of positive emotion among elementary teachers in our study referred to parents' nights –both of these involving teachers of older, middle-school age children. Of the remaining nine incidents of positive emotion cited by secondary teachers, four took place through the indirect means of the telephone or written communication (compared to one at the elementary level). Only one positive communication cited by secondary teachers took place in an informal setting –this involving a teacher in our only rural secondary school site who described positive encounters with a parent in the community. In elementary schools, by contrast, 7 instances of positive emotion out of 14 (the largest category) involved informal discussions with parents and parent volunteers in and around the school.

Similar patterns occurred in teachers' reports of negative emotional incidents with parents. Among secondary teachers, the vast majority of reported negative emotional episodes took place on the telephone (11 out of 16 cases). These largely concerned problems of attendance and behaviour. Three more took place in writing, and just one occurred on parent's night (whose stage-managed nature helps insulate teachers against the possibility of negative emotional outbursts). Only one reported episode of negative emotion at the secondary level occurred in a more informal setting. Conversely, elementary teachers reported that negative emotional episodes were more spread out – with four instances occurring informally with parent volunteers, two taking place when parents came into the school, three happening on the telephone and one being in writing.

There are other indicators of greater emotional distance and formality at the secondary level between teachers and parents. First, the only category where teachers' reported interactions with fathers outnumbered those with mothers (by 6-3), occurred in the case of *negative* emotional incidents at the secondary level. Reported instances of *positive* emotion at the secondary level, however, involved mothers far more than fathers (12-3), as did all emotional incidents (positive and negative) at the elementary level (13-1). Second, all teacher complaints that parents believed their children before them took place among secondary or middle level teachers (suggesting that insufficient interaction with secondary teachers can make children into virtually the sole source of information for parents). Third, it is worth recalling that tendencies to label parents as 'crazy', 'nuts' or 'screamers' were more common among elementary teachers –a reminder that closer, more intense interactions between elementary teachers and their students' parents can bring with them not only more positive connections, but greater conflict, personal threat and feelings of intrusion as well.

Summary

Just as secondary teachers seem to have less emotionally intense relationships with students compared to their elementary colleagues (Hargreaves, 1999), they have less emotionally intense relationships with those students' parents as well. These interactions are infrequent and intermittent, they take place primarily through indirect communication or at staged events, and they are the only setting in which fathers become more extensively (and also critically) involved with the school. To the *sociocultural distance* that cultural diversity and changing families place between teachers and parents, secondary schools add a *professional distance* of relatively formal and stage-managed interactions, as well as a physical distance of infrequent and non-face-to-face communication that can make emotional understanding and strong partnerships between teachers and parents even more difficult to establish.

CONCLUSION

Interactions with parents can provoke fear, anger, anxiety and other disturbing emotions. It is not surprising that teachers sometimes want to avoid, minimize or stage-manage them. Teachers do not welcome their purposes being obstructed or challenged, nor do they like the power of their professional expertise to be undermined. The praise, gratitude and other positive feedback that teachers crave from parents and which they complain is an all-too-rare tribute, does not impel them to seek this out through

surveys or other means. Instead, especially at the secondary level, where teacher-parent interactions seem most stilted, feedback comes to teachers through the infrequent, episodic formal encounters of written messages, phone calls and stage-managed meetings. The risk of inviting further feedback, and opening the floodgates to potentially critical or even hostile responses seems just too great. What teachers most want is silent respect-at-a-distance for their academic and pedagogical judgements where parents defer to their expertise, and active support or back-up for their behavioural decisions. Teachers prefer this active or tacit support to more open and reciprocal relationships with parents where communication learning and criticism run in both directions (Vincent and Tomlinson, 1997).

Yet, this kind of communication and the more open image of teacher professionalism that it evokes, is essential for building strong teacher-parent partnerships and all the benefits for student learning that flow from them. If teacher-parent relationships are designed in ways that make them *professionally and physically distant,* where they are relatively formal or infrequent, there is little chance of closing the increasing *sociocultural distance* between teachers and many students and their families within today's rapidly changing world. Without frequent interactions and close relationships between teachers, parents students, and the prospects for building mutual, emotional understanding are slim. Teachers then risk stereotyping and stigmatizing families who are different from them –treating their differences as deficiencies, and dismissing them as unfathomable, 'alien' others.

Mere contact and closeness are not themselves sufficient to develop strong emotional understanding, however. There must also be efforts to acknowledge, empathize with, discuss and reconcile the different purposes that parents and teachers have for children's education, and that otherwise put a damaging *moral distance* between them. As our elementary teacher data show, where great moral distances exist between teachers and parents, and their purposes are at odds with each other, physically close and frequent interactions will only magnify conflict and frustration between them.

Political distance is also a threat to people whose interactions are physically close. People's emotions are shaped, in part, by their experiences of power and powerlessness. As Kemper (1995) argues "a very large number of human emotions can be understood as responses to the power and/or status meanings and implications of situations". Habermas (1975) argued that power relations distort communication between people – although he did not recognize that this distortion is emotional as well as communicatively rational in nature. In teaching, loss or threatened loss of power and status generate feelings of fear, anxiety, shame, depression and anger (Kemper, 1995, Blase & Anderson, 1995; Jeffrey & Woods, 1997). Where teacher-parent relations are characterized by power-plays rather than partnerships, negative emotion is always somewhere near the surface as people are "grilled", 'vented on" or have things "blurted" into their face. Our data suggest that physically closer, more frequent interactions between teachers and parents will therefore exacerbate rather than alleviate negative emotions between them unless educators also make serious efforts to be less *professionally distant* with parents, unless teachers and parents are *politically open* and respectful of each other, and unless both parties show more readiness to listen to and engage with each other's *purposes* for their children's education.

In a culturally diverse, increasingly unequal and rapidly changing postmodern world, building strong, reciprocal partnerships with parents to develop the depth of emotional understanding on which successful learning among and caring for all students depends

has never been more necessary. But in a world where parents are more demanding, teaching is changing, the cultural differences are widening, and teachers are unbearably overloaded, teachers' understandable inclination is to close their classroom doors, contain the demand, and manage the interaction as best as they can. Ironically, however, building better emotional understanding with students and their parents to support students' learning and help teachers understand the lives of the diverse students in which that learning is embedded, really requires teachers to "move towards the danger" (Maurer, 1995) in working with those of whom they have been most anxious and afraid, to form better, more productive alliances (Hargreaves & Fullan, 1998). It requires teachers to take the initiative and redefine the emotional geography of teacher-parent relationships. In doing so, we believe, teachers will not only discover better support for their students, but as they make their teaching, assessment and caring practices more transparent, they will discover diminished criticism as well as increased support, understanding and even advocacy for themselves and their professionalism as well.

NOTES

[1] This paper is drawn from our project on *The Emotions of Teaching and Educational Change* funded by the Social Science and Humanities Research Council of Canada.

[2] While dimensions of emotional geography are the most prominent in the data, but other dimensions are also plausible and there remains considerable room for further development of the theory of emotional geographies.

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Part 4. Looking Technology from the other Side of the Mirror

AHARON AVIRAM & DEBORAH TALMI

THE MERGER OF ICT AND EDUCATION: SHOULD IT NECESSARILY BE AN EXERCISE IN THE ETERNAL RECURRENCE OF THE REINVENTION OF THE WHEEL?[1]

The chapter defences the claim that there is no systematic rational discussion on the issue of the integration of ICT and education and therefore no rationally sustained strategy or strategies at its basis. It further defences the claim that such a discussion can and should be developed. The paper starts by defending the claim that within the ranks of educators and professionals the issue of the merger of ICT and education is based on three blatantly opposed paradigms (first section). It then proceeds to support our assertion that no discourse exists among the adherents of these three paradigms whose field of view is limited by its own "tunnel vision" (second section), that such a debate is vital for the future of Western educational systems and societies (third section) and that free and open deliberation is socially and epistemologically possible (fourth section). The chapter ends by discussing the questions on the boundaries of the desired discourse, the reasons for its non-existence and on the steps that need to be taken.

INTRODUCTION

This paper appeals to the reader to make a cognitive leap. This appeal is reflected in its very title, in the use of the phrase "the merger of ICT and education", instead of the usual "introduction of ICT to education" (or of "computers to the classroom"). The second and third phrases reflect the presupposition that ICT or "computers" are not much more than a category of neutral tools that can be used for didactic purposes, and that the present educational system can "swallow" ICT without having to go through any meaningful change (it is ICT which is being introduced to the prevailing system or to "the classroom" – the perfect symbol of this system). The first notion, on the other hand, reflects the view that ICT represents a new power or culture and the metaphor of a clash followed by integration of two powers or cultures. This metaphor, while not *a priori* rejecting the previous possibility, also allows for many more possibilities. It does not point to the supreme power of one of the merging entities over the other and it allows for three categories of possibilities: that one of them will "swallow" the other (either cyber-culture will overwhelm the prevailing culture of education or vice versa), or that being more or less equal in power, both will have to change and adapt in order for the merger to take place successfully.

At the heart of this paper lie the premises, reflected in this change of basic guiding metaphors, that most educators and professionals, dealing on a practical or theoretical level with the merger of ICT and education, do so through some form of "tunnel vision"; and that the resultant restricted area of vision represents just the tip of the iceberg when considering the real meaning of this merger and its possible modes. The fusion now taking place in all Western societies in an extremely intensive and rapid

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manner is therefore being carried out without reference to any rational evaluation, discussion or strategy. It is further claimed here that, consequently:

- Many educators and professionals keep inventing and reinventing the wheel, time again and again.
- In most cases this reinvented wheel is actually a square one and is incapable of rolling, i.e. ICT is not proven to be effective irrespective of whatever criteria are used to judge its effectiveness.

This state of affairs is very dangerous to the future of Western education and societies and must be changed through the institution of open-ended rational discussion on the issue.

The merger of ICT and education has only one partial parallel in the history of education – the merger of the printed book and education in the sixteenth century. This previous merger radically changed the nature of education, its epistemological foundation, its social role and its distribution in European societies. Clearly, the merger of ICT with education will have a much greater impact on Western education. The shift from the handwritten book to the printed book was not as radical in its cultural, social and psychological implications as the shift from the printed book to multi-media oriented ICT (Postman, 1992), and the changes are taking place in a far shorter time period and on a much larger scale.

In spite of this historic development and its utmost importance to the future of our societies, in spite of the fact that it requires permanent investments and reinvestments of huge sums of money by otherwise economically constrained educational systems, and in spite of the easily identified and sharply opposed views on tackling the issue, the fact is that we have very little, mainly anecdotal or no evidence at all to show that positions leading to extremely costly policies adopted up to now have had any positive effect. Indeed, there is no systematic rational discussion on the issue and therefore no rationally sustained strategy or strategies at its basis.

The remainder of this paper will formulate a defence of these claims and of the claims that such a discussion can and should be developed. We start by defending our claim that within the ranks of educators and professionals the issue of the merger of ICT and education is based on three blatantly opposed paradigms (first section). We then proceed to support our assertion that no discourse exists among the adherents of these three paradigms whose field of view is limited by its own "tunnel vision" (second section), that such a debate is vital for the future of Western educational systems and societies (third section) and that free and open deliberation is socially and epistemologically possible (fourth section).

The paper will end by answering three questions:

(1) What should be the boundaries or demarcation lines of the desired discourse?
(2) Why has such a discourse not existed until now?
(3) What has to be done in order for it to start?

THREE PARADIGMS ON ICT AND EDUCATION

A matrix for the mapping out of views on the computerization of education

In a previous paper, we presented a tool for the classification of views on the merger of ICT with education. The tool consists of a matrix based on the intersection of two parameters referring to the starting-point and end-point of the relevant thinking process (see Aviram and Talmi, 2003).

The first parameter consists of the *approaches* one adopts regarding the *aims* and/or the *nature* that the computerization of education has or should have. (The distinctions between "is" and "ought" are often blurred in the relevant texts.) Within this first parameter it is possible to differentiate seven distinct approaches:

(1) The lack of any reference to the above issue, that is, the administrative approach consisting mainly of the desire to achieve a certain number or ratio of computers or other kinds of equipment in relation to the number of students;
(2) the desire to use ICT for the enhancement of the teaching/learning of prevailing syllabi, i.e. the curricular approach;
(3) the desire to use ICT for the enhancement of more active student-oriented didactics in school, or the didactic approach;
(4) the understanding of the desired didactic change as a revolution also necessitating radical organizational change in schools, thus the organizational approach;
(5) the conception of the above didactic-organizational revolution as also requiring a systemic revolution, amounting to the systemic approach;
(6) the conception of ICT as the principal factor in a large-scale cultural revolution – hence the cultural approach; and
(7) the belief in the need to ethically evaluate this large-scale cultural revolution as it merges with education and to manage this merger in the light of the results of this evaluation, which leads to the ethical approach.

The second parameter refers to *attitudes* one adopts regarding the nature and extent of the changes in prevailing schools or education systems that are conceived as necessitated by the introduction of ICT to education. (Here too, the distinction between "is" and the "ought" is often not made, so that "necessitated" can have either an empirical or normative sense, or both). Within this parameter it is possible to distinguish five attitudes:

(1) The agnostic attitude, consisting of the lack of a clear opinion as to the impact of ICT on education;
(2) the conservative attitude, based on the belief that schools will and/or should survive ICT with minimal change, as they have survived other technologies;
(3) the moderate attitude, maintaining the belief that for the sake of the integration of ICT, schools are about to (or should) go through an extensive change (only or mainly) in their didactics;
(4) the radical attitude, i.e. the belief that schools are going to change radically in all their parameters if they are to survive the ICT revolution; and

(5) the extreme radical (or deschooling) attitude, embracing the belief that ICT is, in fact, a Trojan horse within the prevailing educational system, and that the latter will not (and quite often also should not) survive it.

As for the logical relations among the approaches and attitudes, some approaches lead more naturally to some attitudes than to others, while some intersections are logically impossible. These logical relations were analyzed (Aviram and Talmi, 2003). However, one thing should be emphasized here. Based on our text analysis in this paper of seven representative texts (mainly recent conference proceedings and large surveys), I have concluded that it is possible to group most of the texts written on the subject into three larger sets of texts or paradigms, since all the texts in each of these sets start from a certain extremely basic perspective, not shared (and usually rejected) by texts in other sets. I chose to call these paradigms (not totally hiding my biases) the Technocrat, the Reformist and the Holistic.

The Technocrat Paradigm characterizes those who avoid any discussion about school change. This set includes texts classified as having an agnostic attitude, as well as almost all texts reflecting the administrative, curricular or didactic approaches combined with a conservative attitude. The latter are included as long as their conservatism is unconscious or naïve, thus reflecting no attempt to examine the future survival of the prevailing educational system –which they assume to be the default scenario- as distinguished, for example, from Postman's conservatism, which is conscious and intentional (Postman, 1992, 1995).

The Reformist Paradigm characterizes the set that perceives ICT as a powerful medium that can lead to deep didactic changes in education and assist the promotion of the "right" didactics. The most fashionable buzzwords mentioned in this context are "interdisciplinary", "constructivist", "collaborative learning" and "student-oriented learning". The texts reflecting this view are classified as didactic-moderate and organizational-moderate.

The Holistic Paradigm. Unlike the two previous paradigms, the authors of the texts in this group usually present an explicit set of assertions regarding the socio-cultural situation and the part ICT plays in it (the cultural approach). They also have an opinion about the desired values that should guide educational decision-making in general and concerning the merger of ICT and education more particularly (the ideological approach). Not only do they aspire to have comprehensive theories and clear recommendations for the education system, they do not refrain from discussing the theories of their rivals (unlike the two previous sets). As is clear by now, this paradigm includes those who start from the cultural and ideological approaches. Their ideologies and attitudes can be very different from each other: either conservative (e.g., Postman, 1995) or radical and extreme-radical (e.g., Kristmundson et al., 2000).

Clearly, these three sets of attitudes towards ICT and education represent three completely different ways of approaching the merger between ICT and education, and hence very different policies. To better understand these three opposing views let us take a brief look (this issue was discussed in detail in Aviram and Talmi, 2003) at the suppositions of each in relation to the world of education and the world of ICT. As we shall see, their suppositions about these worlds are different and to a large extent contradictory.

These different suppositions can be presented as the answers given within each paradigm to three groups of foundational questions. The first group has to do with ICT's (expected/desired) impact on education. It consists of two basic questions:

- Is the educational system as we have known it in the last century going to remain in the foreseeable future in its present shape?
- Should it?

In order to answer these two questions, two additional groups of foundational questions need to be answered. The first contains two complementary questions that together exhaust the issue of the relationship between ICT and culture ("culture" is understood here in the widest possible sense of the term, referring to all structures formed by human beings for the purpose of social and individual survival and development):

- Is the ICT revolution predetermined only by the combination of technological creativity and the hidden hand of the market, or is it also influenced by other cultural forces (ideologies, political and social interests, attitudes/mindsets, world views and social aspirations)?
- Is ICT neutral in its influence on culture (i.e. can it be used as an instrument for any human need with regard to cultural circumstances?), or does it define the culture in which it prevails (i.e. influencing and changing old cultural structures and defining new ones by its mere use, regardless of the aims conceived by the human beings it is serving)?

It is now easy to see why these two foundational questions are complementary: The first deals with the possible impact of culture on ICT, while the second deals with ICT's possible impact on culture.

The second group of foundational questions has to do with the ethical evaluation of the impact of ICT (to the extent that one conceives it to have such an impact):

- Can the ICT revolution be judged ethically?
- If so, is it good or bad (or to what extent is it bad and to what extent is it good)?

In almost all cases (actually all, with the exception of some Holistic texts), these three sets of foundational questions are never mentioned, let alone discussed, by the writers. It would appear that almost all writers are not even aware that they exist and require serious consideration. Still, a simple logical analysis shows that one cannot adopt a certain policy in the field under consideration, or even follow it without practically, even if unconsciously, adopting a certain set of answers to (at least one of the questions in each of) these three sets of questions.

In logical terms these questions are "forced questions", i.e. questions regarding a certain sphere of action that once one acts in, one cannot avoid answering, and even if one does not face them and does not answer them consciously, one is bound to answer by acting on the basis of the default answer to them.

Thus if one is a Technocrat and adopts a policy consisting mainly of flooding the system with computers and modems, which are considered the epitome of progress, so

as to reach a certain desired ratio of computers and modems to the number of students, one is bound to presuppose that:

- The educational system will or should go on existing in more or less the same way (thus supplying positive answers to the two questions of the first category, or at least to one of them).
- ICT is either neutral in its impact on culture (positive answer to the second question in the second category) or has an impact on culture (negative answer to the same question) but a good impact (an answer to the two questions in the third category).

Acting according to the same policy without making these suppositions will mean (at least prima facie) that either one's policy is irrational and unjustified (for example, investing huge sums in a system that one believes is going to, or should, collapse, if adopting negative answers to the questions of the first category), or that it is immoral (if when answering questions of the second and third categories one expresses the view that ICT has great impact on the users and that this impact is negative). Thus, although it seems that Technocrats have never seriously considered these questions, let alone consciously committed themselves to certain answers to them, by the mere policy they adopt, they practically reveal their answers. The same can be shown concerning Reformists or Holists (who, as I argued above, sometimes are aware of at least some of the questions).

As indicated above, I have discussed elsewhere in detail the different and often opposed answers (almost always unconsciously) given by the adherents to the three paradigms to the above foundational questions (Aviram and Talmi, 2003). Here I will present them schematically in the following table.

Table 1. Answers to Foundational Questions

Basic Question	*Technocrats*	*Reformists*	*Holists*
Will the educational system last in its present shape?	Yes	Yes, with some modifications of didactic and related aspects	No
Should the educational system survive in its present form?	Yes	Yes, with some modifications	Yes / No (depends on the writer's ethical view)
Is the ICT revolution neutral or defining?	Neutral	Defining	Defining
Is the ICT revolution predetermined?	Predetermined	Predetermined	Non-determined
Can the ICT revolution be judged ethically?	Yes	Yes	Yes
Is the ICT revolution good?	Yes	Yes	Yes / No (depends on the writer's ethical view)

MANY VOICES – NO DISCOURSE

Despite the fact that each paradigm has its own set of suppositions about the world of ICT and the world of education, and that each takes its own route concerning the merger between these two worlds and advocates its own policy towards it (opposed to those policies advocated by adherents to the other paradigms), there is no discourse between the different paradigms and the adherents of the various approaches and attitudes forming them. With very few exceptions (consisting mainly of Holistic views), each author writes *only* from his or her own theoretical point of view without bothering to consider the competing theories. Furthermore, most authors (especially the Technocrats and Reformists) seem to ignore competing approaches, attitudes and paradigms, as they ignore the foundational questions about which the competing approaches, attitudes and paradigms differ (Aviram and Talmi, 2003).

Schools, districts, regions and national ministries develop and implement ICT products and models of ICT-based education in the absence of any ongoing debate among supporters of various policies or even (to refer to a much more moderate expectation) any ongoing *systemic* and systematic evaluation and improvement on existing models. As it is, everybody is reinventing the wheel over and over again, and without much success (hence my expression "the square wheel") as will be argued below (see Section 3).

Most texts of the Technocratic group, for example, as analyzed in the above-mentioned paper, deal only with smaller-scale changes in equipment and curricula in the framework of the existing school, and do not even mention that novel didactic uses of ICT –as recommended by the Reformists- are not only possible but actually widely pursued. It is important to understand that they do not make an *explicitly justified decision* to concentrate only on administrative/curricular issues. They present their ideas as if no other possibility ever existed, or (to refer again to more modest expectations) as if there is no need to learn from the many (mostly failed) past attempts to follow lines very similar to their own. The administrative/curricular suggestions are simply presented as if on a tabula rasa.

From the point of view of the Reformists, an agnostic or conservative attitude must seem extremely superficial or mistaken, since the adherents of this view discuss ICT's potential for change at length. However, usually they do not bother to rationally criticize or even mention the fact that many of their colleagues adopt precisely these attitudes. They strongly support novel didactics and moderate changes in the school, but do not mention the existence of competing attitudes, ones that are (implicitly) based on the understanding of ICT as a neutral tool in the service of the existing school curriculum (or at least schools have a good chance of using as if it was neutral) and current face-to-face teaching, not to mention, of course, their total ignorance of the Holistic paradigm.

Holists fare better in this regard. Being almost total outsiders in the area of practice and decision-making on ICT and education, they begin by attacking the "received wisdom". In this way they at least show awareness of the prevalence of opposing views. They certainly attack these views (often vehemently), but it is hard to say that they develop detailed systematic arguments to refute the other views (Healy, 1998). Neil Postman is an exception in this regard (Postman, 1992, 1995).

The lack of discourse is even more blatant *within* the Holistic camp. There is no rational discourse whatsoever between ideologically radical (Perelman, 1992) and

ideologically conservative Holists (Postman, 1992, 1995). Usually, ideologically radical texts give their own view, attack non-Holists' views as short-sighted but do not refer to the other holistic possibilities, mainly the ideological-conservative possibility, and vice versa.

In all of the above cases the authors take a stance (explicitly or implicitly), but do not have a meta-level perspective on the place of their viewpoints in the discourse within the range of possible alternative views, which is a cornerstone of rational conduct in science, in normative models of public policy-making as well as in individuals' private lives. There is no attempt to consider competing views, even if the competition is not only theoretical but also very practical. With no common discourse the field cannot develop. Unless a common discourse is achieved, we are doomed to the eternal recurrence of the invention of the square wheel. This point will be elaborated on in the next section.

A DISCOURSE ON ICT AND EDUCATION: A NECESSARY CONDITION FOR THE DEVELOPMENT AND IMPROVEMENT OF THE WHEEL

Such a discourse is urgently needed for the following three (quite trivial) reasons.

(1) Educational systems all over the western world have spent billions of dollars in the last two decades on computerizing education and are going to spend even larger sums in the coming two decades. These huge expenditures are undertaken by otherwise economically strapped systems which have many valuable alternative spending goals that cannot be met (Jones and Paolucci, 1997; World Almanac, 2000).

(2) The results of these huge expenditures are very far from promising in the light of the aims that actually guided policy-makers (in cases where such aims could be identified).

If we had substantial proof of the effectiveness of ICT as it is currently introduced to, and used in education, we might perhaps have been less concerned with the need to critically examine the views behind the above-mentioned expenditures. However, as there are few studies evaluating the actual effectiveness of ICT (Healy, 1998; Melamed, 1999), there is currently no such proof. As Charp (1998) states in his editorial, "With all the studies and documentation available, research on why and how the use of technology is effective in education remains minimal." A recent study of the literature estimated that since 1993 less than five percent of published research was sufficiently empirical, quantitative and valid to support conclusions with respect to the effectiveness of technology in educational learning outcomes (Jones and Paolucci, 1997; Rochelle and Pea, 1999).

The same study fails to indicate the results of this five percent of research concerning the effectiveness of ICT in education[2]. Yet there is substantive research pointing to the ineffectiveness of various ICT functions in enhancing learning, either at the foundations of traditional learning or drill and practice, as many of the Technocrats would expect, or at the level of more research-oriented learning in the spirit of the Reformists (Healy, 1998; Melamed, 1999; Roschelle and Pea, 1999; Archer, 1998; Oppenheimer, 1997; Peacock and Beard, 1997).

In the face of these results, many supporters of ICT in education from the Reformist camp often claim that it is irrational to expect ICT to be functional

within the prevailing didactics or to expect success to be indicated by traditional criteria. According to this argument, by wishing to use ICT within the existing didactic-organizational framework, the educational system "tames" and "suffocates" this otherwise revolutionary learning environment. They claim that in order to be functional and effective, ICT requires altogether different research-oriented and active didactics which in turn require a different organizational setting (a didactic-organizational approach combined with a moderate or radical attitude, to use my above terminology) and that ICT's potential cannot be evaluated by the universal achievement-oriented standards that were adequate for the old paradigm of learning (Aviram, 2000; Salomon, 2000; Roschelle and Pea, 1999; Archer, 1998; Oppenheimer, 1997; Peacock and Beard, 1997; Dahl and Farman, 1996; Bangert-Drowns, 1993).

But even if this claim might seem to solve the riddle of the unproven effectiveness of ICT in bringing about a meaningful rise in the more conservative educational indicators, it leads us to another, even graver difficulty, which Salomon (2000) calls "the Evaluation Paradox" in ICT and education.

The endeavour to prove the effectiveness of ICT might, according to Salomon, be inherently paradoxical. In his view, the reason for the lack of proof of ICT's effectiveness may be that, as just claimed, the technology indeed cannot demonstrate its potential if the didactic-organizational structures within which it is implemented do not change. Thus, in order to allow the potential of ICT to be fully expressed, many important parameters of the learning process and environment should be changed. However, when such a thorough didactic-organizational change does take place, it is impossible to isolate the unique impact of ICT from the influences of the entire change process (e.g. Scardamalia et al, 1992). Thus, Salomon concludes, either the added value of ICT does not exist or, if it exists, it cannot be measured (Salomon, 2000). One should also be aware of the fact that, given the totally different goals of the Reformists' desired didactics and those connected to the more traditional didactics, even if it were possible to measure the methodological isolation of ICT's impact, it would be impossible to compare the effectiveness of the new environment (including ICT) with the old one.

(3) The lack of solid evidence concerning the added value of ICT becomes more acute in the light of the fact that there are opposed views on this subject.

The lack of research, the methodological difficulties in developing rigorous research (McKenzie, 1995), the lack of good empirical reasons for assuming the effectiveness of ICT in education, and the lack of serious discourse on the above facts –all these lacunae become much more critical given the prevalence of sharply opposed views and potential policies concerning the issue. The reason is obvious: in a case where there is only one view concerning a certain issue and a policy stemming from it, the measured outcomes of this policy are not vital for deciding whether to maintain the view and continue implementing the policy. But once there are several sets of coherent views and resulting policies which all, prima facie, make sense but contradict each other, the inability to evaluate the effectiveness of each, even if only in the light of its own goals and criteria, decreases the possibility of adopting a policy that even approaches rationality.

Thus, for example, for most adherents of the Technocratic approach, the mere equipping of as many schools as possible with as many computers, modems and LANs as possible will be judged a success. For the adherents of the Reformist

approach, the above numbers in themselves will be neither a goal nor a criterion for success. For them the level of integration of ICT in current school activities and, more importantly, the level of change in didactics that ICT has brought about will be judged as the prime goals and success criteria.

For Holists, who basically favour ICT or at least accept it as a necessary evil, the above goals and criteria will be deemed to be either irrelevant or undesirable. They will point to the educational system's ability to guide the implementation and use of ICT in the light of higher ethical or social values as a desirable goal and the yardstick of success (Postman, 1995, Healy, 1998).

According to the policy stemming from the Reformist view, the Technocrats' allocation of budgets will be judged to be "throwing away money". Adherents to this view will devote the bulk of the available budget to the training and retraining of teachers (or rather one should say "re-education of teachers") and to the restructuring of schools in the light of the desired active didactics.

The Holists will commit the lion's share of the budget to the re-education of teachers in order to regard ICT from a value-driven point of view. From the premises of their value system, they would emphasize the threats posed by ICT, as well as possible means of harnessing ICT to serve those values. This is a process which is diametrically opposed to the one suggested by the Reformists, or the Technocrats.

Can any developed society adopt one of the above policies in a mindless manner without a systematic survey of the state of the art of rational discourse among them? Should there not be some evaluation at least of their success in the past? In a world based on rational decision-making these questions will be rhetorical. In our real world these questions have to be answered positively, since there is no state of the art, no discourse and no substantial body of solid evaluations to survey. The inevitable conclusion is that policies are, indeed, fashioned in a mindless manner.

ON THE POSSIBILITY OF THE DESIRED DISCOURSE

In the previous sections I have pointed to three opposed paradigms referring to the issue of ICT and education prevailing today in educational practice and thinking (first section), to the lack of discourse among the adherents to the different paradigms (second section) and to the fact that such discourse is vital to the effectiveness of the merger between ICT and education now taking place all over the world (third section). In this section I wish to tackle the questions that could naturally be expected to emerge at this stage: Is such a discourse possible? And if it is, what form should it take?

One way to answer both questions involves seeking discourses on the effect and impact of other technologies and, if some are found, identifying their structure. These are the steps I am going to take in this section.

There are sufficient examples of discourse relating to public macro-policy formation concerning various technologies –some of them very vociferous- going on today in scientific and political circles. One may point to just a few of the best known new technologies that serve as the objects of such ongoing discussions. For example: fertilization, genome, cloning, stem cell formation, carbon dioxide-based engines and mobile communications.

In all these areas (when logically analyzed) we have the same triple-layered structure of the discussion (this is a logical reconstruction of discussions, some of which are very

heated and emotional, with the various layers often blending into one another). First comes an empirical discussion about validation or clarification of basic empirical facts concerning both the positive intended outcomes of the technology and negative unintended outcomes. For example: Can cloning technology *really* create healthy organisms? Will knowledge of human and animal genomes *really* lead to medical advances? Does cellular radiation *really* cause irreversible health hazards? Is there *really* a reasonable chance that genetically engineered food will get out of control? And if there is, what harm can it do? And are these drawbacks much worse than those that could have been created by the more primitive technology of hybridization between different species which has been used for centuries? Do we *actually* have a phenomenon of global warming? Do we have sound reasons to point to CO_2 emissions as the culprit in global warming? What impact might such warming have on human life?

The second layer is the normative one. It consists of the following questions: Assuming certain answers to the empirical questions concerning technology's ability to deliver the goods it promises and concerning any unintended negative impact it may have on various aspects of human life, is the unintended impact dangerous or undesired and if so, can the negative impact be balanced against the intended benefits to be delivered by the technology?

Such questions can be answered only in the light of a normative model of the Good (human) Life or a specific aspect of it. Quite often opposing sides in the discussion advocate opposed models. We then have a heated normative debate of the second order – not among different considerations stemming from the same model of the Good Life, but among different or opposed models of the Good Life. When this is explicit and not tactically interwoven within the first or second layers, this is the third layer of the discussion.

All these debates are epistemologically and socially possible and they are taking place in our societies right now –some of them in a highly vociferous manner, without clear distinctions being made between the three layers described above. As is clear from the preceding short discussion the logical structure can also be quite easily discerned: the empirical layer, the first-order normative layer and the second-order normative layer. It is also possible to say that ideally the first layer should be essentially scientific and take place in scientific conferences and journals, the second layer has to do with analysis by public decision-makers and civil servants or professionals in the field, and the third belongs to the political-social debate in democratic societies.

All three layers of the discourse are necessary in order for the discussion to make sense. Without the empirical layer, the two others will to a large extent merely be a scholastic endeavour or a futile exercise; without the second layer no rational policy formation is possible. Any rational policy consists of the careful weighing of a particular policy's pros and cons from the perspective of a certain normative model. A greater range of pros and cons will lead to a more reasoned and balanced judgement. Sounder and more encompassing empirical findings will result in more rational policy and a greater probability of effectiveness.

As for the third layer, the debate among various and opposed views of the Good Life is epistemologically necessary in our era of scepticism in order to establish the model of the Good Life that will serve as the foundation of discussion in the second layer. Furthermore, the essence of public life in a democracy is debate, sometimes called "the public forum".

One could claim at this point that the fact that all these debates are going on simply proves that they are socially and politically possible, but not necessarily that they are rationally or epistemologically possible or meaningful. The claim would probably be that, at least in the case of ICT and education, we are dealing with opposed paradigms, which are therefore necessarily incommensurable and hence incomparable, and do not engender rational discussion among the individuals upholding them.

To this possible counterclaim one can provide an answer on three different levels:

First, in the later view of Kuhn (1970) (the thinker who bears most of the "blame" for the discussion about the possibility of rational debates among incommensurable paradigms) on the subject, incommensurability does not entail incomparability (Kuhn, 1970, 1993; McCullin, 1993). According to him, rational discussion can be held between incommensurable paradigms. It is in principle possible to translate one's ontology into the other's terms. Although this is a project that will never lead to certainty, it can create reasonable bridges between different ontologies.

The above three paradigms simply do not seem to be incommensurable. The term "different paradigms" has a continuum of meanings. Incommensurable views represent the most extreme meaning of the term. Less extreme meaning refers to views that have different and opposed suppositions about the world but refer to the *same* world, or to put it in other terms, it relies on more or less the same ontologies.

This seems to be our case. All three paradigms refer to the same two worlds: the world of education, populated by schools, teachers, pupils, etc. and the world of computers and the Internet, containing a range of software and hardware.

Moving now to a more positive response to the above possible counterclaim, it is possible in a straightforward way to show that discussion is epistemologically possible and meaningful on all three layers. The first layer is by definition an empirical one and the questions posed within it can and should be decided by empirical-rational debate. There are three categories of such questions:

- Questions about the ability of various modes of ICT to lead to certain desired results when used in the educational sphere (according to goals set by either the Technocrat, Reformist or specific Holistic views).
- Questions related to the impact of ICT on its users and on the culture in which it is being used.
- Questions about the possible impact of culture on ICT.

Concerning the first category of questions as posed above, the evidence relevant to it, to the extent that it exists today, is of a more anecdotal than systematic nature. For methodological reasons answers to these questions may be hard to come by. However, that does not mean that it is impossible to aspire to the systematic formation of such a basis of evidence. At present there are a few attempts at achieving such a goal (one remarkable example of such an effort now taking place can be found in Pelgrum and Plomp, 2003; Pelgrum, 1999). It is also not unthinkable that what Salomon calls the "paradox of evaluation" and other methodological questions concerning the issue could be addressed and solved rationally (Salomon, 2000).

Concerning the second category of questions (the impact of ICT on users and culture), there are ample hypotheses on relevant issues. These include, for example, the saturation and disintegration of the atomistic self brought about by ICT (Gergen, 1991), or the switch from linear deductive patterns of thinking towards non-linear,

more chaotic patterns or radical changes in concepts of participation and belonging brought about by ICT (Harasim, 1993; Reynolds, 2000). Some of these hypotheses are based on a wide range of anecdotal evidence; there are very few solid empirical resources on these issues. However, the fact that there is not much solid research on these questions does not mean that it is impossible to reach such evidence, but rather that for the time being, it is difficult and unpopular. The few solid studies that exist prove this possibility (Gelernter, 2001; Gergen, 2000; Tapscott, 1998; Gergen, 1991; Oppenheimer, 1997; Turkle, 1995; Birkerts, 1994; Birkerts and Kelly, 1994). The third category consists of two sub-categories of questions. The first refers to the past and has to do with the ways in which cultural trends (ideologies, conceptual perspectives, interests, power structures, etc.) have influenced ICT development. Here there are already several disciplines that to a large extent address this issue empirically, such as the sociology of technology, the history of technology and cultural studies of technology. Within these disciplines (especially the third one, which in a way encompasses the two previous ones and combines them with socially critical perspectives (Agalianos, 1997; Agalianos and Whitty, 2000), we have detailed general and case study-oriented analyses of patterns of impact of culture on technology.

The studies included in the previous subcategory refer to the past and reflect one basic question: Was the development of certain ICT products driven by specific values, or by political or social forces? Research referring to this question should serve as the foundation for dealing with other subgroups of research referring to the future. I have in mind large-scale and long-term research projects that address questions such as: Is it possible for a society to influence the message "transmitted" by the medium by guiding the development of its basic structures and interfaces in the light of desired values? If it is possible, for how long? To what extent? How do various political and cultural factors affect the previous answers?

As for the second layer, once one starts from a clear operational model of the Good Life – or the good society –and has sound empirical evidence that can be evaluated in the light of criteria stemming from this model, rational thinking and discourse are, logically speaking, simple and unproblematic. Such a discourse will consist of weighing the positive intended benefits expected to result from technology (first category of empirical questions) against the negative unintended impact (second category of empirical questions) and will result in the formation of strategies aimed at optimization of the desired impact. The formation of such strategies should be based on knowledge of successful patterns of impact on cultural factors in the past (third category of questions) (Aviram, 2001; Aviram and Arias, 2001; Aviram, Melamed & Gal, 2001).

It is the third layer that, prima facie, seems to be the most problematic from the perspective of the epistemological possibility of a rational debate. Can there be a rational debate among opposed models of the Good Life, for example among models that can be found in the foundations of the various Neo-Marxist and Liberal views? On the epistemic level the answer is, to a large extent, a resounding yes.

First of all, a rational debate can exist in the minimalist sense of mapping out the differences (and commonalities) between the suppositions and the values situated in the foundations of opposing or competing models.

Second, various models can be evaluated according to the extent to which they meet basic rational criteria (for example, clarity, parsimony, coherence).

Third, one may point out inevitable or probable outcomes for each of the models and reconsider the models in the light of the desirability of their outcomes.

Fourth (at least sometimes), one may define areas that can be determined by empirical data or critical experiments.

It is obvious that such a debate will very seldom be decisive or lead to agreement or primary consensus, but it can lead to secondary-level consensus –a consensus about agreements and disagreements that can be a very valuable outcome of such rational debate.

The fact that many heated demagogic debates –but very few rational ones- take place on the third layer, testifies to the weakness of human character rather than to the weakness of the human mind.

To conclude this particular discussion, a systematic rational discourse can lead us to complex macro-decisions supporting procedures such as the following (the example below relates mainly to the first two layers; it presupposes a certain view concerning the third layer basic to the second):

- Since we adhere to a certain set of values or a model of the Good Life *X*,
- And since it follows from this that we would like individuals to develop in direction *Y* (claims stemming from answers to questions of the second layer),
- And since we have learnt from empirical research that certain aspects of the Internet *R* influence users in the desired direction while other aspects *S* deter them from following these directions,
- And since we have learnt from analysis of past experience that there is room to believe that in our kind of society certain governmental policy *P* can positively influence the development, distribution and use of the desired and undesired aspects of the Internet (knowledge stemming from research on the first layer), then:
- It is rational and recommendable to form a governmental policy *P*.

On the basis of the above argument we assume that the policy *P* will encourage development and distribution of products of kinds *Z* which will enhance the impact of the desired kind: *R*, and minimize impact of the undesired kind: *S*. (As a first step to following this line of thinking, see Aviram, 2000; Aviram & Arias, 2001 and Aviram, Melamed and Gal, 2001). Such "grand strategic" thinking is urgently required vis-à-vis the merger of the powerful ICT and education which, with high probability, will have a far--reaching impact on our future. Grand strategic thinking in its turn requires a rich repertoire of knowledge, possible scenarios and clear prescriptive models. All these, in order to develop, require an ongoing discourse.

THREE CONCLUDING QUESTIONS

Before ending we are still left with three questions that need to be addressed:

(1) What will be the boundaries of the desired discourse?
(2) Why has no such discourse existed until now?
(3) What has to be done in order for it to start?

The first question can now be readily answered: the discourse should consciously and systematically evolve around four layers of questions: the three layers discussed in the previous section as underlying the necessary debate and a fourth layer, based on

answers to the previous questions and focusing on their implication for the merger of ICT and education.

The last layer should consist of the following questions:

(1) Is ICT going to leave the educational system intact, or is its impact going to cause change, restructuring or its disappearance?
(2) In each of the above cases (ICT affecting and not affecting the educational system), is the expected scenario also the desired scenario?
(3) Is it possible to overcome (at least to some extent) the gap between the expected and the desired scenarios, if such a gap exists?
(4) If it is possible, how? In other words, what are the policies that postmodern democratic societies should adopt in order to optimize the benefits of ICT and reduce its liabilities?

A few basic facts must be remembered about these four questions.

(1) Logically speaking, the basic three layers are fundamental. The first, the empirical layer, is logically speaking, independent of the other two: the second (the analysis of the empirical data in the light of the normative model of the Good Life) and the third (the debate among various models of the Good Life).
(2) All the questions that make up these four layers are *logically* speaking *forced questions*, i.e. questions that cannot be avoided by anybody in a certain field or domain. One of the examples of a forced question given by James (who used the term "forced option" or choice, but it amounts to the same thing) is the instance of an individual on leaving home having to decide whether to take an umbrella. Since action (leaving home) is required and the activity must necessarily be characterized by an answer to this question (leaving home either with or without an umbrella), the choice is forced. "Not deciding" necessarily means deciding NOT to take the umbrella (since this is the default scenario and not deciding actually means opting for the default scenario).

The same is true concerning the above questions for anybody who adopts and implements any policy concerning ICT and education or, as a matter of fact, by anybody involved in the relevant domains. Being agnostic towards the right answer to these questions or ignoring them (as most involved in the field actually do) *necessarily* means adopting the default scenario.

Thus, for example, not seriously considering the question of the defining nature of ICT (because of being oblivious to it or agnostic towards it) *necessarily* amounts in its practical implications to considering it to be neutral. Not considering the question concerning the predetermined origins of ICT *necessarily means* as far as practical activity is concerned, supposing it to be predetermined. Not considering the question of the ethical value of ICT *necessarily* amounts, as far as practical activity is concerned, to accepting it as good. Not answering the question concerning ICT's expected long-term profound impact on education is *necessarily* tantamount to considering it as having no such impact

Now, since all the above four tacit answers are very far from being obvious (as a matter of fact we have good reason to believe them to be false, at least to a large extent), it follows that failure to ask these questions in an systematic manner and not

aspiring to reach substantiated answers to them is utterly irrational and dramatically increases the risk of emerging social or psychological dangers or catastrophes, just as ignoring long-standing basic questions concerning the ecological impact of heavy industrial technology led (among other things) to global warming, pollution and their extremely dangerous consequences for the future existence of our planet.

It is extremely probable that ICT has such negative side effects, too. For example, it threatens the logical, abstract mental structures which are fundamental to any process of reasoning and criticism (Negraponte, 1995; Hirsch, 1987); relationships through this media are more superficial, fragmentary and temporary, hence perhaps contributing to increasing emotional "flatness" (Gergen, 1992), and through its neurological affect on the human brain, it decreases sensitivity, thereby making users more prone to violent behaviour.

Since every view that explicitly and systematically confronts these questions is a Holistic view, it follows that the desired debate is a debate that should take place among Holistic views.

Why has not such a discourse emerged in the last two decades? I can think of a few hypothetical answers to this question:

(1) Large-scale educational reforms have almost never been rationally discussed, founded, or evaluated. Educational reforms have largely reflected political demagogy and deeply rooted, unquestioned and unexamined myths without rational debate (certainly not of a systematic and ongoing nature). Furthermore, it seems that the more extended and costly the reform, the less rational the discussion about it. I am not sure to what extent this is a good explanation, since it necessarily leads to a further question: Why has there been no rational discussion on matters of educational policy?

Possible answers to this question may be:

(1.1) The field of education is rather chaotic, fragmentary and eclectic as far as its conceptual and theoretical foundations are concerned. The lack of an accepted theoretical or conceptual framework renders it rather difficult –but certainly not impossible- to hold a systematic rational debate within its structural framework.

(1.2) Education and educational debate have a necessarily political nature. Politicization of any issue serves as a barrier to the development of rational discussion about the issue, because such a discussion may threaten the vested interests that are being served by the status quo.

(1.3) The growing confusion in the West in the last few decades concerning the aims of education reflects the most basic existential and social problems of the late modern and postmodern eras. This confusion has led to the development of escape mechanisms. The "sloganization" and "technocratization" of educational discourse is certainly such a mechanism (Macintyre, 1985).

(1.4) The huge complexity and in some cases the undecidability of the relevant discourse. Human beings in general and especially politicians, technocrats and educators lack the motivation, time, training and know-how required for such a complex open-ended discussion. Hence most of them conceive discussion to be a threat and retreat into escape mechanisms.

Beyond the above possible explanations for the lack of educational discourse in general, in the past two or three generations it has also become possible to point to

several other possible factors that impede the development of rational discourse on ICT and education, particularly in reference to our era and the special issue at hand.

(2) The general (totally unjustified and unjustifiable) suspicion of "meta-narratives", "grand debates" and "grand strategies" characterizing our postmodern, fragmentary cyberculture (Lyotard, 1984).

(3) The unconscious and to a large extent very justified fear on the part of the potential subjects of such a discourse that such a debate can lead to very strong cognitive dissonance. Why should educators whose professional and often personal identities depend on the prevalence of educational structures, and politicians and technocrats whose power depends on such structures, be willing to support a very complex debate which is frightening, as claimed above, in its own right, and which has a high probability of leading to the collapse of much of what they have been involved in or identified with?

(4) The huge economic stakes involved. Investment and reinvestment in ICT in education involves sums previously unheard of in the educational arena. The will to encourage investments and reinvestments in hardware and software (which unavoidably forms part of the political considerations) necessarily promotes technocratic attitudes and entails the suffocation of any critical thinking on the issue.

There may be additional factors contributing to the lack of ongoing rational discourse on ICT and education, but the ones mentioned here suffice to totally paralyze any motivation to change the situation. Given these factors, it might seem that little can be done but to wait passively for the huge and tremendous ICT waves and streams to carry our educational systems and societies through totally uncharted waters to what might turn out to be largely undesired and unwelcome shores.

We have witnessed in the last few decades several movements and a series of extensive waves of socially and ecologically oriented protests which have led to a process of doubt and reconsideration in the West regarding the most sacred beliefs concerning technologically led progress and its inevitable benefits.

The fact that there is a *political* debate around a certain issue does not necessarily mean that it is founded on or leads to ongoing *rational* debate. Indeed, the more politically heated a debate, the more likely will be the incentives for participants to go beyond the use of rational arguments. Still, as claimed in Section 3 above, it is a fact in many cases that political and social protest can raise awareness that can lead to more rational debate and empirical research, which will in turn provide input for the political debate, and so on. This has often been the case in the last two decades in relation to a large range of technologies (as mentioned in Section 3).

Why should a similar phenomenon not happen in the area of the merger of ICT and education? After all it is this area that will be the source of the most remarkable change in education in the forthcoming decades, an area that will have a huge impact on the future development of Western societies. Why can we not have a rational (as well as political) debate on the (socially and psychologically) sustainable development of ICT in education, as we have on the issue of the (ecologically and socially) sustainable development of heavy industry, internal combustion engine-based traffic and transportation, and genetic engineering, or the status and cultural origins of various social groups?

I believe that such a debate can be carried forward, provided that sufficient resolve and purpose will be manifested by enough individuals. There is room for optimism that such resolve will emerge.

NOTES

[1] The title is a paraphrase of Nietzsche's concept of "the eternal recurrence of the equal".
[2] It would have been interesting to analyze how many of this five percent of studies have shown that ICT has made a positive contribution to learning outcomes, and how many to the contrary. However, no such analysis was conducted (Paolucci, personal communication, 21.2.2001).

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JUANA M. SANCHO

VIRTUAL GEOGRAPHIES OF EDUCATIONAL CHANGE: THE MORE COMPLEX THE PROBLEMS THE SIMPLER THE ANSWERS

Virtual geographies connect the power of computer and other technologies to defeat the tyranny of time and space. Virtual geographies also exclude outsiders raising the problem of the digital divide. This chapter addresses this issue from both a technological and educational perspective; and does not forget the large economic interest of ICT corporations. ICT is fully implemented in our society, and as other information and communication artefacts and systems will be here for a long time, and people will have to learn and use it in their daily lives. However, ICT per se is not an educational technology, but even more, if removed from sound educational approaches is far from being the kind of technology needed to meet current and future educational needs and challenges.

APPROACHING VIRTUAL TECHNOLOGIES OF EDUCATIONAL CHANGE

> The essence of technology is by no means anything technological. Thus we shall never experience our relationship to the essence of technology so long as we merely conceive and push forward the technological, put up with it, or evade it. Everywhere, we remain unfree and chained to technology whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regarded it as something neutral. (Heidegger, 1997: 4)

> In choosing our technology we become what we are, which in turn shapes our future choices. (Feenberg, 1991: 14)

According to (Hargreaves, 2002: 193), "social geographies involve the study of physical space and human constructions, perceptions and representations of spatiality as contexts for and consequences of human interaction". From this perspective, the concept of social geographies of educational change is defined as a field of study that embodies "the ways that changes or failures to change are located, distributed and redefined or reconstituted as they move through space, from one place to another. While social histories of educational change and other phenomena deal with what Shields calls 'regimes of succession' over time, social geographies address 'regimes of articulation' across space" (Shields, 1991: 274-275).

Social geographies of educational change cover a diversity of phenomena that can range from the classroom in its dependency on school, district or national policies; to the ways innovation is imitated or replicated from one school to another; how standardised reforms affect schools differently depending on their social background; how schools influence one another; how policies spread across and are borrowed by different nations; or how the identities of and interrelationships among schools are affected by technology, principles of market competition and choice, and other initiatives (Hargreaves, 2002). This author identifies six strategic geographies that appear to be educationally prominent, in order to overcome the feeling of frustration

F. Hernández & I. F. Goodson (eds.), Social Geographies of Educational Change, 143—167.

brought about by conventional processes of change together with distorted perspectives about how transformations need to come about. He refers to market, network, virtual, standardised and differential geographies, geographies of scaling up and of social movements. For Hargreaves (2002: 203):

> Virtual geographies harness the power of computer and other technologies to vanquish the tyranny of space. Virtual geographies give parents and students independent access to the prescribed curriculum. They also open up access to knowledge far beyond the set curriculum and its recommended texts. Virtual geographies have fuelled rapid increases in home schooling. They are breaking down the walls of schooling and threaten, literally, to put teachers in their place or deny them their place altogether (Hargreaves & Fullan, 1998). But virtual geographies also exclude outsiders; put them beyond the net; and pose the problem of the digital divide.

In the last thirty year the potential of computers and related information and communication technologies (ICT) has served as a powerful discourse to develop a very optimistic view regarding virtual geographies of educational change. This discourse has been so powerful that it has often blanked out the content of the rest of the social geographies of educational change. As it has in other historical moments with different information and communication artefacts, ICT has been presented as a panacea for school improvement, students learning, reduction of educational costs and students' equal opportunity. However, an in-depth look into present social and educational contexts discloses that this discourse is a very long way from reality. This chapter addresses this issue from both a technological and educational perspective. The technological angle will allow us to reveal the unfulfilled promises of ICT in making a significant difference in students' learning and the general improvement of education. Addressing the educational issues will enable us to show the failure of most initiatives to promote the use of ICT in education in taking into account available knowledge about innovation and change in education. Moreover, it will also enable us to deal with the large economic interest of ICT corporations. ICT is fully implemented in our society, and as other information and communication artefacts and systems (writing, telephone, radio, cinema, television, video, etc.) will be here for a long time, and people will have to learn and use it in their daily lives. However, in contrast to some interested sources that aim to argue the opposite, finally I claim that ICT per se is not an educational technology, but even more, if removed from sound educational approaches is far from being the kind of technology needed to meet current and future educational needs and challenges.

TECHNOLOGY TO ACHIEVE EDUCATIONAL UTOPIA

The belief that technology is a privileged way of achieving improvement in all aspects of our life can be traced back to Francis Bacon's social utopia contained in his New Atlantis, published en 1627. This was the first utopian proposal that prophesied inventions. Bacon described a city whose improvement was not based on the refinement of the socio-political forms and rules, but on advanced and sophisticated artefacts. The most important characteristic of this utopian city is that philosophers were not the ones who regulated people's welfare by way of well established abstract doctrines -as in the case of Plato's Republic, but a group of researchers who were always discovering new truths that could change the conditions of life.

The industrial revolution was a redoubtable push for this line of thought that was converted into mainstream thought in the nineteenth century with the consolidation of the notion of progress (Bury, 1932). From this moment on, technology has been mainly associated with the production and use of tools, devices, apparatus, artefacts, gadgets, equipment, etc., and has been driven by the technological imperative based on the fundamental idea that the manufacture of such tools has been determining and essential for human beings' evolution and progress[1]. For Àlvarez et al. (1993), this is a distorted view of human evolution to which creation has contributed different factors and interests. The most perverse consequence of this vision is that it forgets that the same civilisation process has only been possible due to the development of *symbolic technologies* such as language, written systems, symbols, iconic representations, laws, navigation systems and money[2], etc; *organisational technologies*: management of productive systems (associationism, Fordism, Taylorism, Toyotism, etc.), management of human relation, marketing, etc.; and *biotechnologies*: from food preservation to genetic engineering.

In the constitution of virtual geographies of education change, this hardware-driven perspective has been prevalent from the first stages of Educational Technology, the main endeavour of which has always been to look for the best tool to deliver education.

In search of the "best" device

The history of Educational Technology since the beginning of the 20th century has been powerfully driven by the view of educational technology as the application of psychological knowledge –mainly behaviourism, and the use of artefacts such as films, radio, television, video, computers, etc. (Seattle, 1990).

The commercialisation of any new artefact gives rise to inflated statements about the incredible power of the new device to solve educational problems. Cuban (1986) gives an overall account of the expectations generated around by the emergence of the film, radio, television and computer industries. In 1913, Thomas Edison was convinced that in a few years films would supplant the use of textbooks and that the use of films in the teaching process would increase learning from the two per cent achieved with textbooks to one hundred per cent.

> Books will be soon obsolete in the schools (…) scholars will soon be instructed through the eye. It is possible to touch every branch of human knowledge with the motion picture (Thomas Edison in Cuban, 1986: 11).

In the United States an impressive educational film initiative was launched, with a considerable investment in equipment for schools, in the production of films and in research to prove learning gains brought about by films. As it has been proven successively with any other media the use of films in the teaching and learning process has always shown some possibilities but also limitations. A conclusion found in the Chicago film studies, in 1924, was that, "the effectiveness of a medium depends on the nature of the instruction and the learner's characteristics" (Thompson et al., 1992: 15). On the other hand, the reported main reasons for the infrequent use of films in the class, according to Cuban (1986) were:

- Teachers' lack of skills in using equipment and film.
- Cost of films, equipment, and upkeep
- Inaccessibility of equipment when it is needed

- Finding and fitting the right film for the class

It is important to take into account the conclusions of these earlier studies because these findings have been a constant in all research carried out about the contribution of new media to the improvement of teaching and learning processes.

Nevertheless, the enthusiasm in the power of emerging information and communication devices to solve teaching and learning problems has never decreased. In 1932, Darrow, in his book *Radio: The Assistant Teacher*, proclaimed that:

> The central and dominant aim of education by radio is to bring the world to the classroom, to make universally available the services of the finest teachers, the inspiration of the greatest leaders, and unfolding world events which through the radio may come as a vibrant and challenging book of the air (Cuban, 1986:19).

As we all know, radio never managed to fulfil these promises and did not even become a common instructional medium fully integrated into classroom life. However, for a while, before the rise of television and the Internet, it was considered and used as a fundamental aid for long-distance education in countries with geographical difficulties for students to attend school, vocational training courses or university. Nowadays it is still used for those people and places with difficult access to ICT.

The rise of television also captured the imagination of technology devotees and since it its regular broadcastings in 1929 in Great Britain, a considerable set of initiatives has been launched to convert it into a habitual learning tool. Big media consortia have never ceased in their efforts for seeing the information they broadcast, including publicity, in schools and classrooms. Nowadays, television and video, its highly correlated artefact, are commonly found in practically all educational institutions. However, it does not mean that they are fully integrated into the teaching and learning process and even less so that its use has had any tangible influence in the improvement of students' achievement[3].

Research accompanying the beginning of any campaign to foster the use of new media has systematically shown that *any teaching aid makes some contribution to students learning, but also has some limitations*. This steady pattern brought Salomon (1981) to the conclusion that media research has been asking the wrong questions. As it was assumed that each medium is an entity with fixed attributes, studies of differential effects of media were expected to lead to a better practical selection of one medium over another. Therefore media outlets were assumed to be alternative routes to fixed educational ends. This implied that studies were guided to identify "better" media for teaching various disciplines and that research findings could be immediately applicable to solutions of problems not covered by educators. Salomon suggested a change in the set of underlying assumptions to be able to ask more suitable questions, proposing that the characteristics of a medium affects the modes of interaction with users and the transmitted content affects the knowledge acquired; thus, different aspects of media interacts with different aspects of behaviour. However, his most significant suggestion was to take into account a research finding brought about, as we have seen earlier, by the Chicago film studies in 1924. In other words, *the effectiveness of a medium depends on the nature of the instruction and the learner's characteristics*. This line of thinking reached an inflexion point with the publication, in 1983, of Clark's seminal *Reconsidering research on learning from media*. In this work, Clark clearly argued that the media were not superior but were techniques for message storage and delivery.

This way of approaching the study of the educational use and influence of information and communication artefacts was an open door for a more systematic and comprehensive conception of the teaching and learning processes in which media contribution could not be fully understood and used without taking into account the whole educational setting. This educational scenario, as research on school improvement and effectiveness has shown, encompasses more that the study of the "flute and the orchestra", as Salomon (1990) suggested, to undertake research on the use of computers. Following the musical metaphor, it would also entail the consideration of the auditorium's acoustics, the meaning musicians and directors give to their performance, their perceptions of how their performance was contributing to their personal and professional development, without, or course, forgetting the policy regarding Music.

New tools, new endeavours

The discourse about the power of electronic means to foster students' learning had an explosive and still lasting moment with the commercialisation, first of computers and later of the Internet, multimedia, virtual reality, etc. The virtual geographies of educational change have been shaped by a science-fiction aureole that invests these artefacts of all kinds of wonders. More than fifty years ago, when only a single computer was working in the world in an experimental manner and with less computing power than modern-day calculators, the French newspaper *Le Monde* published an article signed by Dominique Dubarle, a priest impassioned by science and technology, about the birth of cybernetics and the invention of the computer. He referred to the computer as "the machine to select information (…) that embraces the totality of the mind's productions represented in the entire world's libraries" (Breton, 1993: 37). At the same time, Norbert Weiner, father of Cybernetics, saw in these machines an extraordinary instrument to fight against the disorder and the entropy menacing our societies.

Since then, this kind of discourse seems to have been growing independently of the real achievements and improvements. In 1995, the Microsoft guru Bill Gates, among other many marvels related to the emerging development of Internet, promised us that:

> The highway is going to give us all access to seemingly unlimited information, anytime and anyplace we care to use it. (…) We will discover all sorts of different approaches to teaching because the highway's tools will make it easy to try various methods and to measure their effectiveness. (…) The highway will bring together the best work of countless teachers and authors for everyone to share. Teachers will be able to draw on this material, and students will have the opportunity to explore it interactively. In time, this access will help spread educational and personal opportunities even to students who aren't fortunate enough to enjoy the best school or the greatest family support. It will encourage children to make the most of his or her native talents. (Gates et al., 1995:184-186)

However, in a single paragraph out of the many dedicated to praise everything the *highway* can do for education, Gates offers a fundamental hint to suggest that ICT is not the kind of technology more desperately needed in the educational field. Gates recognises that:

> All this information, however, is not going to solve the serious problems facing dropout rates, dangerous neighbourhoods, teachers more concerned about survival than education. Offering a new technology won't suffice. Society will also have to fix the fundamental problems. (Gates et al., 1995: 197)

Gates seems to deliberately forget –as he seems to be an intelligent person, that the main educational problem is not the lack of information, but the conjunction of most of the issues the *highway* cannot solve. Even the most valuable asset provided by the *highway,* information, is nothing for a learner if he or she cannot judge it, contextualise it and make sense of it. Computers can handle symbols, but learning implies making symbols meaningful and meaning can only be achieved by somebody able to know, someone with conscientiousness capable of establishing a dialogue with information to convert it into knowledge. This is the reason for Postman (1996) to speak about the god of Technology as a failed god, as a narrative that only deals with engineering problems of teaching. For Postman (1995: 3), "it is important to keep in mind that the engineering of learning is very often puffed up, assigned an importance it does not deserve". This approach to educational issues only considers the technicalities of teaching, but it does not usually confront metaphysical issues. And these are the essence of education since:

> to become a different person because of something you can learn –to appropriate an insight, a concept, a vision, so that your world is altered– that is a different matter. For that to happen, you need a reason. And this is the metaphysical problem I speak of. (Postman, 1995: 3-4)

Nevertheless, the field of education has not been indifferent to the powerful discourse developed about the incredible potential of computers and the huge pressure exerted by economic and political interests. In 1973 –when computers were little more than sophisticated calculating machines, Seymour Papert, a well know MIT professor for his activities addressed to foster the use of computers in education and among young people[4], stated that Christopher Jencks argued that schools did very little to change the inequality in life opportunities. Jencks could not find evidence of any significant difference in teaching due to the use of TV, films, language labs and other artefacts or innovative curricula implemented in the sixties. Papert claimed that powerful computers would have made this difference. And even more, for him, educators such as Dewey, Montessori, and Neill proposed to educate children with a fundamentally correct spirit but that, in his opinion, their proposals failed in practice due to the lack of a technological base. He was convinced that computers provide this base to achieve progressive educational aims (Papert, 1979).

This overoptimistic and under-contrasted discourse about the use of computers in education has gone on for years, even independently of research findings. Thus, when computers increased their capacity to process different kinds of data (audio, video, graphics, etc.) becoming multimedia, and the generalisation of the Internet started, Lamb (1992) asserted that all didactic resources created in the last two centuries, from textbooks to blackboards, overhead projectors, videos and computers were now coming together in a single interactive workstation. For him, tomorrow's schools will see interactive workstations linked to wideband networks which will give students access to audio, video and data both inside and outside the classroom. Even more, the use of different channels will allow teachers to take into account students' cognitive styles. While multimedia systems will foster exploration and self-expression and give students a sense of mastering by allowing them to manipulate its components. This is because, according to Lamb, multimedia environments favour communication, co-operation and collaboration between teachers and students and make learning stimulating, attractive and amusing.

Authors such as Franklin and Kinnell (1990) assured that hypermedia and hypertext programs improve students' access to knowledge, reveal ideas in teachable moments, show connections among different subjects, foster integrative thinking and act as powerful representation tools.

Computer programs have been also conceptualised as *cognitive tools* (Lajoie, 1993). Several authors affirm that there are at least four kinds of *cognitive tools* that can be identified by the type of functions they help to develop: (a) support cognitive processes such as memory and meta-cognition; (b) share the cognitive load by helping with the low level cognitive tasks to allow intellectual resources to be used for higher order thinking processes; (c) allow students to perform cognitive activities to which they would not have access in another way; (d) permit students to generate and test hypotheses.

Policy reports produced by national and trans-national bodies[5] and most countries' educational policy have not been immune to this overoptimistic discourse and to the formidable impact of the use of computers in every area of human endeavour. Nowadays most developed, developing and even underdeveloped countries have a more or less sophisticated and funded policy to introduce computers into education All of then are intended to both modernise and improve education. Therefore virtual geographies of educational change can be identified as strategic spaces to promote or catalyse educational transformation and improvement[6]. However, as it will be argued in the following sections, up until now it is not clear that ICT *per se* makes a positive difference in students' learning or has a significant and lasting effect in school improvement. On the contrary there is increasingly more evidence to show that the full potential of this technology itself, gaining in students learning and teachers' satisfaction, cannot be achieved without facing fundamental changes in teachers and students' mentality, school and cultural organisation and educational funding. In other words, without taking into account educational knowledge encompassed in other social geographies of change.

Between wish and reality

Despite the above considerations, most research carried out since the mid nineteen-eighties has put its emphases on trying to prove that digital technologies make a difference in students' achievement and school improvement. However, up until know there is not definitive evidence either about the impact of computers in the cognitive development of students (Delval, 1986; Krendl and Lieberman, 1988; Beynon and Mackay, 1993, Kozman, 2003), or about fundamental improvements of teaching and learning settings (Self, 1985; Straker, 1986; Becker, 1990; Pelgrum and Plomp, 1991; 1993; Cuban, 2001, Kozman, 2003). In 1994, a report issued by the Canadian government reached the conclusion that contrary to popular belief, the provision of ICT does not guarantee better results for students. According to this report, numerous factors play a crucial role in the achievement of better students' results, the most important one being the way it is put into practice and used (Rivière, 1998).

For Oppenheimer (1997) most research reports developed in the United States, including a meta-analysis frequently cited of 254 studies, lack the needed scientific control to establish solid conclusions about the effect of computers in education. This author also refers to the impossibility of establishing a correlation between investment

in computers and schools' results, reaching the conclusion that no benefit has been scientifically proved.

In his book *Oversold and Underused*, Cuban (2001) after carrying out several studies about the influence of computers in teaching and learning -in one of the most technology-driven school districts of the world, reached the following conclusion:

> there have been no advances (measured by higher academic achievement of urban, suburban, or rural students) over the last decade that can be confidently attributed to broader access to computers. No surprise here, as the debate over whether new technologies have increased overall American economic productivity also has had no clear answers. The link between test score improvements and computer availability and use is even more contested[7].

> Nor has a technological revolution in teaching and learning occurred in the vast majority of American classrooms. Teachers have been infrequent and limited users of the new technologies for classroom instruction. If anything, in the midst of the swift spread of computers and the Internet to all facets of American life, "e-learning" in public schools has turned out to be word processing and Internet searches. As important supplements as these have become too many teachers' repertoires, they are far from the project-based teaching and learning that some techno-promoters have sought. Teachers at all levels of schooling have used the new technology basically to continue what they have always done: communicate with parents and administrators, prepare syllabi and lectures, record grades, assign research papers. These unintended effects must be disappointing for those who advocate more computers in schools.[8] (Cuban, 2001: 178-179).

Although there are a few examples of educational innovation related to the use of ICT (Kozma, 2003), the overall vision, as reflected in studies such as Collins et al. (1999) about the educational use of multimedia systems and some preliminary results of the National Grid for Learning in England and Wales (Office of Standards in Education, 2001), looks quite disappointing. On the other hand, if we accept that the existence of stages in the development of ICT (McKinsey et al., 1997 and Mooij and Smeets, 2001), we seem to be a long way off the second wave of use or integration (McKinsey et al., 1997) in all educational settings.

In fact, what all these studies show is that most initiatives launched with the aim of using computers in education invested in computers of such a power that it was assumed that not only their use, but even their mere presence in schools would achieve what many other tools and methods had failed to achieve. This belief has informed most educational policy regarding the use of computers in education since the very early stages. When computers were introduced for the first time in the French educational system, educationists working for the Minister of Education decided that it was not necessary to carry out any study regarding their effectiveness. They argued that as all pedagogy evolves, there was no sense in comparing these tools with pre-existing pedagogical devices. At the same tame they expected that the use of computers would result in the adaptation of schools to the students' daily life (Andrieu, 1986).

However, the lack of evidence about the positive contribution of ICT to the improvement of education, a fundamental aspect of virtual geographies of educational change, has not prevented countries from investing in considerable amounts of funds to provide schools with these kinds of tools. Even more so, this provision is being made without making sure that the rest of the factors involved in making this change real are adequately handled.

Not only ICT, but also how education is organised and delivered

In recent years, research carried out regarding the use of ICT in education from a broader perspective has provided new evidence of the importance of taking the educational context into account. According to these studies, ICT can be a magnificent tool if used in a sound educational manner. However, if the rest of the components of the educational system: curriculum, timetables, assessment, teaching methods, school space, teachers and administrators' mentality, school culture, etc., remain the same, computers would have very little, if any, influence in transforming and improving educational settings.

In a review of research carried out in the United States about the effectiveness of the use of computers to teach mathematics, Archer (2000) found that computers can increase students' achievement and even improve school climate; however, for this to happen computers have to be put into the right hands and be used in a suitable way. ICT can have positive effects, but it depends on how it is used. The use of computers for the wrong aim can cause more harm than good[9]. Archer considers these findings, which, as suggested earlier have been there since the early stages of Educational Technology, as good news for the United States educational systems that bear an increasing pressure to justify the considerable national investment in educational technology, estimated at the moment at five billion dollars per year. However, it also represents a big challenge for policy makers looking for a good pay back for their investments. The main problem is that too often his study finds that computers are used for the unsuitable activities.

Students participating in the international network of the OECD found the intensive use of ICT at school highly motivating. Students expressed their desire that schools reflect outside world issues and provide them with an adequate education suited to the realities of contemporary life, and in those cases where this would not happen, students became more a more disaffected to school. Students vividly illustrated the capacity of ICT when used wisely and imaginatively to transform teaching and learning settings (OECD, 2001). However, the big problem is to *guarantee this wise and imaginative use.*

In a review of findings from research issued by Cathy Ringstaff and Loretta Kelley, the authors pointed out that

> measuring the impact of technology use on student achievement is fraught with difficulties. Classrooms are not experimental laboratories where scientists can compare the effectiveness of technology to traditional instructional methods while holding all other variables constant. Moreover, few reliable, valid, and cost-effective assessments exist that measure students' higher-order thinking skills, problem-solving ability, or capacity to locate, evaluate, and use information — skills that many researchers and teachers believe can be enhanced through technology use. Technology has also been shown to increase student motivation and engagement, prepare students for jobs, and enhance students' ability to work collaboratively, but we have few, if any, tools and methods to measure impact in these domains. Thus, it is not surprising that the impact of technology on education continues to be debated by educators and researchers alike.
>
> Debates aside, there is a substantial body of research that suggests that technology can have a positive effect on student achievement *under certain circumstances and when used for certain purposes. However, there is no magic formula that educators and policymakers can use to determine if this "return" is actually worth the "investment." Perhaps, rather than asking, "Is technology worth the cost?" the more important question is, "Under what conditions does technology have the most benefits for students?"*[10] (Ringstaff and Kelley, 2002: 23-24)

Lessons learnt from the revision of a good number of studies allowed these authors to identify a set of crucial elements for successfully using ICT, and that they summarised as:

- Technology is best used as one component in a broad-based reform effort.
- Teachers must be adequately trained to use technology.
- Teachers may need to change their beliefs about teaching and learning.
- Technological resources must be sufficient and accessible.
- Effective technology use requires long-term planning and support.
- Technology should be integrated into the curricular and instructional framework. (Ringstaff and Kelley, 2002:2-3)[11]

These findings show, once more, that the mere access to technology is far from being enough to promote students' learning and school improvement. These conclusions were also raised by McClintock (2000) after more than ten years of participating in heavily funded ICT in education projects, the basic aim of which were to use digital technologies in schools and classrooms to change the operative intellectual constraints that have traditionally limited what students and teachers could accomplish. McClintock and his team hypothesised that digital technologies will make two significant long-term changes in educational practice feasible and they sought through their practical projects to take concrete steps towards these changes. One such change involved pedagogy, the other the structure of educational institutions. In the design and implementation of their projects, these hypotheses have been translated into a number of what they called axioms of practice.

- High-speed WAN to LAN connectivity is essential, reaching into all classrooms.
- Schools should integrate new media into all aspects of the curriculum, for students of all ages.
- Diffusion of the use of new media in a school should result, not from mandate, but from responsive support of voluntary efforts – constructivism in school management.
- Schools should design their technology implementations as investments in the power of students to acquire their education.
- Educators should abandon the premise that they can predict what a good student should have learned as a result of an educational experience.
- Classrooms should become places from which students and teachers communicate interactively, among themselves, and with specialists and peers throughout the locality, culture, and globe. Under emerging conditions, precepts of pedagogical common sense may need substantial revision, particularly with respect to what is and is not "age appropriate," who can make sound pedagogical choices, and how feedback controlling the educational process should work. (McClintock, 2000:75-76).

To McClintock's own disappointment, progress has been good only on the first axiom of practice. To link schools via high-speed wide area networks to the Internet and to provide widespread access to that connectivity through local area networks reaching

multiple workstations in each classroom is expensive, but the resources available for it are increasing while its costs diminish. With respect to other axioms of practice, he reckons, "to have learned a well-worn truth –significant historical change in complex institutions takes place on a time-scale of extended duration" (McClintock, 2000: 76).

As a part of the development of School+ project[12], we conducted a study to explore the problems and limitations identified by participating schools in implementing an ICT platform along with the requirements to rethink school time and space and develop a more integrated and inquiry-based curriculum. In the study we took into consideration teachers, students and parents' perspectives, using different data collection strategies – discussion groups and online forums. Their views can be summarized as follows:

- Some teachers did not see the need for changing anything at school because they thought they were good teachers working in good schools.
- There are curriculum subjects a number of teachers and parents thought that cannot be learned using ICT.
- Implementing ICT is not a guarantee for changing teachers' and schools' educational approach.
- The educational approach adopted to implement ICT has to cope with the current content-oriented structure of curriculum and the administrative constraints in relation to school innovation.
- Any ICT proposal requires a clear presentation of its educational and technological framework to schools and their communities.
- The use of ICT in everyday school life needs complementary resources and support from the Administration.
- There is a high level of resistance to change the culture of schools.
- Teachers feel unsure about taking on new roles, are afraid and consider themselves to be constrained in coping with innovations and educational changes.
- Time is a key element for the implementation and continuity of innovation (Larraín, Sancho, Hernández et al., 2003).

Taking into account the above reflections provides irrefutable evidence to argue that the study of virtual geographies of educational changes should adopt a comprehensive approach to the study of phenomena brought about by the use of ICT in educational settings. Such an approach should consider that the implementation of ICT as educational innovation confronts the same challenges, constraints and possibilities as any other innovation. This has not been the case until now, as we will see in the next two sections.

Renewed efforts

One of the many puzzles human beings have been unable to solve is our own inability to make sense of knowledge to prevent the same mistakes happening over and again. We all have information about the damage caused by tobacco, alcohol, and other kinds of drugs, but this does not stop us from smoking, drinking heavily or getting nasty addictions. People know what a good and a bad diet is, but eating problems are greater than ever. Politicians and corporations know perfectly well the kind of irreversible harm pollution and intensive exploitation of natural resources are producing to our environment, but regulations and practices are not improved. The minimum conditions

for educational innovation leading to school improvement have been largely identified (Sarason, 1990; Stoll and Fink, 1996; Fullan, 2001; Hargreaves, 2003); however, this does not mean that recent educational reforms launched in different countries at the end of the twentieth century and beginning of the twenty-first have taken them into account to avoid the same mistakes being committed over and again.

It should therefore be of no surprise to see governments and transnational bodies such as the European Commission to keep on thinking of ICT as a lever for improving both learning and economic competition. All countries are investing considerable funds in providing schools with computers and Internet access[13]. At the moment, the interests of the United States seem to be in another place, but President Bill Clinton campaigned for:

> a bridge to the twenty-first century (…) where computers are as much a part of the classroom as blackboards. Clinton was not alone in his enthusiasm for a program estimated to cost somewhere between $40 billion and $100 billion over the next five years. Speaker of the House Newt Gingrich, talking about computers to the Republican National Committee early this year, said, "We could do so much to make education available twenty-four hours a day, seven days a week, that people could literally have a whole different attitude toward learning". (Oppenheimer, 1997: 1)

After taking office, Clinton's government, trying to meet what he called the *Technology Literacy Challenge*, launched the initiative entitled *Getting America's Student Ready*, with four concrete goals to define the task in hand: (a) training and support for all teachers to help students to learn using the information superhighway; (b) providing all teachers and students with modern multimedia computers in their classrooms; (c) connecting all classrooms to the information superhighway; (d) and making effective software and online learning an integral part of the school's curriculum (United States Department of Education1, 1996: 5).

This inflamed discourse full of apparent goodwill and interest in the improvement of education had, for Selfe (1999), a very different meaning to the reality of schools.

> Although articulate belief systems affectively mask many of the material effects of the project to expand technological literacy, especially those incongruent with dominant American values, they also function to distract our attention for additional causes of failure in the public school system. Much of the failure for the current project, for example, has been attributed not only to the uneven distribution of computers according to race and socioeconomic status but also to the poor education and training of teachers themselves." (Selfe, 1999: 127-128)

The main factors of failure regarding the implementation of the initiative itself have been summed up by Coley et al. (1997) as follows:

- Most teachers have not had suitable training to prepare them to use technology in their teaching.
- In a majority of schools, there is no onsite support person officially assigned to co-ordinate or facilitate the use of technologies.
- To use technology effectively, teachers need more than just training in how to use the machines and technical support.
- Many teachers feel the need for more technical and pedagogical knowledge, not just regarding how to operate the machines, but also about which software to use, how to integrate it into the curriculum, and how to organise classroom activities using technology.

- Many schools, districts, and/or state assessment systems rely heavily on standardised achievement tests, which can be a barrier to experimentation with new technologies because teachers are not sure whether the results they are seeking will be reflected in the student test score.
- Issues created by technology itself are also factors to deal with, including those related to copyright and intellectual property rights, privacy, student records, and control of student access to objectionable material.

In 2000, at the meeting in Lisbon, the European Council expressed its willingness to convert the European Union into a highly competitive entity. One of the conclusive agreements of the summit was that:

> Europe should become, by 2010, the most competitive and dynamic knowledge-based economy in the world, capable and sustainable economic growth with more and better jobs and greater social collaboration.

The European Commission determined that one of the major ways of achieving these aims, even though the European Commission does not have policy responsibility for education in the member states, has been by launching the so-called e-Learning initiative. Once more, the definition of e-Learning is centred in the tools and not in the conditions regarding school culture and organisation, curriculum, teacher education, etc. So e-Learning is understood as the use of new multimedia technology such as the Internet to improve the quality of learning. According to this initiative multimedia technology allows the use of movie, audio and text resources to enrich the contents; the Internet gives easy access to resources and services; e-Learning stimulates remote exchange and collaboration and empowers the learners in every situation.

The stated objectives of this project are:

- To help the individual to realise his or her full potential and lead a happy and fruitful life.
- To reduce the disparities and inequalities between individuals and groups.
- To ensure that the skills available meet the needs of business and employers.
- The explicit assumptions of this proposal are that e-Learning is based on reliable technologies but is pedagogy-oriented; that it is a social process and should facilitate interaction and collaboration with people; and that implies organisational change and teacher/tutor training.

It is too early to assess the effect of such an initiative on the educational systems of the European Union member states. However, looking at the discussion held in the previous sections of this chapter and from my own experience in the European project, introducing the fundamental pedagogical changes needed to achieve these objectives needs the explicit *permission* of national Ministries of Education, because teachers and schools in most countries do not have the necessary autonomy to implement any essential pedagogical change. Furthermore, in countries such as Spain, the newly approved educational law[14], as has happened in other countries (Hargreaves, 2003), seems to be a long way off providing the most suitable pedagogical conditions for the implementation of e-Learning.

In the short term this situation means that the happy and fruitful encounter between information and communication technologies and sound pedagogical approaches has not happened yet, and it is difficult to foresee when it will happen,

especially if those interested in these technologies and those dedicated to school and teaching innovation by means of improving school management and organisation, teaching methods and teacher education do not find a way of establishing a productive dialogue and profound collaboration.

THE FINANCIAL ASPECTS

No technology is neutral and ICT is not an exception. Behind the pressure for educational systems to use its power for fostering students' learning and school improvement, enormous corporative interests have also been identified. In 1992, taking into account the lack of evidence about the effectiveness of computers to foster students' learning, Barry MacDonald wondered why the British government was spending millions of pounds in providing computers to schools, and why in a country such as Great Britain, that scrutinises any economic adventure, the government decided to isolate its more substantial investment in computers in education from this external examination. As satisfactory answers could not be found, he concluded that this decision had very little to do with education and much more to do with providing a hidden subsidy to the Information Technology (IT) industry and with using schools as a lever to persuade industrialists to invest in IT (MacDonald, 1992).

Different authors have also pointed out the decisive movement made by corporations with interests in different ICT fields towards the impressive volume of funds moved by educational and training systems. Corporations regard educational and training systems as fundamental clients for their increasingly more diversified products: hardware, software, teaching materials, information, communication, entertainment, etc. (De Sélys, 1998; Rivière, 1998: Sancho, 1999; Steinberg and Kincheloe, 1997). Not only that, they also regard themselves increasingly as education and training providers (Hanna, 2000)[15]. In 1989, the European Round Table of industrialists, an association with a notable influence on the European Commission, published a report, *Education et compétance en Europe*, in which education and training were considered as strategic investments vital for the future success of corporations. The report regretted that education and training were considered by governments and those in decision-making positions in each European country as an internal issue, leaving industry with a reduced influence on curricula. The industrialists asked for a closer association with educational and training institutions and argued that teachers were a problem due to their lack of understanding of the economy, business, and of the notion of profit. The conclusion was that industry and education and training organisations should work together in developing educational and training programmes, especially regarding distance learning and the development of computer-based learning programs.

It is therefore of little wonder to see that today digital distance education, multimedia systems and virtual learning environments are the new bandwagon in the evolving landscape of virtual geographies of educational change. A landscape in which, in spite of all evidence showing that in the field of educational technology the unsolved part is still *the educational* one, still much more attention is paid to *the technology*. Perhaps the question could be posed to policy makers, administrators and educator' inability, or impossibility perhaps, for really planning and putting into practice a systemic and comprehensive approach to education. Such an approach should be able to give an account of the whole complexity of educational problems, including the political and economic ones.

STUDIES IN INNOVATION AND CHANGE AND DIGITAL TECHNOLOGIES: THE MISSING LINK

More than ten years ago Barry MacDonald (1992) tried to explain why, from the beginning, the proposals launched to implement the use of computers in education, which in fact were innovations as it could have been the putting into practice of new curriculum in the use of new teaching materials, did not pay attention to the problems that studies in educational innovations had been identifying since the sixties. His explanation is partly based on the powerful and interested discourse we have made explicit earlier in this chapter. Most of the times the huge dose of hope placed in computers to solve educational problems relies on the supposition that computer-based instruction is a powerful change agent, able to impose a reconstruction of the learning environment. Computers as catalyst or the Trojan horse metaphor have been often used. The amazing thing for MacDonald was the perseverance of these expectations even if these beliefs were discredited.

The other part of the problem was, and still is, the apparent ignorance of the computers enthusiasts, in charge of ICT in education programmes, regarding the real situation of schools and the set of factors, circumstances and processes involved in educational innovations that bring improvement for schools and students' learning. For MacDonald the most worrying of all was, and it still is, that with computer reading in educational literature few people would think that we have more than thirty or forty years experience, in part a bitter experience, of curriculum innovations that have tried to achieve the kind of transformations dreamt by computer enthusiasts. These initiatives began with the conviction that it would be very easy to rewrite textbooks and disseminate curriculum packages. This very simplistic vision led to the need to undertake the professional development of teachers together, otherwise they would never be ready to implement the curriculum and use the materials in innovative ways. However, the notion of single innovations able to change the learning settings had to be discarded, along with the illusion that innovation could last only with the infusion of overtime resources and additional rewards. In other words, innovation should be sustainable processes. Finally, the real catalyst happened to be the institution, not the innovation, in this case, the computer. Organisations are the ones able to neutralise and assimilate any intervention that constitutes a threat for their dispositions, values and routines. Institutions themselves are, as Ernest House pointed out in his seminal evaluation of innovation policy, frozen establishments, locked in the social order of the institutional structure of the social administration and control (House, 1974).

MacDonald considerations, expressed in the first *European Conference about IT in Education: a critical insight*, played a prophetic role in the second one, held ten years later. The participants in the second Conference[16] reached, among others, the following conclusion:

> Those educators willing to renew and improve education with the use of ICT feel themselves trapped by administrative and organisational structures. The educational communities seem to be more ready for the change that the incorporation of ICT implies than their working conditions, current laws and budget endowments allow them to be. In this sense, some bottom up initiatives should be promoted or recognised through structures that enhance them, rather than repressing them. (Sancho, 2003: 283).

When House was pointing out, in 1974, that institutions were frozen establishments, everybody was thinking of schools. Thirty years later those schools that

have the energy and the desire to start a defrosting process, find themselves trapped in a web of regulations and bureaucracy practically impossible to break. Different studies are pointing out that central and regional administrations can act more as a brake than as lever for school improvement (Sancho, 1992; Hargreaves, 2003).

Regarding the lack of dialogue between those in charge of *computers in education* programmes and those involved in the study of school innovation, change, improvement and effectiveness, it must be realised that a dialogue needs two to talk at least. This statement comes from my observation of the relatively poor interest shown by leading scholars in the educational innovation field regarding these issues. Maybe computers are seen as just another tool that will go through schools without leaving any tangible good. However, we should not forget that according to Inis[17], the new ICT have three types of effects. They *alter the structure of interests,* the things about which we think. This action has important consequences in the evaluation of what counts as a priority, is important, fundamental, or obsolete; and also has an influence in power relationships. They also *change the character of the symbols,* the things with which we think. Comparatively simple operations such as tying a knot or using marks to remember something change the psychological structure of the process of memory, extending it beyond the human nervous system's biological dimensions and enabling it to incorporate artificial of self-created stimuli called signs (Vygotsky, 1979). If this is the case, there can be no doubt that the new ICT are enlarging this repertoire significantly. Finally, they *modify the nature of the community,* the area in which the thought develops. At this moment in time, for an important number of individuals that area might be cyberspace, the real and virtual worlds as a whole. Even those who don't leave their home and do not establish relationships with anything or anybody out of their own space can have the impression that they are fully *informed* and *connected.*

Scholars and educators interested in converting schools into better places for students and teachers; and who envision education as a *place* to allow students to develop as subjects and responsible citizens, cannot approach educational issues any more from a single viewpoint. If specialists or enthusiasts in the use of computers in education do not take the institutional and administrative complexities, cultural inertia and resistance to change into account, their proposals will be a long way off from achieving the proposed goals. At the same time, scholars and practitioners involved in the promotion and study of educational change and innovation aimed at improving educational performance, will have to take into account which virtual technologies, along with other political and economic factors, are shaping the world and setting up new challenges to education. They also should discuss to what extent this same technology can play, or otherwise, a fundamental role in the educational processes.

TOO SIMPLE TOOLS FOR SUCH COMPLEX ISSUES

Regarding educational systems, contemporary societies are confronting formidable challenges and needs. The complexity of social organisation and harmonisation is increasingly growing hand in hand with a set of interrelated phenomena such as globalisation, immigration, market-driven economy, increasing wealth divide and information explosion, brought about by the impressive proliferation of digital technologies. This new social scenario acts as a source of unremitting demands, tension and pressure for educational systems. Educational systems have to cater for an increasingly more diversified population and meet broader and deeper educational

objectives. However, and this is a paradox, the policy deployed in the last decade of educational reforms is given very little room for schools to become flexible, challenging and engaging places for children and adolescents. On the other hand, as an integral part of this scenario, digital technologies, as discussed above, have been claimed by many enthusiasts as a panacea for educational problems, the way of modernising teaching and learning and transferring schools from the nineteenth to the twenty-first century.

An evolving landscape for a rather stable structure

If in the middle of the nineteenth century people had been told that very soon everybody, from the age of six or seven to fourteen, sixteen or eighteen, will be compulsorily at school around five hours per day, five days per week, we can be sure that most of them would have felt puzzled. They probably would have raised questions such as: Why does a manual worker need to go to school? Or why a woman? Can't they learn their jobs perfectly well in the fields, factories or at home? Why do they need to learn to read or write? Maybe if they do, they could have access to information, develop the capacity to think in different ways and become rebellious or unhappy with their roles. What about those people coming from other countries or cultures such as black people, indigenous, gypsies, etc.? What point is there for them to go at school if they are considered intellectually and socially inferior? What about handicapped people or people with mental disorders that in some countries were considered as a shame, as "something" to be hidden at home or in charitable institutions? What were they going to do at school if they were unable to read, write, speak and behave? One hundred and fifty years later, there are many countries where all children and adolescents, independently of their sex, ethnical, religious or social background and their intellectual and emotional capacities, spend a good deal of time of their lives compulsorily attending school.

This clearly shows that many things have changed in the world in the last one hundred and fifty years. Modern societies pay more attention to individual rights and duties, in spite of the neo-conservative attacks on welfare states. The working age has been delayed both due to the production system and the evolution of the market, but also because of social struggle and political evolution. Access to knowledge is no longer seen as a perk of privileged people, but as a right for every citizen[18]. School itself is no longer considered as the main source of children and adolescent learning. In technologically developed societies the socialising universe of children and adolescents, for years centred in the family, the school and the church, as shown in graph 1, has been significantly enlarged.

Individuals in societies highly mediated by ICT are finding themselves exposed to a remarkable information flow and experiencing new paradoxical phenomena. First, the gap between *exogenic* knowledge and *ontogenic* knowledge, Chen (1992), is growing rapidly, exerting tremendous pressure on the individual who aspires to have a share of *exogenic* (public) knowledge. Chen (1992) considers *exogenic* knowledge as public knowledge accumulated by mankind since the beginning of civilisation by complex social processes; while *ontogenic* knowledge is namely the knowledge that grows in the individual as a result of the complex process interrelating the innate knowledge emanating from the unfolding expression of the genetic pool, and the knowledge acquired by learning through the environment. Secondly, the fissure between adults' and children's, adolescents' and youths' construction of identity, subjectivity, social

relationships and values has evolved and widened rapidly by the increasing separation of all the above sections' life experience and commitment[19]. Digital technologies, along with adult working conditions and views about children, adolescent and youth education, are broadening the *traditional* generation gap beyond recognition, making some parents, teachers and especially youngsters feel they are living with *strangers*.

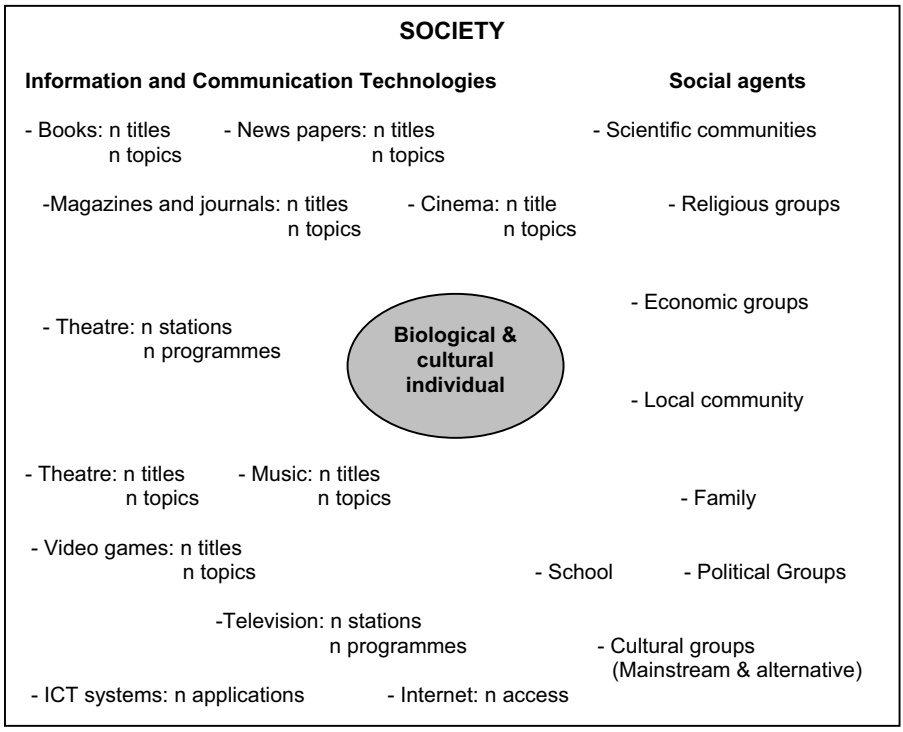

Figure 1: Enlarged socialising universe in the Information Society

Finally, the gap between the 'inforich' and 'infopoor', the digital divide, has dramatically widened not only between technologically developed and underdeveloped countries, but between privileged and underprivileged groups within countries. In 1996, 66% of the 23.4 million of households connected to the Internet belonged to the United States; 16% to Europe and 14% to Asian Pacific (Tapscott, 2000). What does mean is that, even if we can be assured that the figures have increased in these seven years, there are around 15 ad a half million of United States households connected to the Internet. However, what about the almost 40 million households that do not have this facility in a highly competitive society? What does it mean for the more than one billion households all over the world without any clear hope of not only being connected to the net but even of providing their children with an education? However, even access to technology is not the only indicator of the digital divide. Even more

important is the kind of use people make of digital technologies. This use systematically correlates with people's educational and cultural background.

Regardless of all these changes, the idea most people have about school is of an isolated building, divided up into classrooms in which a teacher and a group of students of the same age (and some time capacities) spend around thirty hours per week, for around nine months per year. During this time, students should learn what the Ministry of Education thinks is best for them, and the way of undertaking this learning is decided by the teacher and the textbooks. Teachers are expected to teach (explain the lesson or indicate the exercises students must do) and students are expected to learn (listen to the teacher, read the textbook and do the exercises). Usually the teacher takes the most prominent role. Periodically students have to show their learning through paper and pencil text and if their answers are satisfactory they are upgraded. Students can also use other school spaces such as gyms, labs, or libraries, although it may be the case that many schools lack this equipment. With a few exceptions, generally located in the early grades, infant and primary, this way of understanding schooling has undergone very little changes (Cuban, 1993). This stability or difficulty to adopt and sustain substantial changes has brought Tyack and Tobin (1994) to speak about the "grammar" of schooling, about a set of implicit rules found in practically all schools. What it does not mean to deny is the particular culture and pedagogical tradition of certain schools.

In spite of this stability, everybody recognises that the expectations we have of schooling today are much higher than one hundred years ago. The nineteen-nineties were prolific in drawing different pictures of what were considered the educational needs and challenges for the upcoming century and millennium and the social and personal profile to be achieved or developed by an educated person. Blending reports funded by UNESCO (Delors et al., 1996), the European Commission (1996), the European Round Table of Industrialists (ETR, 1995), and the Organisation for Economic Co-operation and Development (OECD, 1998), education should aim to create citizens:

- with a comprehensive development;
- able to emit reflective judgements;
- able to undertake research-like activities and maintain an independent spirit of inquiry;
- able to achieve their self-realisation and find who they are;
- able to deal with the tension between the world-wide and the local levels, the universal and the singular issues, tradition and modernity, the long and the short terms, the indispensable competition and concern for equal opportunities, the extraordinary development of knowledge and their assimilation capacities, between the spiritual and the material;
- with a palette of skills covering both numeracy, literacy, critical judgement and a knowledge of the basics of all three disciplines: maths/science/technology, humanities, economics and social sciences; and communication skills, taking on responsibility and team spirit;
- able to think and not only accumulate facts;
- self-disciplined to be able to cope with ongoing change and challenges;
- with a satisfactory development of their linguistic abilities, their creativity, their capacity for collaborative teamwork and for problem solving;
- ready to work with new technology, especially with digital and virtual technologies;

- able to exercise a responsible citizenship, enjoy their individual self-satisfaction - while being aware of their rights and duties;
- with a good predisposition to work.

Following along these same lines, after the contributions of different authors (Bell, 1976; Castells, 1996, 1997, 1998; Giddens, 1998, Rich, 2001), Hargreaves (2003) undertakes his analyses of what it means to teach in the Knowledge Society, taking advantage of its best elements. This author, as many of the reports considered above, gives a great deal of responsibility to teachers that, according to him, are experiencing a very demanding and paradoxical job. He also concludes that teaching for the economy of knowledge fosters and flourishes with creativity, flexibility, problem solving, ingenuity, collective intelligence, professional trust, risk taking and continuous improvement.

Today's educational problems, leaving aside poverty that prevents millions of children all over the world from benefiting from any kind of education, can by identified as:

- The problem of *equity*: how to guarantee the basic human right of access to education for *all*? An education that should be able to meet the often conflicting needs and expectations of individuals and groups.
- The problem of *sense*: how to foster among students a positive vision of their environment and their role as children, adolescents, youngsters and adults, in an unjust and uneven world, hounded by unemployment, poverty, marginalisation, violence, political and economic corruption and habitat degradation.
- The problem of *meaning*: to which extent an institution that generally does not take into account either external world events or students' interests and expectations and that is anchored in a decontextualised discipline-based knowledge, can capture and develop students' motivation and predisposition to learn. How can schools and curricula favour student's understanding in a world characterised by the culture of fragment and information overload?
- The problem of *perspective*: one fundamental question for current educational systems is to decide where to look exactly. Up until now, they have looked towards where policy makers, administrators, teachers and parents feel safer: in other words, towards the kind of education they received, even if when they were at school they did not think it was the best possible one. If this is the case, the question is how to transform a situation based on the feeling of safety provided by the classic discipline-based curriculum metaphor into a learning organisation able to cope with complexity and uncertainty.

The main question here is what kind of educational system we would need to be able to cope with all these challenges and demands. Does it seem wise to expect ICT application, even the most sophisticated ones, to be an answer to these problems?

It seems clear that the role of ICT in addressing all these problems it is a marginal one, unless, as pointed out earlier, many other factors undergo substantial changes. However, the most significant issues emerging from this approach is the need to ask whether what everybody understands today as a school, the most rooted organisational technology in any educational system, and its derived routines and belief systems, are

still the best and only possible answer to meet individual and social educational needs and challenges.

THE CONCLUSIONS AS A FORM OF CONTINUING THE DISCUSSION

It is evident that in a world that is heavily technologically driven, virtual geographies of educational change have to be carefully taken into account. Maybe not so much for the *power* of computers to act as a fundamental lever for promoting innovation and improvement in education, but because of the powerful discourse consistently built around them and the mass of corporations' interests. ICT applications will remain amongst us for a long time to come and will regularly flood the market with more and more sophisticated gadgets. Immediate consequences of this trend are the rise of technological consumption, along with feelings of frustration for those children, young people, and even adults who cannot afford to update their technology[20]; the increase of the digital divide and the enlargement of the gap between the 'haves' and the 'have nots'; and the increase in environmental pollution. ICT were introduced as *clean* technology in opposition to the industrial technologies whose impact in our milieu was very well known[21]. However, it is now turning out that hardware waste is already producing large-scale pollution and the tendency to constantly update hardware will make it worse and worse in the near future.

On the other hand, current students and the ones entering schools in the following years have been socialised in world heavily mediated by ICT. The way today's children and adolescents approach information, appraise knowledge, approach schooling, achieve learning, and build value systems is very different to the way teachers and parents did. These transformations have formidable consequences for education. The school structure was conceived for the education of a few in the emergence of the written text. The timetable, the curriculum, the teaching methods and the teaching materials responded to the need to transmit a stable set of subjects to a selected group of students, using the printed text. Today images are playing a fundamental role; digital technologies have diversified the information production and delivery modes; knowledge is expanding and evolving at an amazing pace. In many countries school is compulsory for all children, even for those with special needs, for a good length of time, between 8 and 12 years old; however the structure of school remains practically the same in spite of computers and all the ongoing social changes.

The consequences of this situation are the growing students' disaffection with school, the feeling that what they learn there is irrelevant for their present and future lives. This inability of schools to provide students with an educational milieu to foster their intellectual and emotional development and their own responsibility in the learning process is confronting our society with formidable challenges and contradictions. However, we should take into account that the responsibility for the transformation of school settings does not only lie with teachers but also with policy makers, parents and all social systems.

Hargreaves (2003) has pointed out some of the challenges regarding educational systems and their apparent difficulty in providing students with an educational setting that allows them to acquire and develop knowledge, skills and emotional equipment for them to meaningfully live in the Knowledge Society.

On the other hand our society is constantly increasing its complexity, its knowledge, and its technology. At the same time, audiovisual media has become the predominant

mode of information delivery influencing people's learning and approach to knowledge. And most audiovisual media content is characterised by a high degree of frivolity and lack of depth in dealing with any issue. At the same time, in the relationship with audiovisual media people inevitably adopt a consumer role as practically nobody has the knowledge and the conditions to produce audiovisual messages[22]. Schools themselves make students media consumers since if they use media at all in the teaching and learning processes, most of the time its use places students in an uncritical consumer role. In many schools students can end up being able to produce an articulate text to express their ideas; but it is difficult to find school leavers, and also graduates, if they do not have a degree in media studies, able to express themselves and their approach to the world using images.

One of the consequences of such situation is that people living in highly complex societies, in which *exogenic* knowledge expands with an impressive higher rate than *ontogenic* knowledge (Chen, 1992) find themselves in a cultural and educational milieu that prevented them from developing the wide and deep understanding and the emotional strength needed to survive in this same society. In the long term, this could mean the inability of more and more people to take advantage of and recreate the accumulated knowledge. Also in the long term, this could even mean the loss of cultural and scientific memory and the weakening of civilisation.

I started this chapter by stating, using Heidegger's words, that, "the essence of technology is by no means anything technological". I will close it by suggesting that the essence of virtual geographies of educational change is by no means technological, but highly educational. This field cannot forget the whole educational picture at risk of converting itself into something irrelevant for the innovation and improvement of educational systems.

NOTES

[1] The over-expectation phenomenon regarding the power of technological devices to solve enduring human problems has accompanied practically all new developments from electricity to computers.

[2] For Searle (1995) a given piece of paper can only become a five-dollar note, for instance, if it is a human institution of money.

[3] Where it seems to have an influence in students learning, as suggested by McLuhan and McLuhan (1988), is in children and adolescents' exposure to television after schools –three of more hours in most Western countries.

[4] The title of his books, *Mindstorms: children, computers, and powerful ideas*; *The Children's Machine: rethinking school in the age of the computer* or *The connected family: bridging the digital generation gap*, indicate the line of his thought and action regarding this issue.

[5] See among others, National Commission on Excellence in Education (1983), European Commission (1996), United States Department of Education (1996), ERT (1997), OCDE (2001), European Commission (2000).

[6] The computer as catalyser has been a metaphor repeatedly used by authors to exemplify the intrinsic power of these tools. However, practically all those who use it seem to forget that chemically a catalyser brings nothing extra to the situation. The only thing it does, and it is not of minor importance, is to cause the chemical reaction or speed it up. However, the components must be there. The main problem in education is precisely that, on many occasions the components needed are not there (McClintock, 2000; Mandinach and Cline, 2000; Kozma, 2003).

[7] Heather Kirkpatrick and Lariy Cuban, "Computers Make Kids Smarter—Right?" *Technos* 7, no. 2 (1998): 26-31; Thomas K. Landauer, *The Trouble with Computers: Usefulness, Usability, and Productivity* (Cambridge: MIT Press, 1995); W. Wayt Gibbs, "Taking Computers to Task," *Scientific American*, July 1997, pp. 82-89; Daniel E. Sichel, *The Computer Revolution: An Economic Perspective* (Washington, DC: Brookings Institution Press, 1997).

[8] Henry Becker, "Findings from the Teaching, Learning, and Computing Survey: Is Larry Cuban Still Right?" Paper presented at *Chief State School Officers Organization*, Washington, DC, January 13, 2000.

[9] See www.ets.org/research/pic.

[10] My stress.
[11] These findings are common ground for most research about educational innovation and change.
[12] School+ More than a platform to build the school of tomorrow http://www.school-plus.org is a project partially supported by the European Commission under the "Information Society Technologies (IST)" programme. Action-line: School of Tomorrow. September 1st 2001- August 31st 2004. School+ consortium is integrated by four Higher Education institutions (the University of Barcelona -Spain, Neuman Institut -Israel, Oulu Universit -Finland and Karlova University -Czech Republic), five secondary schools (IES Bernat Metge -Spain, Ellinogermaniki Agogi S.A.-Greece, Alliance High School of Haifa- Israel, Oulunsalo Secondary School- Finland, Gymnazium F.X. Saldy- Czech Republic) and an SME (ExtremeMedia Solutions Ltd. -Greece).
[13] In some cases, even at the expense of fundamental needs, including teachers' salaries, or creating situations such schools being unable to use the computers because they lack electricity, ink for the printer, suitable software or because the teachers do not know how to use them.
[14] Ley de Calidad de la Educación. (Quality of Education Law)
[15] See also http://www.futurekids.com the website of a project sponsored by Microsoft and http://dep.disney.go.com/educational/index, with the set of educational products offered by Disney,
[16] See Conference website http://web.udg.es/tiec.
[17] In Tedesco (1995).
[18] Even in countries where immigrants are not considered as citizens or there is a good number of illegal immigrants, voices denying the right of people to get an education or to have access to socially produced knowledge are challenged by progressive social and political forces.
[19] While I was finalising this chapter I listened to the results of an online inquiry delivered by Adrian North from Leicester University on the radio to young people about the historical characters they most admire. To many people's surprise, even if it should not be a surprise for those who are aware of TV, web, radio and newspaper publications' content, unless they are hypocritical, the ten most admired historical personalities did not stand out for their intellectual qualities, but because of their physical look. The number one was the British football player David Beckham.
[20] The situation of a Finnish eight year old deeply frustrated because his mobile phone did not have the services (photo, melodies, logos, etc.) that the new ones just produced had, is being converted into a practically everyday frustration among children and youngsters in practically all developed and developing countries.
[21] See, for instance, www.usatoday.com/tech/news/2002/02/25/computer-waste.htm and http://www.ylan-a.com/compdirt.htm.
[22] In my doctoral course about Discourse and practice in the Information Society students asked themselves why the media has such a powerful role as a reality constructor, and why people find it so difficult to defend themselves from the lies conveyed by the audiovisual media that uses images as reality. Through the discussion we found out that a major problem is that many people can write a text to refute or disagree with an idea, concept, phenomenon or news item; however, practically nobody can produce an alternative visual scenario.

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