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Honorary Doctors at the Faculty of Educational Sciences 2011–2017

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Conferment ceremony in the University Main Building in Uppsala. Photo: David Naylor.

Preface

The system of conferring honorary doctorates at Uppsala University has its origins in the conferment ceremony of 1839, when promoter, P.D.A. Atterbom, poet and Professor of Aesthetics and Modern Literature, first made this possible. Recipients of honorary doctorates can be researchers – primarily from other countries – or people with whom Uppsala University has established close connections. They can also be people without doctorate degrees whom the university wishes to link to the research community.

The Faculty of Educational Sciences was established in 2011. The faculty consists of the Department of Education (EDU), the Centre for Educational Leadership (RUT), the Centre for Professional Development and Internationalisation in Schools (FBA), Education for Sustainable Development (SWEDESD) and the Forum for Cooperation with the School Community (FoSam). The faculty offers graduate studies within three fields: education, curriculum studies, and sociology of education.

The faculty has decided to present the honorary doctors appointed after 2011 by printing the lectures they gave in connection with the conferment ceremony. Honorary doctorates in Educational Sciences have been awarded since 2004. The complete list of honorary doctorates can be found in Appendix I.

Through this publication, the Faculty of Educational Sciences aims at both contributing to research in the field and providing readers with an opportunity to access the wide range of work encompassed by Educational Sciences.

Uppsala, March 2017

Professor Elisabet Nihlfors
Dean of the Faculty of Educational Sciences



Diplomas given out to graduating doctors. Photo: Mikael Wallerstedt.

Presentation of the Honorary Doctors 2012–2017

This is a translation from the program the year they were installed.¹

Aasen, Petter (b. 1952), (HD 2012). Professor at Norway's Vestfold University College and a researcher of international repute in the area of education and research policy. He has studied policy control of education reforms, especially in the Nordic region. The book *The State and the Politics of Knowledge* places these studies in a broader international context. He has added depth to both the historical and the comparative perspective in education policy research by looking at the whole process (from formulation to realisation) of reforms in the education sector. In recent years, the work has increasingly been oriented towards how various forms of evaluation and the system of control affect governance of education and research.

From 1998 to 2003, Aasen was the Director and Head of research at the Nordic Institute for Studies in Research and Education (NIFU) in Oslo. During this period, the model publication index, which has had international success and is used in Sweden and elsewhere, was developed.

Professor Aasen has been Dean of both the Faculty of Social Sciences and the Faculty of Natural Sciences and Technology at the Norwegian University of Science and Technology in Trondheim. He is currently Rector of Vestfold University College and was recently appointed director of the newly established national Knowledge Centre for Education at the Research Council of Norway. The Centre will compile and disseminate research and promote collaboration among researchers, teacher trainers, practitioners and politicians. Petter Aasen has also worked on evaluations and as an expert for various Swedish government agencies. He has long collaborated with research environments at Uppsala University.

¹ Acta Universitatis Upsaliensis. Skrifter rörande Uppsala universitet. B. Inbjudningar 167–183, Uppsala 2012–2017.

Corsaro, William (b. 1948), (HD 2016). Professor Emeritus at Indiana University, Bloomington, US, has fundamentally changed our understanding of children's perspectives and participation ('agency'), and their socialisation ('interpretive reproduction'), in preschool, school and family life. In the 1980s, Corsaro carried out ethnographic fieldwork in American preschools, where he explored peer cultures and how children create friendships. His early research identifies, for example, the complex admission rituals developed by children to gain access to other children's activities. Since then, he has implemented a series of extended field studies in preschools, both in the US and in Italy. In his recent studies, he has investigated how, through their participation in everyday activities ('priming events'), children become prepared to start school.

Today, Professor Corsaro's microethnographic approach, as well as his theoretical set of concepts, are used by many researchers with an interest in children's social lives and learning. His textbook *The Sociology of Childhood*, published in 2006 and now issued in a third, revised edition, is used in a range of disciplines. William Corsaro has visited Sweden repeatedly, and his research has been recognised with several honours.

Goodwin, Marjorie Harness (b. 1944), (HD 2014). Professor of Anthropology, University of California at Los Angeles is a world-leading researcher whose pioneering work has developed an understanding of the embodied linguistic practices through which, in various contexts, people constitute their social world. In the 1980s, long before interaction research became established, M. H. Goodwin (1990) conducted anthropological field studies showing how such linguistic practices as disputes and gossip form part of the organisation of social life among Afro-American children in a housing area in the northeastern U.S.

Goodwin's research has significantly transformed our understanding of children's social and linguistic skills, and how children in various cultural contexts creatively established their social world in interaction with others. Her research has contributed key scientific understanding in terms of the view and importance of treating the body, emotions and morality as social and cultural phenomena, beyond mental characteristics.

In recent years, she has joined international projects exploring embodied linguistic practices that constitute the interplay among children, siblings and parents in middle-class families. Here, she shows how feelings are used to regulate behaviour in everyday interaction in child-rearing scenarios. In addition to her interest in interaction among children and in everyday family life, she has studied the use of technology and artefacts as part of the way

in which the world of work is organised. Goodwin has also, in a pioneering way, contributed to methodological development in interaction-based research. Above all, she has made use of ethnography, video recording and multimodality as integral parts of social practices. Today, she works at an internationally eminent research environment: The Centre for Language, Interaction and Culture (CLIC) at the University of California, Los Angeles.

Humphries, Jane (b. 1948), (HD 2016). Professor at All Souls College, University of Oxford, UK. She has devoted her career to both research and teaching about the social and economic history of families, children and young people. In the past few years, she has focused on children's experience of their upbringing, schooling and more. In her book, *Childhood and Child Labour in the British Industrial Revolution* (2010), she has transformed our knowledge of how working-class children experienced working in factories and going to school during the Industrial Revolution. The findings described in the book also formed the basis of the critically acclaimed, award-winning BBC series *The Children Who Built Victorian Britain*, in which Humphries herself gave a voice to British working-class children's experience during this epoch.

Professor Humphries has extensive qualifications in terms both of publications and of awards and honours, scholarships and research grants received. She has also held many academic and professional positions, and was the keynote speaker at the Sixth Nordic Conference on the History of Education (2015), organised by Uppsala Studies of History and Education (SHED).

Karsten, Lia (b. 1955), (HD 2013). Associate Professor at the University of Amsterdam, Netherlands, has studied children's agency and daily lives over the course of several decades. She is an internationally eminent researcher who has written or co-authored more than 120 academic publications, and a pioneer in studies of children's and young people's mobility and use of space. This area has assumed ever greater importance in research on children and adolescents, notably in the field of educational sciences.

In her research, Lia Karsten has shown how segregation in education and in housing are intimately connected; the implications of changed family circumstances for children's organisation in time and space; and the new challenges this poses for preschool and school organisation. In an extensive historical study of children's freedom of movement and families' school choices, she has studied how children's social capital has changed over time and the particular vulnerability this has entailed for certain groups of chil-

dren. It was Lia Karsten as well who coined the term 'back-seat generation' for children who are driven to school and home again seated in the back seat of the family car. This notion has gained a high degree of international penetration and reflects Karsten's great importance.

She likes working in the academic community, but also with organisations and companies, and has become involved in debates on social planning. One area of topical relevance, on which she has published several studies, is urban densification. The need for preschools and schools has been sidelined, school commuting has increased and children's mobility, freedom of movement and spontaneous activities in their immediate environment have been disregarded in the planning process. Over the years, several Swedish research environments have collaborated with Lia Karsten and in spring 2011 she was a visiting professor at the Faculty of Educational Sciences at Uppsala University.

Kress, Gunther (b. 1940), (HD 2015). Professor at the Institute of Education, University of London, UK. Previously, he worked in Australia. How communication shapes us as individuals and social agents is a question that permeates Kress's work. Within this broad area, he has published in English literature, linguistics, sociosemiotics, discourse analysis, multimodality as well as learning and teaching.

In recent years, his main focus of interest has been the interplay among various ways of communicating (modalities), such as writing, creating images, speaking and making music, and the influence of these modalities on learning and knowledge at a time of rapid change in the dominant means of communication. He describes current change in ways of communicating partly as a transition from the written page to the visual screen (from book to computer monitor or tablet). He has written several ground-breaking works, such as *Reading Images: The Grammar of Graphic Design*, the first systematically performed study in this area. Data comprise everything from children's drawings and toys to moving pictures, websites and works of art. His subjects of study have included communication forms in children's and adolescents' learning environments at school, in e-learning, in textbooks and in medical students' practicals.

Gunther Kress has variously contributed to education at the Faculty of Educational Sciences. He has also presented his research at seminars, taught on postgraduate training programmes and expressed his opinions on academic texts. He is also a member of a reference group for a research project.

Le Roux, Brigitte, (b. 1943), (HD 2013). Professor at the Laboratory of Applied Mathematics at Paris Descartes University and researcher at the Centre for Political Research at the Paris Institute of Political Studies (Sciences Po). Today, she is a world leader in geometrical data analysis, which is a family of methods for quantitative analysis of qualitative data. The best known are variants of correspondence analysis. This tradition was founded by Jean-Paul Benzécri in the 1960s, and Brigitte Le Roux was one of his first doctoral students.

Besides weighty contributions to mathematics in the nature of basic research, Le Roux has been increasingly interested in applications in the social sciences. Her innovations include 'specific correspondence analysis', which allows new ways of working on 'clouds of individuals' and 'concentration ellipses'. This form of analysis was used for the very first time in the late 1990s in a study headed by sociologist Pierre Bourdieu on the field of book publishing in Europe. Since then, Le Roux has also participated in a further series of key surveys in France and other countries. In Sweden, she has worked in close cooperation with the Sociology of Education and Culture (SEC) research unit at Uppsala University.

The new approaches, using clouds of individuals, permit a precision in the analyses that was previously inconceivable. In brief, correspondence analyses used to be confined to identifying main points, such as – to take examples from the sociology of education – one for representation of male students in higher education and one for that of female students. The methods developed by Le Roux allow analyses and visualisations of the individual paths through and positions in the education system of, say, boys or girls, children of doctors or librarians and urban or rural residents. Every point in the cloud of individuals represents one individual: Mary Smith, Jack Wilson and so forth. Concentration ellipses can be used to gauge the size of the cloud of individuals.

In addition, through her numerous contributions to postgraduate studies and seminars in Uppsala, Brigitte Le Roux has helped to train a generation of young researchers in the Nordic countries who now have the skill to independently apply analytical methods that used to be fairly unknown in Northern Europe.

Lindberg, Carl, (b. 1941), (HD 2012), has made major contributions to research and education on sustainable development over the past years. Education in these issues is one of the United Nations' priority areas and the Decade of Education for Sustainable Development has been announced for 2005–2014.

As State Secretary, Special Advisor to the Swedish National Commission for UNESCO (the United Nations Educational, Scientific and Cultural Organization), educator, speaker at major national conferences for UNESCO and public commentator, Carl Lindberg has been highly successful in terms of getting a sustainability perspective introduced into preschool, compulsory school, upper secondary school and higher education.

Since March 2007, Lindberg has been a member of the Board of the Centre for Sustainable Development (CSD) at Uppsala University. For four years, he has also been a board member for the Baltic University Programme. In the past few years, he has directed efforts to generate collaboration between Uppsala University, the municipality of Uppsala and the Beijing Academy of Educational Sciences.

Carl Lindberg was among the driving forces behind the internationally acclaimed Conference on Education for Sustainable Development in Gothenburg in 2004. In the same year, Carl Lindberg joined UNESCO's High-Level Panel on the Decade of Education for Sustainable Development (ESD), 2005–2014. This membership has given him ample opportunities to promote ESD in the capacity of keynote speaker in more than 20 countries. Carl Lindberg has helped Uppsala University's Faculty of Educational Sciences to earn national and international acclaim for its research on education for sustainable development.

Mitch, David (b. 1951), (HD 2014). Professor of Economics at the University of Maryland in Baltimore, U.S. Ever since the early 1980s, Mitch, an eminent researcher with a broad international network, has been tackling issues with a crucial bearing on the study of the economic history of education. His most acclaimed work includes his contributions to the study of human capital, literacy and the history of school funding, which have had a tremendous impact in the research field. In particular, David Mitch's analysis of the association between literacy and the economy has been acclaimed. With a solid historical study as his starting point, Mitch has toppled widespread assumptions about the importance of literacy in the industrial revolution.

Mitch's analyses of the historical relationship between private and public elements in mass schooling, and of school funding, are further groundbreaking contributions he has made to this research field. His status in the field is

illustrated by, for example, his being selected to write the article on funding of schools in the *International Handbook on the Economics of Education* (2004) and to be the guest editor for the special issue on school choice and school vouchers in *Education Economics* (1997). The latter contribution also illustrates how, in his work, Mitch has dealt with politically hot issues, several of which remain topical today.

During his career, Mitch has had good contacts with Swedish research environments, not the least of which are Umeå and Lund. In the past few years, he has collaborated with Uppsala University's working group addressing the social and economic history of education.

Ryder, Jim (b. 1966), (HD 2017). Professor of Science Education at the University of Leeds, UK, is one of the most eminent researchers in his field. His work has helped to boost knowledge of science education, and it represents an effort to develop science teaching in schools in a way that can support pupils' interest in scientific issues.

In several studies, Jim Ryder has studied teaching and learning about the nature of scientific inquiry, both at the higher levels of compulsory school and at university. He has, for example, investigated the purposes of scientific laboratory experiments and how knowledge claims are made in the natural sciences. His main scholarly contribution in this field has been to combine perspectives from the history and philosophy of science with insights from teaching and learning theory.

In recent years, Professor Ryder has explored the implications of his earlier research findings on the implementation of school reforms regarding the sciences. He shows that, within international research on science education, too little attention has been paid to the roll-out of these reforms. This is especially striking given the impact of a curriculum on teaching and learning in the subjects concerned. In this work, Ryder collaborates with researchers at Uppsala University.

Jim Ryder is the Director of the Centre for Studies in Science and Mathematics Education (CSSME) at the School of Education, University of Leeds. He is also the leader of a research team known as the Teaching and Learning Academic Group. Moreover, Ryder is the editor of the journal *Studies in Science Education*.



Entrance to the Grand Auditorium of the University Main Building in Uppsala. "To think freely is great, but to think rightly is greater" (Thomas Thorild, 1759–1808). Photo: David Naylor.

Nothing Is As Political As Education

Petter Aasen (2012)

Understanding education¹

Some years ago, I completed a study of Swedish educational research grants funded by The Swedish Research Council from 2001 to 2005. The study documented that educational science appeared as a multidisciplinary and partly interdisciplinary research field. The portfolio of funded projects included a number of different research traditions with organisational affiliation with various academic disciplines (pedagogy, subject didactics, psychology, sociology, political science, history, etc.), faculties and basic units in higher educational institutions (Aasen, Prøitz & Borgen, 2005). In other words, The Swedish Research Council had assumed a broad definition of educational sciences as an object of knowledge or a scientific area, and thus included research disciplines applying a wide range of theoretical and methodological approaches and designs in the portfolio.

In the calls, the Research Council claimed that research projects should be relevant to teacher training and educational professional activity. This demand was met by research projects that focused on formation/building, upbringing/early childhood, pre-schooling, teaching and learning in

¹ Elements and arguments in the inaugural lecture is later further developed and published in the following articles/chapters: *Accountability under Ambiguity. Dilemmas and Contradictions in Education*. In Østern, A.L et al. (eds.): *Teacher Education Research between National Identity and Global Trends*. Trondheim: Akademika 2013; *Knowledge Regimes and Contradictions in Education Reform*, with Nina Sandberg & Tine S. Prøitz. *Educational Policy* vol. 28, no. 5 2014, pp. 718–738; *Nasjonal læreplan som utdanningspolitisk document*, with Tine Prøitz and Ellen Rye. *Norsk Pedagogisk Tidsskrift*, no. 6 2015, pp. 417–433; *Making and Re-making the Nordic Model of Education*, with Tine Prøitz. In Nedergaard, P. and Wivel, A. (eds.): *Routledge Handbook on Scandinavian Politics*. London: Taylor & Francis/Routledge 2017.

the school system as well as in other settings (playgrounds, organised leisure, working life), curriculum, special needs, leadership etc. Hence, The Research Council, through the funded portfolio, assumed a broad understanding of relevant objects to study.

Whereas this was the main conclusion in the study, observing the research portfolio in a longer historical perspective also led to another conclusion. Swedish educational research in the first decades after World War II had the ambition to provide systematic knowledge to underpin systemic educational reforms. The reform agenda introduced a radical extension of the comprehensive school system in Sweden. The reforms had two primary objectives. The first was an economic or instrumental objective, based on the assumption that there was a clear association between the level of education in the population and economic growth. The second aim was based on a social motivation. This has been considered the main objective both for the comprehensive school system and for school reforms in general in the post-war era in Sweden. The ambition was to involve the school in the realisation of social goals such as equal opportunity, community fellowship and solidarity (Telhaug, Mediås & Aasen, 2006). This implied that the extreme consequence would be the dissolution of the social class system. As late as 1968, Olof Palme, who then was Swedish Minister of Education, reiterated this motive: “The school is, and remains, the key to abolishing a class-based society” (Richardson, 2004, p. 14).

The reform agenda drew heavily on social and educational research. In 1959, the Swedish Minister of Education, Ragnar Edenman, proclaimed that science was “the most dynamic force in developing society” (Sejersted, 2005, p. 234). While the ambition of the research agenda in the post war period was to position schooling in a cultural, social and political perspective, the educational research funded by the Swedish Research Council in the beginning of the 21st century was more introspective and endeavoured to win understanding of pedagogical processes in specific contexts. The greater part of the research focused on quality in educational and relational processes within different learning environments.

It is not my intention to criticise the process-oriented, relational and situation-specific research tradition. On the contrary, I would argue for the importance of this type of research to shed light on and to guide educational practices. However, at the same time I would argue that this research would be more productive and powerful if it were inserted in a social and political perspective. To situate process-oriented research in a larger social and political context, will strengthen both the academic quality and practical relevance of the research. Furthermore, the acknowledgement of the

relationship between education and learning on the one hand, and material, social and cultural formations on the other, is not merely a more productive research perspective. In my view, recognising the importance of this relationship must be embedded in the self-understanding of educational research.

Education, ideology and power

As professor Ulf P. Lundgren, here in Uppsala has reminded us, formal schooling as the framework for general upbringing and education, originates from a gradual change in social formations and relations where competence and identity development no longer could be achieved through participation in natural contexts, but through the study of selected and adapted texts (Lundgren, 1979). In a modern society, it is through formal education that we reproduce our culture – our values, habits, attitudes and knowledge – from one generation to the next. It is through formal education that we create conditions for cultural, social and economic renewal and growth. Formal education prepares us for social participation and democracy. Through education, we gain knowledge and basic values, access to work and social life, resources to meet the material, social and cultural changes and power to influence the directions of changes. Hence, education is connected to ideology and power in different ways. This relationship between education, ideology and power can be scrutinised by using the concepts *policy*, *politics* and *the political* (Dahler-Larsen, 2003).

Educational policy

A *policy* refers to a principle or rule to guide decisions and achieve rational outcome(s). Policy includes the ‘what’ and the ‘why’ generally adopted by governance bodies within the public and private sector. A policy can be considered as a statement of intent or a commitment. A policy guides actions towards those that are most likely to achieve a desired outcome.

The concept *policy* or *educational policy* refers to decisions made by bodies with legal and legitimate authority. Educational policy is constituted through legislation, regulations, curricula and assessment systems. In the Scandinavian countries, national parliaments and national governments define the goals and decide the framework for the educational sector. However, educational policy is also shaped by other agencies. The Scandinavian countries have a two tier-system of local government, and together with the state, the regional level and local level form the political-administrative

apparatus. Regional and local levels are essential in the implementation of national policies, but at the same time they are autonomous political levels. To a certain extent, counties and municipalities are self-governed, empowered by authority delegated by the state, set out in legislation. Thus, the municipalities and counties are essential in the implementation of national policies, but moreover they are self-governed entities with responsibility to constitute and authorise educational policy.

In Norwegian education reforms after World War II, we can identify four ideologies in action, which can be interpreted as competing *knowledge regimes*: a Social-democratic knowledge regime, a Social-critical knowledge regime, a Cultural-conservative knowledge regime, and finally a Market-liberal knowledge regime (Aasen, 2007a). The knowledge regimes are constituted by different perspectives on the relation between education and society and the goals and organisation of education (Slagstad, 1998; Aasen, 2007a). In examining the education system, they define different problems to act on and prescribe diverse solutions at the systemic as well as the school level. The different political ideologies have different views of the knowledge base for education policy and practice. Furthermore, they have different answers both to Herbert Spencer's powerful question *What knowledge is worth the most?* and to Michael Apple's even more provocative question *What counts as official knowledge?* (Spencer, 1859; Apple, 2003).

The Social-democratic Knowledge Regime

In Norway and in Scandinavia as a whole, we can trace the Social-democratic Knowledge Regime back to the decades after World War II and to the political context and ambitions that shaped the special characteristics of what is often referred to as the Nordic model of education or the Nordic school model (Aasen, 2003; Telhaug, Mediås & Aasen, 2006). This model was intrinsically linked to the development of the social democratic welfare state model in Scandinavia.

The particularly characteristic feature of classical social-democracy was the transformation of a relatively passive bourgeois state into an active, strong authority engaged in national planning. Such an expansion of the state and the public sector was based on the view that it was the particular responsibility of the state to promote the collective values and interests of society. The social-democratic welfare state model stresses the redistributive role of the state, to promote social inclusion through equality of accesses and equality of outcomes in education. While the former addresses the responsibility of the state to provide equal opportunities to participate, the latter is concerned with whether children from different

social groups actually take advantage of that access and are successful in doing so.

From this perspective, simply providing the same opportunities is not enough as children with different economic, social and cultural backgrounds will need different kinds of opportunities and support in order to be successful. However, working for equality of results does not imply that every child should reach the same level or receive identical results, but aims at reducing those differences children and youth possess when entering school. In this way, the pupil's merits should emerge regardless of their social background. If children from different backgrounds are going to have similar chances in life, they will therefore have to be treated differently. Hence, the Social-democratic Knowledge Regime introduces different provisions to ensure actual participation/enrolment and a substantial degree of success across social and cultural groups. In policy approaches to improve equity defined as equality of outcomes, the state must play a crucial role in ensuring that all citizens have real, and not only formal, access to the resources necessary.

Within the Social-democratic Knowledge Regime, the policy in general and education policy in particular favor national standardisation within an egalitarian and comprehensive school system. Accordingly, in the post-war era, a structure was implemented where, instead of different types of schools existing in parallel, the aim was a common school for all children and young people extending as far up the education system as possible. Within this regime, school is seen as an instrument for social inclusion. Education is defined as a common good and children and youth as students are regarded more as the state's responsibility than as parents' sole responsibility.

The Social-critical Knowledge Regime

The Social-democratic Knowledge Regime was originally based on a vision of a homogenous society and a rather simplistic definition of the common good. Thus, the regime endorses an educational policy that combines standardisation of subject matter and knowledge with individualisation of instruction and learning. In Norway, the policy of standardisation was contested as the general climate of educational discussions shifted towards the political Left during the 1970s. Thus, the Social-democratic Knowledge Regime was challenged by a Social-critical Knowledge Regime focusing on conflicts of interest and the struggle for power in the society.

The Social-critical Knowledge Regime underlines the role of the school as a preparatory institution for political participation in a pluralistic democracy. The aspiration is not to reconcile, but to understand the divisions

that exist between ethnic cultures, social classes, linguistic communities and gender-based identities. It criticises equity based on a common cultural heritage and minimum standards as involving cultural domination and hegemony. The Social-critical Regime instead makes a claim for human equity by reasoning that children and youth have different, legitimate interests due to their social or cultural position.

In a multicultural, pluralist society, common goals and the common good are not self-evident. Questioning the ways in which struggles over social meanings are connected to the structures of inequality in society is seen as essential (Aasen, 2007b). Accordingly, the Social-critical Knowledge Regime places the contents of education or the subject matter on the political agenda. Within the Social-critical Regime, knowledge is not viewed as value-neutral. Knowledge is regarded as power, and the circulation of knowledge is therefore important to the social distribution of power. Within this regime, questions about how official knowledge is defined and whose knowledge is taught in the school is essential in its political discourse. Concepts like “hegemony”, “resistance”, the “hidden curriculum” and “local, community based curriculum” are introduced.

The Social-critical Knowledge Regime opposes policy that emphasises national economic growth and efficiency. In contrast, communalism, solidarity with the Third World, peace education, the global environment, awareness of social inequality, consciousness formation, and the potential for social change through political activism are introduced in the curriculum debate and are subjects for more investigative approaches in the schools.

In these ways, the Social-critical Knowledge Regime introduces a more critical, conflict-oriented perspective on education. Classical social democracy is regarded as an authoritarian society and the regime argues for the sovereignty of social and cultural groups and individual emancipation. The regime puts different issues on the political agenda, including child-centered approaches and whole-learning arrangements, learning through cooperation, problem- and project-centered methods, process-oriented, situated and constructive learning activities as well as critical thinking.

The Cultural-conservative Knowledge Regime

In the 1980s and 1990s, the Cultural-conservative Knowledge Regime became more dominant in Norwegian education policy. Education reforms in this period become more concerned with academic performance and a standardised curriculum with a greater focus on cultural heritage providing common ground and the basis for a collective consciousness. This regime advocates the role of the school in disseminating a common national

cultural heritage. The school's obligation is associated with communicating high-quality knowledge, as opposed to the dissemination of mass culture or popular culture. Within this regime, schools are seen as transforming agents for 'real' or canonical knowledge, basic skills, morality, Western and national traditions, high culture, and a common national identity. The Cultural-conservative Knowledge Regime is determined to enforce a standardised national curriculum and high academic standards. Thus, the regime proposes detailed national curricula and a "return" to high standards. Like the Social-democratic Knowledge Regime, the Cultural-conservative Knowledge Regime is guided by a vision of the strong state. This ideal of a strong state is visible in the demand for control over legitimate knowledge and methods, and in the regulation of teacher autonomy. The regime expresses distrust of teachers, of professionalism in education, and of teachers' unions. Allowing schools, a large degree of freedom in determining curriculum content is expected to result in "trivialising" the substance of education. Accordingly, local authorities and individual teachers are given a limited degree of freedom. Thus, the Cultural-conservative Knowledge Regime reflects political positions that closely correspond with positions identified by Michael Apple in the neoconservative movement in the US (Apple, 2001).

The Market-liberal Knowledge Regime

The Market-liberal Knowledge Regime is guided by an ideal of a weak central state, which leaves the development of society to the dynamics of local public or private initiatives, the dynamics of the market. Within this economic rationality, efficiency is measured in terms of the opportunity individuals are given to maximise their own position or benefits. The ideal role of the citizen becomes that of a purchaser. Democracy is transformed into an economic concept where consumer choice within a free-market system is the guarantor of a just, self-regulating society.

The Market-liberal Knowledge Regime promotes an individual and merit-oriented educational system. While the Social-democratic Knowledge Regime advocates state intervention in order to create equality between different social groups, the Market-liberal Knowledge Regime anticipates and accepts that young people have different interests and ambitions. In Margaret Thatcher's words (1987): *There is not such a thing as society. There are individual men and women, and there are families...and people must look to themselves first.* Accordingly, education should supply opportunities for the free individual to choose from, and offer adapted or tailored education to suit individual preferences and talents. To meet these diverse individual demands, the regime argues for more flexible curricula and freedom to

establish private or independent schools. Thus, the Market-liberal Knowledge Regime reflects many of the ideological positions identified by Michael Apple in the neoliberal movement in the US and elsewhere (Apple, 2001).

An essential element of the Market-liberal Knowledge Regime is the stress placed on education's contribution to the nation's economic competitiveness in a globalised economy. Qualifications that meet the demands expressed by the business community are therefore essential. This alignment of educational programs with the particular skills required by the business community is accompanied by increased attention to international education policy and recommendations from supra-national organisations with strong economic profiles, such as the EU and the OECD. Education is primarily defined as a process of developing 'human capital' to be invested in production and turned into economic profit. Consequently, the Market-liberal Knowledge Regime stresses the utilitarian value of the school and cognitive-instrumental competence. The regime regards education as a matter of commodity exchange through a commercial body than as an agent of social and national integration or a sacrosanct academic institution. While the Social-democratic and the Cultural-conservative knowledge regimes promote input-based steering of education, the Market-liberal knowledge regime emphasises output-based steering, with national testing as a central steering device.

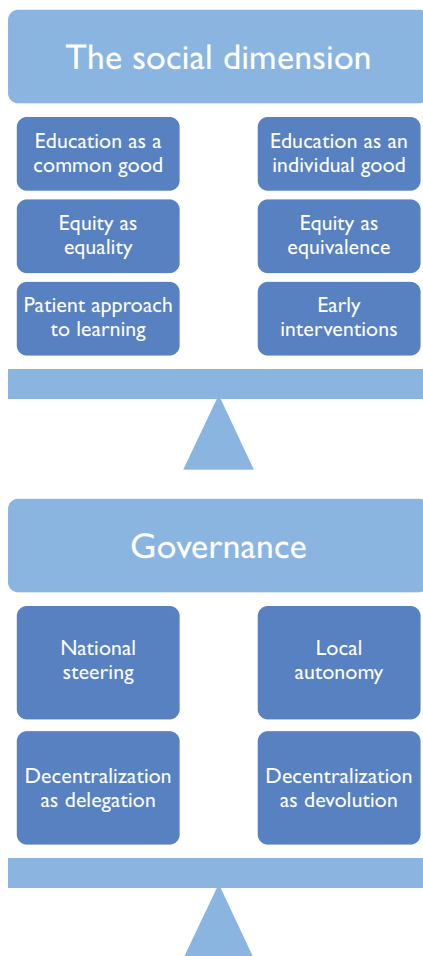
Educational politics

In the formation of educational policy, the different ideologies or knowledge regimes work simultaneously and comprise different perspectives on knowledge and education: different understandings of schooling and the relation between education and society. Thus, there are always contradictions embedded in education policy and reforms creating tensions on several dimensions. Hence, we cannot understand the relationship between education and ideology and power if we limit the relations to ideologies in action and decisions defining ambitions, goals, and legal, financial and pedagogical measures.

To understand the relationship between education and ideology and power, we need to focus on disagreements and conflicts of interest in the policy-making process and in the implementation of educational policy and reforms. Thus, the relationship is also characterised by *politics*. Politics is a process by which groups of people make collective decisions. The term is generally applied to the art or science of running governmental or state affairs, but it also refers to behaviour within civil governments. Politics can

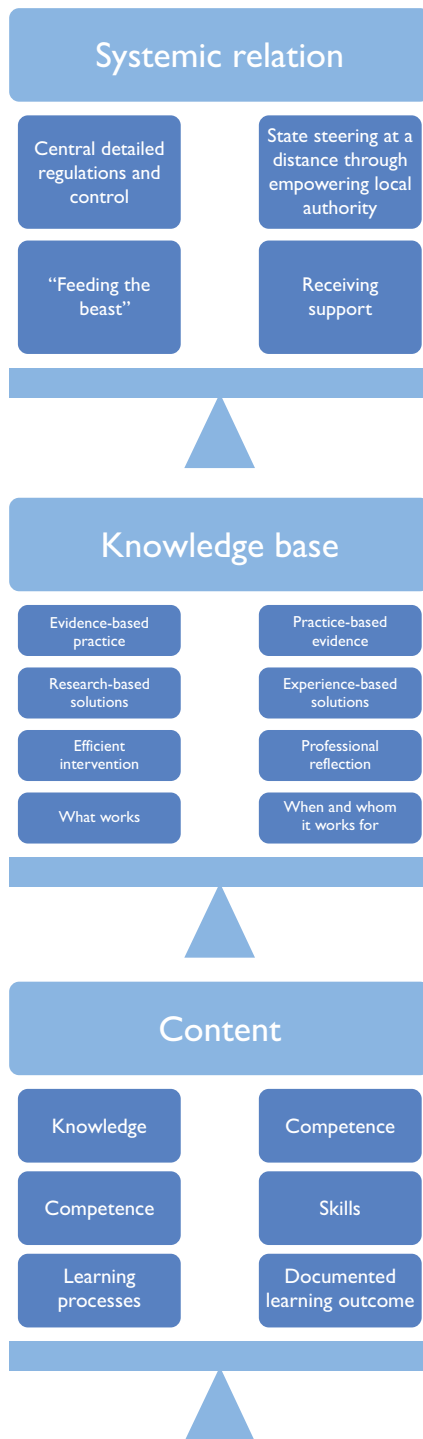
obviously also be observed in other group interactions, including academic institutions.

Politics consists of social relations involving authority or power and refers to the regulation of affairs within a political unit, and to the methods and tactics used to formulate and apply policy. The concept of politics draws our attention to processes that define *who gets what, when and how*. Hence, in order to understand education, it is vital to examine the politics of policymaking processes and the ongoing conflicts over state policy with an eye to the ways in which ideological positions are mediated and transformed. There are always contradictions embedded in education reforms (Ball, 1994; McNeil, 1986, 2000; Whitty, 2002). Through the lenses of various knowledge regimes, we can observe such tensions or contradictions on several dimensions.



On *the social dimension*, we witness strains between education as individual good and education as common good, between equity as equality and equity as equivalence, and between the importance of early intervention and a more patient approach to learning.

On *the governance dimension*, we observe tensions between input- and output-based steering, between national steering authorities and locally elected political bodies' ability to act autonomously, and between decentralization in terms of delegation and decentralization as devolution.



On *the systemic relation dimension*, we observe tensions between central, detailed control and state steering at a distance, by empowering local authorities. The central state demands for extensive documentation is often interpreted as a form of 'feeding the beast', while local governments and schools ask for national support.

On *the knowledge base dimension*, there are tensions between evidence-based practice and practice-based evidence, between research-based solutions and experience-based reasoning, between efficient intervention and professional reflection, and between knowledge directed at *what works* and knowledge focusing on *when and whom it works for*.

On *the school contents or subject matter dimension*, there are tensions between knowledge and competence, between competence and skills, and between focusing on learning processes and the demand for documented learning outcomes.



Finally, on *the accountability dimension*, there are tensions between professional teachers, school leaders and managerialism, and tensions between trust in professionals and an increased administrative technocracy.

These contradictions in education policy also work within education practice, at the school and classroom level (Møller, Ottesen, Prøitz & Aasen, 2009; Møller, Prøitz & Aasen, 2010). The contradictions present challenges experienced by local authorities, school leaders and teachers in the classrooms. At the local and school level, they can generate ambiguity and frustrations. Thus, in the educational disputes at the local level and at the school level we can observe demands for a return to stronger and clearer hierarchical guidelines and mechanisms. On the other hand, we can also observe more pro-active and autonomous actions by school leaders and teachers who are finding creative ways to occupy the openings and spaces created by these contradictions. Accordingly, the concept of knowledge regimes and the awareness of contradictions in education are important, not only to understand the circulation of national policy documents and technical and administrative plans. The awareness of knowledge regimes working simultaneously and thus generating contradictions can help us to better understand the situation of those involved in education practice; such insights are vital as education policy must be understood as being continuously remade in use, with schooling ultimately being built from the ground up.

The political in education

Policy and *politics* are important concepts in understanding the development of education both at systemic and practical level. However, to fully understand the relationship between ideology, power and education, we must include the term *the political*. The term does not limit the relation to decisions made by governing bodies or to policymaking processes, but implies an understanding of education as an inherently political act. Thus, the political in education refers to the fact that educational procedures and practice – the questions of the ‘what’, ‘how’, ‘where’, and ‘when’ in education practice – constantly include priorities and decisions at the school and classroom level. Investigating the political in education includes answering questions like who ultimately gains the most from the ways our schools, and the curriculum and practices within them, are organised and operated.

In a book he published in 1959, Reidar Myhre, who later became professor of educational philosophy and my teacher at the University of Trondheim in the early 1970s, warned against a division between educational science and the political (Myhre, 1959, *Preface*):

Education must – besides discussing ways and means – also include a discussion of goals and direction and an analysis of the assumptions it consciously or unconsciously is founded on... Without such discussions, educational science is blind, and blind educational science is not a good servant for the development of our schools.

In Norway, however, situating education in a broader perspective long was a neglected area. Educational research and the most important educational journals suffered from philosophical and political dormancy (Ness, 1971). As a reaction to a one-sided individual, instrumentalist and apolitical approach in Norwegian educational research, a more society-oriented epistemological tradition gained a foothold in educational science throughout the 1970s and 1980s. Historical, social, cultural, philosophical and political perspectives were introduced to shed light on educational systems and practices. Nevertheless, even in recent years, it has been necessary to emphasise the importance of putting studies of educational systems and practices into a broader context and call for critical research that examines schools and educational practices in social, political and historical perspectives (Aasen, 2004, 2007b). The ambition of the Swedish research agenda in the post-war period was to position schooling into a cultural, social and political perspective. The educational research funded by the Research Council in the beginning of

the 21st century seems, however, to indicate a need for a wake-up call in Sweden as well.

Nothing is as political as education. It is through education that we reproduce social formations and relationships, culture, values, habits, attitudes and knowledge from one generation to the next. Education prepares us for social participation and democracy. It is by education that we create conditions for cultural, social and economic renewal and growth. Education is inherently a political act. Hence, education is connected to ideology and power in different ways. Accordingly, to enhance our understanding of education as a phenomenon and to strengthen the relevance of the research for teacher training and school development, I have argued for positioning educational research in a broader social context in this lecture. I have also argued that the awareness and perception of the relationship between educational science on the one hand and *policy*, *politics* and *the political* on the other, is not only an important research perspective, it is linked to self-understanding educational research and educational practice.

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Promoting Education for Sustainable Development

Carl Lindberg (2012)

How are you going to handle the Club of Rome's report at schools? he asked. It felt like an irrelevant question, coming from him, but he wasn't just anyone. He was the likable school inspector in physics, Thord Adolfsson. The location was Sandbroskolan, now called Westerlundiska Gymnasiet (Westerlundiska Upper Secondary School) in Enköping. The year was 1972. The Club of Rome's report really had nothing to do with my teaching in physics, I reckoned, but I promised to give it some thought. I've been doing just that for nearly 40 years now, and my evaluation today is: it should have.

The Club of Rome's report, *The Limits to Growth*,¹ was published around the same time that the Stockholm Conference on the Human Environment was held, the conference that became the starting point for environmental education globally.

The Stockholm Conference was a Swedish initiative arranged in close collaboration between Inga Thorsson (s), who worked at the UN; Alva Myrdal (s), chairperson of the Swedish Delegation to the UN; and our UN ambassador, Sverker Åström (s). In their assessment, serious environmental issues needed to be addressed at the UN level. The environmental catastrophes of the 1960s and the debate launched by Rachel Carson's book *Silent Spring*² generated support for arranging the conference.

The Stockholm Conference was primarily intended for diplomats. Only two government leaders participated: Indira Gandhi of India, and our own Olof Palme (s). Both gave memorable presentations. Indira Gandhi linked the struggle for a better environment with the fight against poverty with the words, "Poverty is the greatest polluter," thus planting the seed of the concept of sustainable development. Olof Palme declared, "In the field of

¹ The Limits to Growth, report from the Club of Rome, 1972.

² Rachel Carlson (1962): *Silent Spring*.

human environment there is no individual future, neither for humans nor for nations. Our future is common. We must share it together. We must shape it together.”

Immediately after the Stockholm Conference, the report *Choosing the Future*³ was presented under the chairmanship of Alva Myrdal. The directive states: *It is important and necessary that we ourselves study the future... In this way, the small states can create public opinion for other possible options of how the future world should be constituted...and...the political bodies must represent the interests of future generations.*

Already, here was a warning about the most important issue of our time, the climate issue, with the formulation: *The heat radiation balance can be disturbed through changes to the reflectivity of the earth's atmosphere due to the production of carbon dioxide.*

Even though I was obligated to answer the school inspector's question about the Club of Rome's report, I was by no means indifferent. Perhaps that was what lay beneath me and my colleagues' initiative to open an upper secondary school to the rest of the world. At that time, upper secondary schools had an effective means for this, called “*timme till förfogande*” or “hour at disposal”. This was a resourceful tool for all schoolchildren. We felt it was not really being put to use, and a handful of smart, older colleagues joined our initiative. This led to a presentation of the horrors of the Vietnam War by Sara Lidman to an auditorium packed with students and teachers, while the coup against Allende in Chile was discussed by musicians who had fled from there; and the nuclear weapons threat was addressed in conjunction with Peter Watkins' “The War Game”, along with other activities related to current global events. We formed an Amnesty Group, group 215, which is still being run almost 40 years later by truly longstanding advocates. A number of teachers formed a study group on Paulo Freire's “Pedagogy of the Oppressed”, inspired by a talk given by methodology lecturer Lars Lööf from Lärarhögskolan, the college for teacher education here in Uppsala.

The curriculum (Lgr 1962) contained nothing about the environment, nature conservation or environmental education beyond the objectives for the subject of biology. In the curriculum from 1969 (Lgr 69) the environment is mentioned for the first time.

The conclusions of the Stockholm Conference⁴ on education, i.e., page 96 of the action plan, were subsequently followed up in October 1977 in Tbilisi, Soviet Republic of Georgia, at the Intergovernmental Conference on

³ *Choosing the Future* (1972). Stockholm: the Ministry of Justice.

⁴ UN Conference on the Human Environment, Stockholm 1972.

Environmental Education, where the *Tbilisi Declaration on Environmental Education* was adopted.⁵

The sound approach that currently permeates education for sustainable development was indeed already present in the document from Tbilisi. Characteristics of education for sustainable development were formulated in the 2004 report *Learning for Sustainable Development*.⁶ They include:

- Many and varied explanations of economic, social and environmental conditions and courses of events are addressed using an integrated approach with support from interdisciplinary work methods.
- Democratic work methods are used to give students influence over the form and content of their education.
- Learning is reality-based, with close and frequent contact with nature and society.
- Learning is focused on problem-solving, encouraging critical thinking and readiness for action.
- The educational process and product are both important.

The curriculum, Lgr 80 strengthened the position of environmental issues in schools and starting in 1983, each county's board of education had special environmental resource contacts.

The early 1980s were largely characterised by intensifying antagonism between the US and the Soviet Union during the Cold War. The deployment of mid-range missiles in Europe stirred anger and activism, which also came to influence operations in schools; and Lgr 80 supported addressing issues of peace and conflict in schools.

But by the early 1980s, I no longer worked in schools. It was a very difficult decision because I liked my teaching job. I thought then, and I have not changed my opinion, that teaching is the most important profession in society, and furthermore, that it is an incredibly rewarding career for most teachers.

What made my decision easier was that I would still be working in education, now with union education for the Swedish Confederation of Professional Employees (Tjänstemännens Centralorganisation, TCO). I also had assignments in TCO's Sida-funded activities, including as one of the leaders of a field trip to India and Sri Lanka to study union activities and training programmes in 1980.

⁵ The Intergovernmental Conference on Environmental Education, Tbilisi 1977.

⁶ SOU 2004:104: *Att lära för hållbar utveckling [Learning for Sustainable Development]*. Stockholm: The Ministry of Education and Research.

A new school system in India – could be dynamite. But the members of India's elite are not interested, said E.W. Franklin, secretary general of India's largest teachers' organisation, when a friend and I interviewed him. He continued, *Education must serve the needs of the country and the people – the people in the villages are so poor – I can't even describe it. What they learn in school is unusable. Practical education is not education, say those who hold power in this country.* I cannot assess how relevant this description is for the poor in India today, 30 years later, but it is certainly relevant in far too many places in the world.

The peace issue grew and also became important in TCO, especially because three of our 18 unions were teachers' unions whose members included thousands of teachers who were dedicated to peace. I was responsible for TCO's peace activities. As a result, I became interested in peace education in schools. It was controversial in the early 80s, and there are clear connections between peace education then and education for sustainable development now.

To illustrate the parallels between peace education and education for sustainable development, I will quote minister of education Lena Hjelm-Wallén (s) in a debate in the Parliament, Riksdagen in March 1983:

Work for peace must be of the highest priority for all of us. A desire for peace and education for peace must permeate all areas of society.

I want to emphasise that the school's task in this area is not just the traditional responsibility of providing knowledge and insight about conflict resolution, international relations and peace. In this regard, the school must do even more. It must go deeper. It must consciously train students to feel a natural solidarity with other countries, peoples and cultures, and thus actively work to foster peace.

I believe that the teacher categories that worked the hardest then for peace education are now the champions of Education for Sustainable Development (ESD), with the same powerful belief in the possibilities and responsibilities of schools. I met many of them as participants in the Swedish UN Association when I became its vice president in 1984.

From 1985, my full-time focus became education policy, when Lennart Bodström offered me the job of press secretary. I also had an outlet for engagement with peace issues there, because Lennart Bodström was coming from his role as minister of foreign affairs, in which he had demonstrated a strong commitment to the creation of nuclear-free zones.

In 1987, Gro Harlem Brundtland published her commission's report, *Our Common Future*,⁷ in which the concept of sustainable development was given its now familiar definition.

In 1990, environmental issues were strengthened in schools when the new minister of education, Göran Persson (s), allowed the addition of the Education Act's portal paragraph, which stated: *Each and every one working in schools should promote...respect for our shared environment...* a paragraph which, unfortunately, was removed from the current Education Act.

A new curriculum committee was appointed shortly thereafter, which included professor Bodil Jönsson, who had special responsibility for issues related to the environment and natural sciences and who was associated with an environmental secretariat.

The 1991 election results meant that the incoming government replaced the curriculum committee's members and the environmental secretariat was discontinued. Professor Ulf P. Lundgren continued as Head Secretary, but as Director General of the National Agency for Education, he allocated resources for an inspirational book for teachers about the environment and environmental education.

I had been working as a political official in the Riksdag for several years at this point, with responsibility for education and research issues. After the 1991 election, together with Lena Hjelm-Wallén (s), chair of the committee at the time. For us, the primary issue was the social and economic dimension of sustainable development; the main duties were to defend the idea of one school for everyone and to promote the expansion of upper secondary schools so that all programmes would be three years long.

In June 1992, the world's leaders gathered for a meeting in Rio de Janeiro called the United Nations Conference on Environment and Development. The original proposal, which the UN General Assembly already supported in 1989, was that this conference should also be held in Stockholm. The Rio Declaration's challenge deserves repeating: *The creativity, ideals and courage of the youth of the world should be mobilised to forge a global partnership in order to achieve sustainable development and ensure a better future for all.*⁸

⁷ Report from the World Commission on Environment and Development, The Brundtland Report 1987.

⁸ The Declaration of Rio, A declaration of 27 global principles, the UN Conference on Environment and Development, Rio de Janeiro 1992.

An agreement was made there on Agenda 21, in which the heading of Chapter 36 reads: *Promoting Education, Public Awareness And Training*.⁹ The reasoning that permeates Chapter 36 is familiar from Tbilisi, but now the concept of sustainable development constitutes a goal for education. Education is mentioned almost 500 times in this action plan. The requirements in the plan to change – to reorient – education systems is entirely reasonable, given that the part of the world with the best-educated populations has a lifestyle that involves consuming most of the world's limited natural resources and the most energy, and producing the most greenhouse gases, i.e., we have the largest ecological footprint by far. From 1992, the concept of sustainable development could be found in texts from UNESCO and the UN. Even universities began writing about sustainable development and among other things, a COPERNICUS University Charter for Sustainable Development was adopted in 1993.

In September 1992, the curriculum committee presented its main report, *Schooling and Education*.¹⁰ It included a proposal for a new subject, “technology and environment”. But when the proposition for the primary school curriculum came, the subject was not included. Nor was sustainable development emphasised as one of the values on which schools should be based, which had been natural, given the formulation of the portal paragraph for schools. However, before the Riksdag even adopted the new curricula, the National Agency for Education had produced commentary on “Schools and Environmental Education” in the autumn of 1993.

A follow-up of the Rio decision was made by UNESCO through the report “Learning: the treasure within” in 1996 from the International Commission on Education for the Twenty-first Century during the chairmanship of the EU Commission's former president, Jaques Delors. One of the first factors that education is deemed to have to consider is “the aim of sustainable development”.

At that point, I had been working for two years as assistant state secretary for minister of education Carl Tham (s). The highest priority then was to expand higher education, but also to reform student funding, democratise research foundations, and to begin reforming teacher education, the latter for me, via participation in developing the proposal *Teacher training*

⁹ Agenda 21: The Action Plan. 40 chapters, Chapter 36 Promoting Education, Public Awareness and Training, the UN Conference on Environment and Development, Rio de Janeiro 1991.

¹⁰ SOU 1992:94: Main report by the Curriculum Committee.

*in change*¹¹ and much more. Education for sustainable development did not exist as a concept for me.

Baltic 21 was a political process for creating an Agenda 21 for the Baltic Sea and its surrounding states. It was initiated by minister of the environment Anna Lindh (s). A number of reports had been produced in different areas, including forest management, agriculture, industry and tourism. Education initiatives were called for in all of them. So suddenly, one day in late 1999, Secretary General for Baltic 21 Christine Jacobsson was in my room, assisted by Ulla-Stina Ryking, one of the department's officials. Their proposal was that I should persuade the minister of education, Thomas Östros (s), and minister of schools, Ingegerd Wärnersson (s), to invite their colleagues from the eleven countries included in the Baltic 21 partnership to a ministerial meeting to create an action plan for the subject area of sustainable development.

The ministers agreed to the proposal and an invitation went out for a ministerial meeting at Haga Palace in late March 2000. Preparations began with intensive studies and an interpretation of Chapter 36. We enlisted help from some of the available experts, including Siv Sellin from the National Agency for Education, with experience from the Baltic Sea Project, and Lars Rydén from the Baltic University Programme. Together, we created the Haga Declaration, which was then presented to the ministers. The project to formulate Baltic 21 Education was launched with Sweden and Lithuania as the lead parties.¹²

We held conferences in Vilnius, Karlskrona and Gdansk, where I especially came to appreciate the partnership with the Lithuanian vice minister, Vaiva Vebraite, who later, in her position as advisor to Lithuania's president, successfully persuaded UNESCO to hold the European inauguration of the UN Decade in Vilnius.

Our Swedish trump card in the Baltic 21 work was that we had research-based knowledge to build upon. Siv Sellin succeeded in procuring resources from the National Agency for Education and engaging researchers Leif Östman and Johan Öhman to conduct studies on how environmental teaching in Swedish schools approached education for sustainable development. It was incredibly valuable for our efforts.

The work concluded with a new ministerial conference at Haga Palace. Baltic 21 Education¹³ was sent out to all schools and higher education insti-

¹¹ Ds 1996:16

¹² www.baltic21.org/Education-Culture.

¹³ Government Offices Baltic 21, Series No 2/02.

tutions in Sweden and reported to the Riksdag. Even though I haven't met many people who have read our report, of which 8,000 copies were distributed, it is mentioned fairly often as an introduction in many essays on ESD, which is gratifying.

I must admit that I was deeply disappointed when I was unable to include clear language about ESD in the spring 2002 action plan for schools, given Baltic 21 Education. To handle my disappointment, as early as May 2002, I took the opportunity to suggest that the theme of the Swedish education conference in 2003, our Nordic chairmanship year, should be Education for Sustainable Development. And so it was.

Both in Sweden and internationally, 2002 was the major breakthrough year for education for sustainable development. The science and education community was significantly better prepared for the summit meeting in Johannesburg than it had been for the Rio meeting. Japanese prime minister Koizumi pushed the proposal for the UN to declare a special decade, 2005 – 2014, to promote education for sustainable development, a suggestion which several countries wanted to cut out at the preparatory meeting in Bali – but Japan stood its ground. The prime minister had received the proposal from the powerful Japanese volunteer organisations for the environment, under the chairmanship of professor Osamu Abe, who has been known ever since as 'the father of the decade' and who is a frequent guest here in Uppsala.

Like other governmental heads in Johannesburg, prime minister Göran Persson (s) was required to offer something to the international community. His advisers had prepared him well. But at the lectern, he departed from what his staff believed would be the Swedish proposal and, much to their surprise, he invited everyone to an international conference on education for sustainable development in Sweden.

The surprise in Johannesburg was exceeded only by the joy felt by some of us at the Ministry of Education and Research over the prime minister's initiative, and it was immediately proposed to the prime minister's office that the Ministry of Education and Research should assume responsibility for the conference. It was only natural for the conference to be held in Gothenburg, given that the University of Gothenburg and Chalmers University of Technology had long shown extensive interest in sustainable development.

A few weeks after Johannesburg, the ministry received a phone call from Geneva. The United Nations Economic Commission for Europe (UNECE) had discovered the Baltic 21 Education work and wanted Sweden and Russia to lead the efforts to develop a strategy for all 56 countries, similar to what was done for Baltic 21. It cost SEK 300,000, but under its new environmental minister, Lena Sommestad (s), the Ministry of the Environment provided

the money. Thus, began UNECE's work for ESD, which would later evolve into one of the most significant forms of support for education for sustainable development.

Planning for the Gothenburg conference began with a number of on-site visits, where we were met with loads of expertise and enthusiasm. The government appointed a committee tasked with both organising the conference and later advising the government on ESD. It included professor Mats Ekholm and the university's former vice chancellor, Bo Samuelsson, both of whom were incredibly dedicated to the task.

In parallel with the committee, I felt compelled to develop my own ideas about ESD, especially at the university level. And so, I turned to the 'scholars' of Uppsala, who I understood to be both able and willing to help me along the way. Thus, the group Vet HUT [an abbreviation of the Swedish for "Know Sustainable Development"] was formed, comprising Peter and Lena Wallensteen, Bengt Gustafsson, Bo Kjellén, Hans Levander, Lars Rydén and Eskil Franck. We had the privilege of holding our meetings in spring 2003 in the Dag Hammarskjöld Room at the Department of Peace and Conflict Research. One of our most important discussion points was how we would ensure that education for sustainable development would now be the focus, that is to say, normative – something the university is not usually thought to do.

Christina Ullenius, vice chancellor of Karlstad University, addressed this particular matter in her presentation to the large conference "Sweden after Johannesburg" in December 2002. Of all the participants at this conference, she was the only one to address education; everyone else talked about research. She said:

The necessary paradigm shift in society cannot be achieved through research alone. Through education, higher education institutions can broadly disseminate the information generated by research... A question that arises then is whether education can be morally normative regarding these issues? Our education system should be value-neutral, but at the same time, normative in certain areas, such as democracy, gender equality and diversity.

Perhaps it is equally important for education to be normative when it comes to essential matters in sustainable development? After the 1992 environmental conference in Rio, there was an initiative to incorporate environmental aspects into academic education, but it fizzled out. Now we must discuss what knowledge should be highlighted; we must consider how the state can support such a focus; and we must ask ourselves what higher education institutions can do on their own.¹⁴

¹⁴ Former Vice-Chancellor, University of Karlstad, Christina Ullenius: After Johannesburg 2002:34

Kiev, the capital of Ukraine, was the location of the important UNECE environmental ministerial conference in May 2003. Sweden manifested the importance of education in this context by being the only country with representatives present from both the environmental and educational ministries. I had the honour of presenting the “Statement on ESD” which was developed and unanimously accepted at a session led by Lena Sommestad (s). A decision was taken there to develop a “Strategy on ESD”.

Immediately thereafter, in June 2003, the task was to hold a Nordic Council of Ministers’ conference on ESD in Karlskrona. 140 participants gathered for the conference, from Greenland in the west to Moscow in the east, from Warsaw in the south to Luleå in the north. An excellent report from the conference was written by Christer Wallentin, author of educational materials.

Prague and its historic Charles University hosted a huge ESD conference in September 2003. The conference was attended by every internationally leading ESD advocate, including Rector of the United Nations University in Tokyo, Hans van Ginkel. He gave a surprising and delightful presentation in which Sweden’s dedication to environmental education at the university level was deeply praised.

The Prague conference also gave Manne Wängborg, the new secretary general of the upcoming Gothenburg conference, the chance to become familiar with the fundamental ideas upholding ESD. Manne Wängborg had extensive experience as a diplomat, including with peace and disarmament issues, and had been active in Amnesty International; his efforts have been incredibly competent and dedicated.

Lund University’s Vice-Chancellor Göran Bexell, professor of ethics, showed enormous enthusiasm for the ideas of ESD. Together with vice chancellors, deans and department heads, I was invited there in November 2003 to spend half a day discussing the responsibility of universities to promote sustainable development. From the group work that followed our presentation, I especially remember this comment from one of the participants: *It was the first time that researchers with backgrounds in fields as diverse as history and mathematics were discussing these matters together.*

The prime minister and three other ministers – for education, the environment and development cooperation – took part, thus indicating the importance the government attributed to the conference. The UN Secretary-General Kofi Annan, participated through a video recording. One lasting outcome from the conference was the proposal to amend the Higher Education Act, which was later implemented; thus, as of 1 February 2006, all higher education institutions must promote sustainable development in

their operations. The prime minister announced this news in his introductory address. Many were happy; others less so.

A few months later, UNESCO Director-General Matsuura decided to appoint an advisory body for ESD and the Decade, a High-Level Panel. Suddenly, I was invited to Paris on account of the establishment of this high-level group. This was presented to me in the invitation. The panel would include Alpha Oumar Konaré, chairperson of the African Union and president of Mali; Akito Arima, Japan's former minister of education, science, sports and culture; and professor Steven Rockefeller from the U.S. Once in Paris, it became clear to me that I was assigned to be the fourth member of this group. Completely shocked, but also thankful, I realised that membership in this group would make it possible to continue to advocate for what I believed in so resolutely. The High-Level Panel was expanded after a few years with Ms. Mary Joy Pigozzi, vice president of the Academy for Educational Development (USA) and Ms. Rosiska Darcy de Oliveira, former environmental minister of Brazil. Just two months later, I was invited by Director-General Matsuura, together with a UNESCO official, to introduce the UN Decade in Geneva to the ministers of education and their representatives from all over the globe.

In late November 2004, our report for the government was ready, entitled "Learning for Sustainable Development". It was received by the new minister of education, Leif Pagrotsky (s). In conjunction with the government reshuffle, early that month it was time for me to leave my job after 19 years in the offices of the government and Riksdag.

One of the invitations I had to cancel was a planned meeting with Uppsala University's vice chancellor Bo Sundqvist, the deputy vice chancellor, vice rectors and deans. To my surprise, Bo wanted me to come, even though I no longer represented the ministry. So for the next two hours, I had the chance to participate in the discussion about how universities should work with education for sustainable development, which I found highly productive.

In November 2005, my opportunities to promote ESD were further strengthened through the decision to become Special Adviser to the Swedish National Commission for UNESCO, which was chaired at the time by Ingegerd Wärnersson (s).

After the 2006 election, she was replaced by former minister of the environment Görel Thurdin (c), who asked me to continue. Her deep dedication to education for sustainable development also came to provide excellent support for the operation. In her capacity as chairperson, she delivered the Swedish National Commission for UNESCO's statement on two topical reports at that time.

On the report about a new upper secondary school, Path to the Future – a reformed upper secondary school, she wrote the following:

With great surprise, we conclude that the report essentially contains no connection between education and sustainable development. The concept of sustainable development appears in only one place in the nearly 700-page document.¹⁵

And on the report about a new form of teacher education, Sustainable Teacher Education, Görel Thurdin (c) wrote the following, among other things:

Once again, we conclude that an important report on the field of education lacks a serious discussion about and proposals for education for sustainable development. How can an analysis of tomorrow's teacher education programmes lack insightful reasoning about education for sustainable development? Swedish and international research on teaching for sustainable development in various parts of the education system has been published.¹⁶

As you all understand, I am deeply proud to receive the eminent recognition of the appointment as honorary doctor. Unlike those who become doctors after completing a degree, that is, after producing enormous amounts of scholarly text, I have been spared this intellectual stress. I thus feel the need to protect, to some extent, the Faculty Board of Educational Sciences from excessive accusations of injudiciousness by touching upon some of my work here, rather than by formulating groundbreaking ideas about education in written form.

In July 2005, I was invited to participate on a panel at Nagoya University in Japan in conjunction with the World's Fair there. I knew that Akito Arima, member of the High-Level Panel, would also be on this panel. I had met him 6 years earlier at an informal education ministerial meeting in Tokyo. He proved to be a great friend to Sweden and he was especially delighted by Uppsala. This was because his mother, who was over 90 years old at the time, was a botanist and a great admirer of the apostle of Linnaeus, Carl Peter Thunberg, about whom Arima knew a great deal.

¹⁵ A letter from the chairman of the Swedish Commission for UNESCO on a government proposal for a reformed upper secondary school – Path to the Future, 2009.

¹⁶ A letter from the chairman of the Swedish Commission for UNESCO on a government proposal for a reformed teacher education: Sustainable Teacher Education, 2008.

As a tribute to Arima and all Japanese participants, I concluded my presentation by telling the story of Carl Peter Thunberg's trip to Japan and Edo (Tokyo) in 1776 to pay respect to the shogun, but with the ulterior motive of fulfilling his task from Linnaeus to gather plants from Japan. He spent three weeks waiting to see the shogun. During this time, through his extensive knowledge, Carl Peter Thunberg managed to bridge the cultural gap and become good friends with two of the shogun's personal physicians, Katsuragawa and Nakagawa. These three scientists came to use all their time together to exchange information and experiences about medicine and botany. Their friendship grew to be so deep that despite the enormous distance, they maintained contact for several years after his visit. As a resident of Uppsala, it was rewarding to highlight this meeting over 235 years later, as inspiration for the participants from all over the world to, similarly, exchange experiences about how education must be changed in order to better contribute to sustainable social development in all parts of the world.

At a conference in Tokyo just over two years later, in August 2007, a decision was passed by Uppsala University's vice chancellor at the time, Anders Hallberg. It was the decision of 16 December 2006 about how sustainable development should permeate all of Uppsala University's operations as a follow-up to the amendment to the Higher Education Act. Using the vice chancellor's well-formulated points, I was able to provide formidable contributions to the conference's recommendations for higher education around the world. The highly ceremonious conference was held in the UN building in downtown Tokyo, in the big U Thant Hall, with representatives from the government, authorities and the business community.

A deep interest in ESD has been demonstrated not only in Japan, but also in China, and there are now also connections to Uppsala University in this area. Back in 2005, I had the honour of speaking at their "Second International Forum on ESD". On my way, up to the podium, I was asked by the vice minister of education, who was also chairperson of the UNESCO Committee, which country was leading the world in the area of ESD. I had to apologise, because the question was too complex to be answered briefly and then there was no time to return to it.

I was invited again in 2009, this time with senior lecturer Per Sund. The inaugural speaker this time was a new vice minister of education, who gave a fiery speech on the importance of ESD. Earlier that spring, she had led the Chinese Delegation at the huge Conference on ESD in Bonn, which had obviously been influential, with its "Bonn Declaration on ESD".

After the conference, I was looked up by someone who was quite clearly one of the people in charge of the conference. He asked me for help with

two things. The first was to persuade UNESCO's headquarters in Paris to provide more support for the translation of ESD materials. The second had to do with initiatives in the field of research, to be able to lay a scientific foundation for the implementation of ESD in Chinese curricula. It later turned out that the man I had spoken with, Shi Gendong, was chairman of a work group under the Chinese UNESCO Commission that had been tasked with promoting ESD in China.

I responded by saying that I thought it would be possible to fulfil his requests. When it came to the second request, the solution I expected was found in Uppsala: Professor Leif Östman provided his scientific expertise, along with the expertise available to him through national and international research networks and the GRESO preschool, which was based on the wise Swedish Research Council decision dating back to 2007.

As a first step in the partnership, we were invited to a conference in Beijing in April 2010. Included in the group as the representative of Uppsala Municipality's schools was Pernilla Andersson, one of the teachers who worked to spread ESD ideas very early nationally and internationally. I do not want to deprive you of Pernilla's wording here, which I quote quite often: "Education for sustainable development is not a burden; it is not a new onus. It helps me to differentiate between what is important and less important in schools."

In May this year, it was time to visit China again and a few months ago, a Swedish delegation was working at the fifth international ESD conference in Beijing.

In India, environmental education and education for sustainable development have long been promoted through an operation based in the city of Ahmedabad, which was also the centre of Mahatma Gandhi's political efforts. The Centre for Environment Education (CEE) is located there, and its operations now promote ESD across most of India. CEE was the location of a huge international conference in November 2007, 30 years after Tbilisi, with over 1,000 participants, and in which I had the opportunity to participate. The result, the *Ahmedabad Declaration*,¹⁷ is worth reading on the internet.

There is also now a centre in New Delhi tasked with disseminating ESD ideas: the Mahatma Gandhi Institute for Education for Peace and Sustainable Development. In August 2010, I was invited together with 50 Indian educators and 12 international guests to advise the Indian government on the focus

¹⁷ Centre for Environment Education, Ahmedabad at the UNESCO Conference Tbilisi +30, 2007.

of the institute's operations. The meeting was initially led by the recently appointed Indian minister of education. He concluded by emphasising that the most important intention would be to focus so much on education that ideas about sustainable education would spread to every classroom on the Indian continent.

The European country that has shown the greatest interest in the ideas of ESD is Germany. This is probably due to the stable foundation laid in the German Bundestag all the way back on 1 July 2004 via the unanimous decision to support the goals of the UN Decade. With German thoroughness, a committee of 30 people was established with representatives from schools, universities, and even the business community and media to promote ESD initiatives.

I have had the privilege of being invited to Germany as a speaker a number of times, mostly at conferences in Berlin, Bonn or Lüneburg. Several of these have been sponsored by the German business community, including a large bank and the German telecommunications authority. At a conference at the University of Bremen in April 2010 for university vice chancellors, I was tasked with discussing what the amendment to the Swedish Higher Education Act entailed for Sweden's higher education institutions' engagement with sustainable development. Many of the German enthusiasts recognised, with pleasure, corresponding support in the law for their own work with promoting these ideas.

The most important of these meetings was the conference in Bonn, which was carried out in the plenary hall of the German Bundestag, when it was located in Bonn. Over 900 delegates gathered from most of the world's nations, 60 of which were ministers of education. The Life-Link Friendship School organisation, founded by Dr. Hans Levander from Uppsala over 20 years ago, was one of few organisations to be given the honourable task of presenting its activities to support sustainability issues in the Arab world.

In the other Nordic countries, I have also met many committed researchers, teachers and enthusiasts from volunteer organisations at conferences. In the Baltic 21 work, Norway also participated enthusiastically. Norwegian environmental teachers have been well trained for decades. The volunteer organisation Idébanken in Oslo runs a very innovative operation in ESD, including in the other Nordic countries.

The Danish School of Education was an early adopter of the ESD field, through Bjarne Bruun Jensen, Sören Breiting, Karsten Snack and Jeppe Lessö. Denmark has the advantage of support in its ESD work from one of their best-known artists, Jens Galschiøt. He has made many "balance

act"-themed sculptures in support of the UN Decade, which express the vulnerable position of humankind.

Finland was the country to adopt the recommendations of Baltic 21 Education with the most determination. After only a few years, they had produced an extensive action plan for ESD for all levels of education. So there are many extremely serious and deeply committed advocates at many Finnish higher education institutions.

I am not sure how far our Icelandic friends have come today, but I will never forget the enormous enthusiasm for ESD shown by the participants from Iceland at the Karlskrona conference in 2003.

In Sweden, many positive things have happened at all levels of the education system. Most of our higher education institutions have adopted a policy for ESD. Some have even appointed a vice rector with special responsibility for sustainability issues.

I fully acknowledge that a few years ago, I was anxious that the paragraph about sustainable development in the Higher Education Act would disappear when certain changes to the Act were implemented. To my delight, that did not happen. So today, this text has been strengthened in practice through support from two different Riksdag majorities.

Umeå is currently one of the Swedish municipalities that has made the most dedicated efforts to get as many of its preschools and schools as possible recognised as 'Schools for Sustainable Development'. The work began without a political decision, but through the headmasters and headmistresses agreeing to work to achieve such distinctions themselves. Malmö has a farsighted political decision for financial support for teaching for sustainable development throughout the UN Decade. In addition, RCE Skåne's operations primarily pertain to Malmö and Lund. Nyköping and many other Swedish municipalities have real advocates who are fighting on the home-front; naturally, they are gathered in networks and in addition to network contact, they organise meetings.

They are supported through the excellent work done by the World Wildlife Fund (WWF), through material production, by the Sida-supported Global School, and through Keep Sweden Tidy's work with Green Flag, which has expanded its requirements for all three dimensions of sustainable development. However, the National Agency for Education, lacking clear requirements from the government, has not allocated as many resources as I would consider justifiable for the quality enhancement of schools that I believe ESD represents. There is room for improvement here. What is encouraging, however, is the support Sida gives to international ESD work

through SWEDES on Gotland, and to a position at UNESCO's headquarters in Paris.

After this exposé, we will be back in Uppsala. And there is much to be happy about here: the world's only Institute for Research in Education and Sustainable Development; probably the world's only student-run university institution, CEMUS, which also has a focus on sustainable development; and the Baltic University Programme, one of the earliest university networks to tie east and west together and for which sustainable development is the basis of its operations. The latter two comprise the largest programmes in the Centre for Sustainable Development Uppsala (CSDU), a partnership between UU and SLU. It is also extremely encouraging that Uppsala is known today as the municipality with the highest schools in the country bearing the distinction of 'School for Sustainable Development': Lundellska, Rosendalsgymnasiet, Ekebyskolan, Uvengymnasiet, GUC and Katedralskolan. I am extremely grateful that the chair of the Education and Labour Market Committee, Mohamad Hassan (L), immediately took to the ideas about education for sustainable development and made sure we had political consensus on their importance. I am also impressed by the way in which Pernilla Andersson pursued these issues in a discussion with upper secondary school leaders, with strong support from her manager, Kajsa Wejryd.

I am also both grateful for and impressed by the interest in ESD that many preschool teachers in the municipality have shown, and the very carefully considered activities that have resulted from this care at the six preschools that obtained the distinction Opalen, Ekudden, Klockarbol, Löten, Von Bahrska and Årsta.

The development in Uppsala underscores the observations I have made and regularly point out that – in order to be successful, ESD operations must be founded upon two equally important processes: a top-down process with clear political decisions and regulations, and a bottom-up process based on accountability and inventiveness among employees, often inspired by the always equally important advocates who, regardless of political support, do what the future and their morals require of them.

In conclusion, I want to briefly summarise what I always emphasise when I am given the opportunity to speak:

1. The UN Decade is a golden opportunity to change education systems, which we cannot miss.
2. Educate ministers of education and their closest advisors, as well as political representatives at various levels about ESD.

3. Hold on to the designation 'Education for Sustainable Development', which will make it clear that the operation is part of an UN-recommended activity.
4. Recognise the potential for sustainable development, which the education sector in particular offers in its role, as the most important and largest sector of every civilised society.

My hope now is that the upcoming conference in Rio de Janeiro, Rio +20, will more clearly emphasise the importance of education for finding a path to sustainable development and the eradication of poverty.

Finally, I wish to quote a predication that a professor in attendance here, Ulf P. Lundgren, recently formulated in a book, "Lärande, Skola, Bildning"¹⁸ (Learning, School, Education) and whose hope I share:

The question of the role of education in developing a sustainable society will likely become increasingly clear in future curriculum development. It was distinctly included in the first directive to the twentieth century's curriculum committee, but disappeared in the modified directive. In the next decade, it will probably be a crucial theme in curricula and syllabi.

¹⁸ Lundgren, U.P., Säljö, R. & Liberg, C. (red.) (2014): *Lärande Skola Bildning. Grundbok för lärare*. Stockholm: Natur & Kultur.

On Childhoods and Cities or the Changing Relationship between the Street, the School and Children's Consumption Spaces

Lia Karsten (2013)

Introduction

This lecture is about the construction of new urban childhoods and the changing relationships between three important spaces of childhood: the street, the school and children's consumption spaces. I will consider this topic within the context of the growing number of families choosing the city as a place to live. As I will argue this trend will make cities and children more closely related and this will ultimately result not only in new urban childhoods, but also in newly invented cities.

Cities and children are often considered to be two mutually exclusive concepts. Cities are big and children are small. Additionally, when people are asked to define what a city is, they most probably will refer to some of the concepts mentioned in the first column of Table 1, not to children; and vice versa: definitions of what a child is will probably not include references to cities, but rather to some rural and suburban connotations.

Table 1: City children out-of-place

City	Child
Big	Small
Work	Play
Public domain	Private domain
Apartment building	Single family home
Stony and dense	Green and spacious
Urban jungle	Rural idyll

The dichotomous conceptualisation of cities and children defines city children as being out of place. Yet, children and families have always lived in cities. It is only since the suburbanisation from the 1960s onwards that urban family living is increasingly considered to be problematic and many families, particularly the ones who could afford to do so, indeed left the city for the suburb. Families started to buy themselves a single-family home in the suburbs with easy access to ample public outdoor space. Suburban mothers were made the first responsible parties for the upbringing of the children, while their husbands made long working hours in central cities' labour markets. The gendered character of the suburbanisation process was conceptualised by Susan Saegert (1980) as a dichotomy between the masculine city versus the feminine suburb. Family households became a minority in large cities. Urban populations were becoming predominantly childless households, although families continued to settle down in cities. Outward middle class family suburbanisation went along with the urbanisation of new lower class family households, mostly poor immigrant families from less economically advanced countries.

Over the last decades, however, this situation has started to change. Today, we see a new development of middle class families opting for the city as a family-friendly place to live. This is a trend of middle class families that can afford to buy themselves a suburban home, but who decide not to do so and remain living urban. The number of urban families is on the rise again and the same applies for the number of children growing up in large cities. Table 2 gives some figures about this process in Amsterdam:

Table 2: Demographics in Amsterdam (1996–2014).

Amsterdam	1996	2014
Number of households	352.542	392.057
Number and percentage of two-parent families	52.282 (14.8%)	64.219 (16.4)
Number and percentage of children 0–3	34.468 (4.8%)	40.764 (5.1%)
Number and percentage of children 4–11	58.237 (8.1%)	64.551 (7.9%)

Source: Boterman and Karsten, 2015.

The percentages of Table 2 are not very impressive, due to the general growth of the Amsterdam city population. In absolute numbers the increase of family/children is, however, considerable. In addition, the growth concentrates in specific neighbourhoods, which puts high pressure on the building of new schools and other children's facilities.

The growth of urban family life is reflected in several European capitals and within specific inner city neighbourhoods, including Paris, Lon-

don, Berlin, Stockholm, Helsinki as well as some neighbourhoods in the US like New York (Authier and Lehman Frisch, 2013; Buttler, 2003; Statistisches Bundesamt, 2015; Lilius 2014). And as my Swedish colleagues have explained to me: even in the mid-sized city of Uppsala, the trend of growing numbers of families in centrally located neighbourhoods is apparent. We are discussing urban development in the Global North. Today, cities are the home of family households again. And we can distinguish roughly two categories: a large group of lower class, mainly migrant families and a smaller but fast growing group of (upper) middle class families.

Within this new urban context, I want to answer two questions. First, what does today's urban childhood look like? And second: how do new urban childhoods affect cities or how do new practices of urban family life contribute to the shaping of a new urban order?

I will start with the first question and will first reflect on the significance of the street, the school second and children's consumption spaces third for the construction of new urban childhoods.

The street

Historical studies clearly demonstrate the loss of significance of the city street as a site for growing up. Gill Valentine (2004) argues that urban public space is transforming into adult space. Over the years, children's outdoor play has reduced and has increasingly become supervised. The research by Pia Bjorklid (2004) has demonstrated that motorised traffic is one of the main threats for children's outdoor play. In the context of today's increasingly dense cities and its lack of open space, children's outdoor play has been pushed towards specifically designed spaces such as playgrounds. Those playgrounds have an ambivalent status. On one hand, it is public space and it accommodates children's play. On the other hand, playgrounds set children apart and underline their status as 'the other': not belonging to mainstream society (Karsten, 2002).

In my historical research (Karsten, 2005), I have described the decline of the iconic child: the outdoor child who plays outdoors frequently and during long hours. In the 1950s and 1960s of the last century, playing outdoors was defined as a matter of course. Playing was playing outdoors. My adult respondents, looking back to their childhood, however, made clear that we should not romanticise children's outdoor adventures too much: it was (and sometimes still is) a daily practice without much variation and without much choice. Many children had to play outdoors. They lived in big families with only limited space indoors just like we see today in some migrant fam-

ilies. But this child gathering on the street also had a particular strength: by their playing outdoors so frequently, children created streets that were to some extent meeting places for all children of the neighbourhood. Children with different backgrounds met each other regularly outdoors and without much interference from adults. Children's freedom of movement was large and as a group they took the lead in exploring the neighbourhood on their own. Outdoor play was not yet adults' work. A great contrast with today, as this advertisement makes clear:

Our sons, J. and B. are looking for a nice experienced *nanny who loves to play outside*. On Thursdays and Fridays, Amsterdam 06-... (Advertisement in Amsterdam City Paper, 2005, 18 may).

While the freely exploring, outdoor child has become marginalised in the city, two new types of childhood have emerged: the indoor child and the back-seat generation. The first type of indoor child plays outdoors only rarely. Indoor children have parents who are afraid of the dangers of the street. They want to protect their child. Children in their turn, generally like playing outdoors, but they are also pleased by the newest indoor play equipment; and the competition between indoor and outdoor play is easily won by today's large supply of particularly electronic games and the internet that accommodates children's indoor life so smoothly. The second new type of childhood, the back-seat generation, explores the city in the company of their parents. They have a fully booked agenda and are travelled around to the numerous consumption spaces they attend. This has already resulted in alternative transport means as the new iconic car bike shows. Both new types of urban childhood show that children's agency is reduced to the reach of parents' eyes; and for both new types, the street as a resource for the building of social capital has decreased.

Spatial and social conditions have worked together towards the declining status of the street as a children's space. Besides the aforementioned deteriorating spatial conditions of motorised traffic and increasingly dense cities, I discovered a changing conceptualisation of childhood from resilient to vulnerable. Parents of the 1950s used to consider their children resilient, today many parents define childhood as a vulnerable period in life and they are held responsible continuously for their child's wellbeing. Dealing with risks, however modest, is no longer seen as a necessary part of growing up positively.

The school

Now I come to the second space of childhood, the school, which you are all so familiar with in this faculty. Schools have always been important, if not the most important, space for out-of-home growing up. In Western society, all children go to school. Schools and education are surrounded by high expectations. Educating young children is considered to be the ultimate instrument for societal progress and personal achievement. Education should deliver a vehicle for the social mobility of all. Ideals and day-to-day practice however have never run parallel.

In the Netherlands, public education is still the main organising principle of primary education; private schools sponsored by parents with sky-high tuitions like in the US or the UK don't exist. However, within the public education system, we have a large variety of schools distinguished by denomination on religious grounds (from protestant to catholic and non-religious), by pedagogical direction (from Montessori to Dalton) and increasingly by the supply of additional classes like foreign languages, extra sports and other so-called 'enrichment activities'. This is all communicated on the internet and elsewhere and has contributed to a system of school markets as the research by Katarina Gustafson (2011) has made clear. Schools are becoming increasingly competitive in constructing a reputation of high achievements. That's what middle-class parents in particular are looking for. But it is not only high achievements that attract parents. Parents also want to see themselves reflected in the school's culture, its pedagogical principles and the population on the school yard. Following Bourdieu (1984), we may say that with the choice of a specific school, families express who they are and to whom they want and don't want to belong. Choosing schools is an identity constructing activity informed by social class and ethnic status, as the research by Ball and Vincent (1998) makes clear. This mechanism creates schools as segregated nodes in the networks of 'people like us', not only for parents but for children as well.

History teaches us that segregated schools have always existed. There has always been a divide between poor and rich schools and in the Dutch context between schools of different religious denomination. But as I have just explained, in the past, children were more easily in touch with children 'not like us', however superficially. After school, children with different backgrounds met on the street as the quotes by two Amsterdam women born in the early 1950s further clarifies:

I joined a steady group of children, who all lived on our street or one of the streets nearby. When we came out of school, out of our different schools, we used to meet on a small square nearby and play together: catholic, protestant and also communist children; it didn't matter to us.

The children I played with in their homes, they were children from school. The neighbourhood children were different. We played together on the street, but we didn't meet them at home.

The second quote illustrates that neighbourhood friendships were generally characterised by weak social ties, they had a different status compared with the close, intimate and strong relationships among school friends. But following Granovetter (1983), it is often weak ties that enable us to bridge the divides between different status and culture groups. And it is particularly those bridging weak ties that are disappearing in today's urban childhood (Karsten, 2011).

Segregated schools contribute to the narrowing of children's social capital as schools have probably always done. However today, this situation is no longer compensated for. Children no longer meet playmates with different backgrounds on the street. Again, we must conclude that children's agency, given the parental power in the choice of schools, has decreased.

Children's consumption spaces

Now we arrive at the third and last space of childhood that I will focus on in the context of this lecture: children's consumption spaces. Today's position of the school as the most important childhood space for the building of social capital and personal identities supposes a strong relationship between schools and after-school spaces. This however is a relationship we don't know much about. It seems to be logical that the attendance of a specific school relates to the attendance, membership and consumption of specific after-school spaces. In school yards, parents inform each other about 'nice' sport clubs, good music classes, child-friendly restaurants and so on. The raising of children is a frequently discussed topic among befriended parents. Parents consider children's growing up as a project with the aim to ensure that children acquire a range of healthy, safe, meaningful and instructive experiences. Middle-class parents spend money on the reproduction of their status by passing on the right life skills, clothes, food, and ultimately friends to their children (Vincent and Ball, 2007). In the words of Annet Lareau (2003), middle class parents are engaged in a project of concerted cultivation that is very much reflected in today's commercialised childhood.

The new family practices in cities correspond with the changing of cities from landscapes of production to landscapes of consumption (Zukin, 1995). The increase of urban family households and their new ways of spending time and money on children is reflected in the rise of new children and family-related consumption spaces. In an Amsterdam research project, we studied the changes in the consumption infrastructure of some inner-city neighbourhoods. In the neighbourhood of Middenmeer, a popular middle-class family environment, four categories of family and child-related consumption spaces have increased over the last 20 years (Karsten, 2014). First, the number of family focusing food businesses has grown significantly. Family-welcoming restaurants, coffee houses where they serve babyccino, cafes with play space for children, healthy family caterings: they popped up in several centrally located neighbourhoods (Karsten et al., 2015). Those new family spaces develop as gathering places for young families (Lilius, 2015). The entrances are often blocked by prams and strollers as if to make clear: this is a family space.

Second, the number of shops selling family related non-food commodities also increases. An example is the enlargement of departments of children's books in bookstores or the opening of new bicycle shops specialized in children's bikes and sturdy mother and father bikes, including the iconic car bike.

The biggest growth we discovered among the third category: that of children's leisure spaces (Holloway and Pimlott-Wilson, 2014). New children's leisure spaces vary from children's creative clubs to music studios like the piano-shop, located across the street of a big primary school. Also, the number of children's sporting places has considerably increased. One of the tennis clubs of the neighbourhood used to have adult membership only, but has now broadened the scope and welcomes children as their new client group. A fourth and last very visible change is the establishment of new services for child care, including after school care and a new homework institute.

The Amsterdam study further reveals that part of those new consumption spaces are started by parents themselves. Here we meet the self-organising middle classes (Buttler, 2003). It is particularly mothers who develop initiatives to start toddlers' music classes, children's yoga studios or family-friendly organic catering services. Parents' pre-occupation reflects the intensification of parenting described in the literature and a situation in which children and parents share each other's company during long hours (Van der Burgt and Gustafson, 2013; Craig and Mullan, 2012). Family outings, parents and children accompanying each other, are one of the fast growing 'children's' activities I see in my latest research (Karsten and Felder, 2015).

The new market-driven family and child-related consumption infrastructure now fosters a new urban family culture. It is, however, evidently clear that many of the new family spaces don't cater to all urban families to the same extent. Inequality across class is definitely there.

Conclusion

In this lecture, I have focused on three important spaces of childhood where children's growing up takes place: the street or the urban public space, the primary school with its different denominations and pedagogical regimes and the after-school supply of children's consumption spaces. Conclusions about today's urban childhood and future cities are two-fold and have both negative and positive dimensions.

First, the negative side. The decrease of urban public space as a meeting space for children is certainly a loss for the individual child, including the ones who still play outdoors regularly. While the street is declining in significance, the segregation among different class children is growing. The strengthening of intra-group (among people like us) relations at school is no longer compensated for. School is gaining importance not only as a learning site, but particularly as self-chosen identity marker and as a resource for social networking for both children and parents. It even seems to be that the choices of after-school consumption spaces are largely reflecting school composition. As I have argued, children's use of those three spaces are inter-related and together contribute to the construction of segregated, unequal and commercialised urban childhoods with only limited agency for children themselves (Karsten, 2011). Family-related consumption is becoming big business in the global North and contribute to a further spaceialization of class (Lees, 2003; McKendrick et al, 2000; Putnam, 2014).

Secondly (and to end with more positive words): It is my opinion that we should not continually stress what has been lost. I want to shift the discussion to an exploration of what has replaced past practices. The growing number of urban families and children and the related rise of new urban consumption spaces can also be interpreted as contributing to a new age, gender and family-inclusive urban order away from the dichotomously conceptualised city of the past. Susan Saegert's masculine city is fading away (Saegert, 1980; McDowell, 1983). By their mere presence, families reflect a demographically more diverse city than in the past with increasing numbers of children and growing gender equality in family households (De Meester, 2010; Boterman and Karsten, 2014). Children's visibility in the urban arena has further grown by their family related ways of consuming the city,

which has now improved conditions to foster today's urban family life (Lil-
ius, 2015). Central urban areas are transforming in places to raise children
as used to be the case before the massive family suburbanisation. In my re-
search, I recognise potential gains for equalities related to the emancipatory
city as described by Loretta Lees and others (Bondi, 1999; Warde, 1991; Lees,
2004). From this perspective, children are not only losing agency, they are
also important agents of societal change.

My two-sided and ambivalent conclusions have one advantage: they urge
for further and preferable comparative research between different contexts
in Sweden and the Netherlands. We have much in common on the level
of the nation-state and on the level of the city, but there are differences as
well. I already suggested one topic: the primary school as network location
for parental advice and children's after-school spending of time. Regarding
this topic, a comparison between different classes and a further refinement
of lower and middle classes is much needed in order to go beyond a di-
chotomous conceptualisation. And another suggestion: how urban are my
analyses in this paper? Which developments about a decrease of playing
outdoors, the growing importance of education and the growth of children's
enrichment activities are also reflected – and maybe in different ways – in
the countryside? As the Faculty of Educational Sciences, you will have am-
ple access to different categories of schools in cities and in the countryside
and thus to children and parents who can be approached to participate in
research. I hope that this paper inspires you to do so.

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*Detail of a red chair at Campus Blåsenhus, Uppsala University.
Photo: Staffan Claesson.*

Two Applications of Geometric Data Analysis

Possible Plagiarism in Sholokhov's "And Quiet Flows the Don", Individual Differences among Gifted Students of Stanford EPGY Program

Brigitte Le Roux (2013)

Introduction

My domain of research concerns applied mathematics and more precisely Geometric Data Analysis, which is considered a branch of Multivariate Statistics. In this paper, I will not speak about mathematical theory, but about applications of mathematics. To do this, I will try to show how the methods of which I am a specialist allow us to reveal the structure of complex data.

I will present two case studies as illustrations of how *Geometric Data Analysis*¹ might provide useful tools for research in the fields of culture and education. The first one pertains to Lexicography, the second one to the Sociology of Education. I will first present the geometrical modelling of data, then, using a clustering method, I will give a representation of the data by a hierarchical tree.²

¹ Le Roux, B., Rouanet, H. (2004). *Geometric Data Analysis: From Correspondence Analysis to Structured Data Analysis*, Dordrecht: Kluwer.

² If the various notions of clustering are now defined in the mathematic language of the set theory, their inspiration and their application go back to the famous Linné, especially for his precise system of scientific clustering of plants and mineral species.

Lexicography Study: plagiarism or not

The lexicographic paradigm is defined as follows. Consider a text (or a set of texts from one or several authors) divided into a set of pieces (or *chapters*) and a set of *graphical forms* (or words). A lexical table, crossing chapters and graphical forms is constructed, with in each cell the counts of occurrences (*tokens*) of a graphical form in a chapter. Then we proceed to Geometric Data Analysis of the table using two methods, namely Correspondence Analysis and Ascending Hierarchical Clustering.

The set of words will be chosen depending on the linguistic issues to be investigated. Most frequently ‘content words’ (nouns, verbs, adjectives, etc.) are used to investigate *content*, while function words’ (sometimes referred to as empty words, or tool words, or grammatical words, as opposed to content words) are used to investigate *style*.

Data set

As an example, we will briefly present the study by G. and A. Volochine³, motivated by the intriguing accusation of plagiarism raised against Sholokhov (1905–1984), the famous Russian Nobel prize writer, in connection with his novel *And Quiet Flows the Don*. This novel was written in several stages between 1926 and 1940, and earned him the Stalin Prize in 1941 and the Nobel Prize in Literature in 1965. Many discrepancies in style and vocabulary appear from one volume to another and sometimes even within one chapter of the same book. Owing to these differences, Sholokhov was accused of plagiarising the work of Kryukov (1870–1920), another Russian author.

This novel comprises four books subdivided into eight parts (hereafter denoted **D1**, **D2**... **D8**), each of them being subdivided into chapters (1945 issue). It contains a total of 393,500 words.

In order to establish whether the observed discrepancies were specific to Sholokhov or could be signs of theft from Kryukov, the authors of the study included three other texts by Sholokhov in their analysis, namely, *Virgin Soil Uplifted* (1932–1960) with 214,500 words (two chapters denoted **Ts1** and **Ts2**), *They Fought for their Country* (1956–57) with 60,400 words (denoted **R**) and *One Man's Destiny* (1959 reviewed in 1967) with 10,600 words (denoted **S**).

³ Volochine, G. and Volochine A. (1995). Etude comparée des textes russes : Le Don tranquille et autres œuvres de Sholokov, *Les cahiers de l'Analyse des Données*, 20, 7–26.

Finally, in order to highlight possible similarities or differences in writing, five short stories by Kryukov were introduced. These stories (denoted *K1* ... *K5*), which are the alleged concealed sources for Sholokhov, were published between 1903 and 1913 (except “Kazatchka”, which was published in 1896). They contain about 68,000 words.

The texts were chosen for their homogeneity. There are both narratives and short stories. They are set in the period of time that goes from the First to the Second World War, during which the revolution and the collectivisation of the land occurred. The texts describe mostly feats of arms or war stories. They all deal with the Cossack culture of the “Don river”. The overall corpus thus comprises approximately 747,000 words.

The authors of the study retain categories⁴ of function words, precisely, prepositions, adverbs, adjectives used as adverbs, conjunctions, demonstrative pronouns and possessive adjectives. A total of 244 forms of *function words* were retained; these forms appear at least once in each text (except for the short text *One Man's Destiny* with 10,600 words), hence providing a lexical table with the following format.

Table 1. Lexical table: 17 texts and 224 words.

	word1	word2	word3	word224	
D1					
D2					
D3					
D4					
D5					
D6					
D7					
D8					
TS1					
TS2					
R					
S					
K1					
K2					
K3					
K4					
K5					

Count of occurrences of word3 in text D8

⁴ An automatic segmentation of a text into occurrences of *graphical forms* can be made by specialized software; see, for instance, the methods of “Text mining” developed in SPAD software (distributed by Coheris-SPAD www.coheris.com/produits/analytics/logiciel-data-mining/).

Results of Correspondence Analysis

In order to visualise the data, a Correspondence Analysis of the lexical table consisting of 17 texts and of 224 function words was performed. Then two clouds in a high-dimensional space (here 16 dimensions) were constructed, namely the *cloud of texts* and the *cloud of function words*. Figure 1 shows the representation of the 17 texts in the first plane of the analysis, which is the best approximation of the whole cloud.⁵

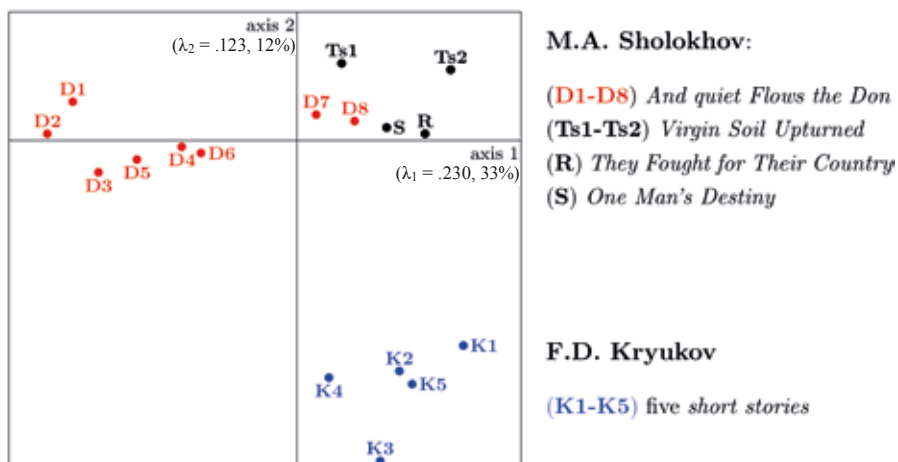


Figure 1. The 17 texts in the principal plane 1–2.

The *cloud of texts* produced by Correspondence Analysis convincingly shows that:

1. the first six chapters of the novel do differ (on the first axis) in style from the last two chapters and also from other texts by Sholokhov. This strengthens the suspicion of plagiarism;
2. Kryukov's style differs considerably (on the second axis) from Sholokhov's style. This weakens the accusation of plagiarism of Kryukov's work.

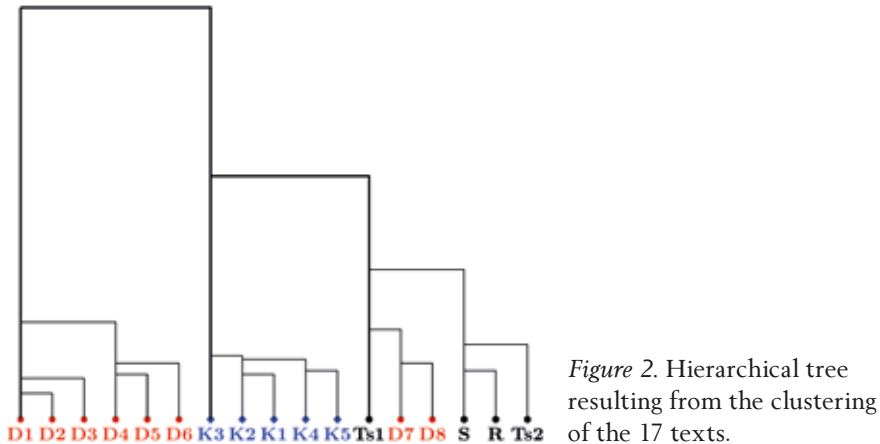
Inspecting the *cloud of words*, G. and A. Volochine wrote:

- On the left, one finds prepositions that deal mostly with locations.
- At the bottom, the predominance of adverbs evokes Kryukov's short stories.
- At the top, there are words that can be words of a discourse and not only of a narrative.

⁵ The first axis accounts for 32.6% of the variance, the second one 17.4% and the third one only 8.2%.

Results of Ascending Hierarchical Clustering

When performing ascending hierarchical clustering, of the 17 texts, the data are represented by means of the following tree.



The first separation is between the first six parts of the “Don” (**D1, D2... D6**) and the other texts. Then there is a separation between the other works by Sholokhov and the five short stories by Kryukov (**K1... K5**). Notice that, in a work like the *Don* dealing with only one subject, 70% of the text is separated from the rest of the text and from the other three texts by the same author.

Conclusion: Plagiarism or not?

It was said that at least the first three parts of the “Don” were written by Kryukov. The analysis presented here clearly shows that is not the case. Kryukov’s stories have no affinity with the “Don”.⁶

The lexicographic paradigm has given rise to a full-fledged domain of direct applications of Correspondence Analysis.⁷ Such a paper is a good illustration of its use as a *geometric model* for investigating hypotheses.

⁶ On this issue, there are several linguistic studies that lead to the same conclusion. For instance, one is based on the length of the sentences (see Geir Kjetsaa, *The authorship of The quiet Don*, Oslo: Slavica Norvegica, 1984), another one is based on the way of beginning or ending the sentences, etc.

⁷ An important area of textual analysis is the analysis of open questions in questionnaires; see, e.g., Lebart, L., Salem A. & Berry L. (1998). *Exploring Textual Data*, Dordrecht: Kluwer.

Individual differences among gifted students (EPGY Study, Stanford)

Another privileged field of application of Geometric Data Analysis is the sociology of Culture and Education. We will present here a study concerning the Education Program for Gifted Youth (EPGY).⁸ The EPGY project, initiated by Patrick Suppes at Stanford University, is a continuing project dedicated to developing and offering multimedia computer-based distance-learning courses in a large variety of subjects. For instance, in its Department of Mathematics, EPGY offers a complete sequence from kindergarten through advanced–undergraduate levels.

The overall objective of the study was to construct a geometric space of data exhibiting the organization of individual differences among gifted students.⁹ A specific matter of interest was the investigation of the trade-off between errors and response times. In this respect, the body of existing knowledge about ‘ordinary students’ appears to be of limited relevance, so the case study is really exploratory. This case study was conducted by myself and my colleague, Henry Rouanet in cooperation with Patrick Suppes (Stanford University).

Data and coding

This case study deals with the detailed performances of 533 students in the *third grade*. The data concerns the EPGY course Mathematics with its five strands: *Integers, Fractions, Geometry, Logic* and *Measurement*. For each domain, performance indicators are recorded; they are of three types, namely, *Error rates (E)*, *Latencies (L)* (response time) for correct answers and *Number of exercises (N)* to master the concepts of the subject domain. Crossing the three types of indicators with the five strands we get fifteen variables in all. Table 2 exhibits the data concerning three students.

⁸ <https://epgy.stanford.edu/>

⁹ Patrick Suppes, Kalée Tock, Mario Zanotti, Tammy Rosenthal, Eric W.Cope, Yong Liang, Henry Rouanet, Brigitte Le Roux, Tryg Ager, John Dexter Fletcher, Constance Stillinger, Nava Ben-Zvi, Paul Lorton Jr. and Barbara W. Searle (2013). *Individual Differences in Online Computer-based Learning: Gifted and Other Diverse Populations*. Patrick Suppes (Ed.), Stanford, CA: CSLI Publications, 2013.

Table 2. Example of raw data for three individuals.

<i>Integers</i>			<i>Fractions</i>			<i>Geometry</i>			<i>Logic</i>			<i>Measurement</i>		
E	L	N	E	L	N	E	L	N	E	L	N	E	L	N
.0141	27.2	4	.015	13.7	4	.034	26.5	12	.054	17.53	5	.069	37.5	6
.0318	32.6	4	.043	21.1	4	.134	31.2	12	.120	21.20	5	.098	45.9	5
.0101	21.4	4	.014	12.8	4	.046	19.7	12	.086	16.48	5	.029	33.8	4

The age of students at the end of the course ranged from 5 years to 11½ years, the age that occurs most often is between 8 and 9 years. We first perform elementary analysis and study the distribution of each variable.

Error rates. The distributions differ among the strands. The *Integers*, *Fractions* and *Measurement* distributions are *I*-shaped whereas the *Geometry* and *Logic* ones are more bell-shaped. Notice that there are 9 students who make *no error* in *Integers*, 70 in *Fractions*, 4 in *Geometry*, 0 in *Logic*, 49 in *Measurement*.

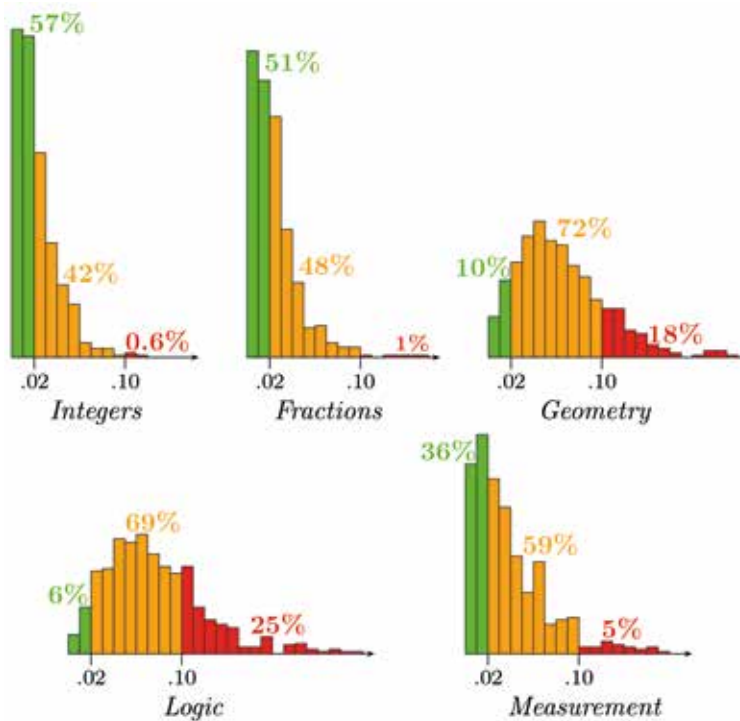


Figure 3. Distribution of Error rates and percentages of the three grouped categories.

Latencies. The distributions widely differ between subject domains. This discrepancy may be attributable to the differing organizations of exercises according to domains.

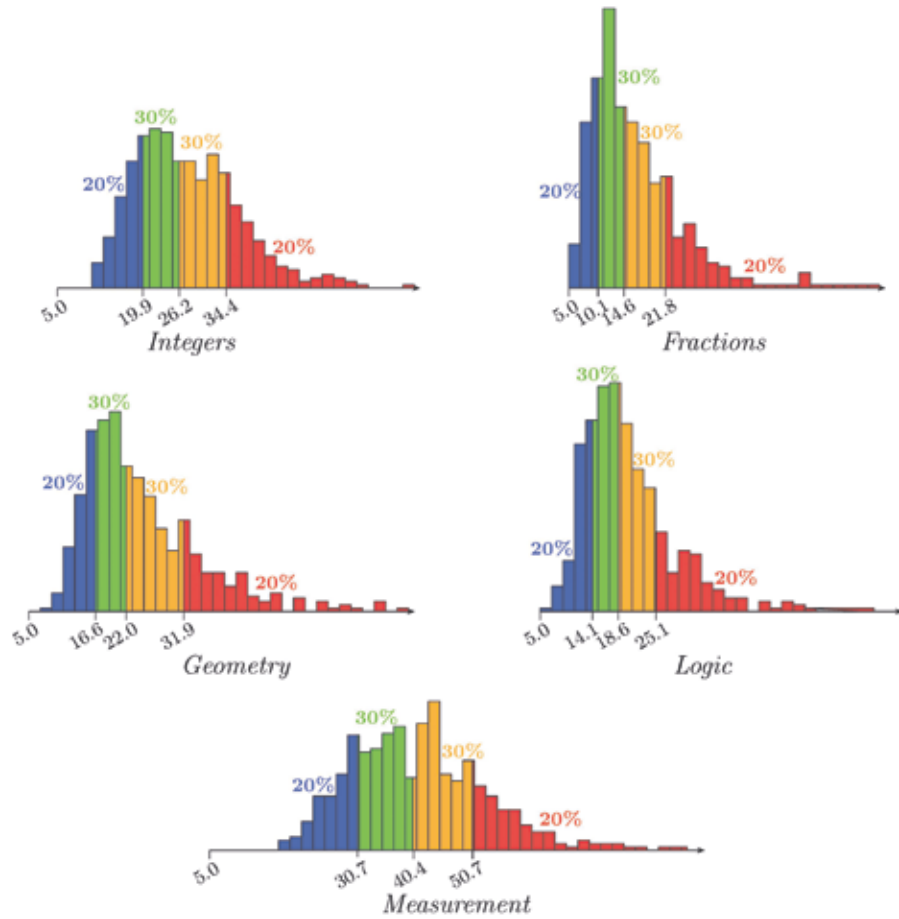


Figure 4. Distributions of Latencies with cut values in seconds (20%, 30%, 30%, 20%).

Number of exercises. In the following tables, we give the absolute frequencies of the *Number of exercises* (in italics) necessary to master the concepts of the strand. For instance, 480 students treat only 4 exercises in *Integers*; 203 treat 12 exercises in *Geometry*, etc.

Table 3. Absolute frequencies of the *Number of exercises* (in italics) and grouping into categories.

<i>Integers</i> $\frac{4}{480} \mid \frac{5}{53}$	<i>Fractions</i> $\frac{4}{482} \mid \frac{5}{49} \frac{6}{1} \frac{7}{1}$
<i>Geometry</i> $\frac{6}{1} \frac{8}{1} \frac{9}{19} \frac{10}{61} \mid \frac{11}{118} \frac{12}{203} \mid \frac{13}{100} \frac{14}{20} \frac{15}{7} \frac{16}{3}$	
<i>Logic</i> $\frac{4}{165} \mid \frac{5}{301} \mid \frac{6}{55} \frac{7}{9} \frac{9}{2} \frac{10}{1}$	<i>Measurement</i> $\frac{4}{387} \mid \frac{5}{125} \frac{6}{21}$

The material of the course is such that, after four or more exercises, it can be decided, using a mathematical model borrowed from Patrick Suppes, whether the student does or does not master the notion. If he/she does, the following exercises are not proposed to the student. This is of prime importance for gifted students who do not continue doing other exercises about a notion if they master it, but wish to go further and continue with another concept.

Given the heterogeneity of variables and of their distributions, the most appropriate Geometric Data Analysis method is Multiple Correspondence Analysis¹⁰ (MCA), a method especially devoted to analysing categorical data and questionnaires. Therefore, with the help of the specialists of the EPGY program, we proceeded to the coding of variables into a number of categories equal to 2, 3 or 4. For *Error rates*, we started with a coding in three categories from 1 (low error rate <2%) through 3 (high error rate >10%). For *Latencies*, we took for each strand a 4-category coding from 1 (short) through 4 (long) (see Figures 3 and 4). For *Number of exercises*, we coded in two categories for *Integers*, *Fractions* and *Measurement*, and in three for *geometry* and *logic*, from 1 (small) through 3 (large number).

With each individual, a specific *response pattern* defined by the individual's responses to the 15 coded variables is associated. The number of observed response patterns is 520, quite close to 533 (total number of individ-

¹⁰For an elementary introduction to Multiple Correspondence Analysis, see Le Roux, B. and Rouanet, H. (2010). *Multiple correspondence Analysis*, QASS series #163, CA: Thousand Oaks, SAGE publications.

uals), which nearly expresses the maximum of individual differences at the level of coded variables.

Construction of the space of individual differences

From the recoded data, we first perform a *Multiple Correspondence Analysis* in order to construct the space of individual differences, and then a *Cluster Analysis* in order to define a groups of students.

The Multiple Correspondence Analysis provides two clouds of points, namely, the *cloud of categories* and the *cloud of students* in a high-dimensional space. We will present the projection of these clouds in a plane (Figures 3 and 4), which is the best approximation of clouds, and hence allows a reasonably strong visualisation of the data.

The examination of the cloud of categories (see the three following graphs in Figure 5) shows that, for each type of variable, there is *coherence between strands* except for the *Number of exercises in Geometry*.

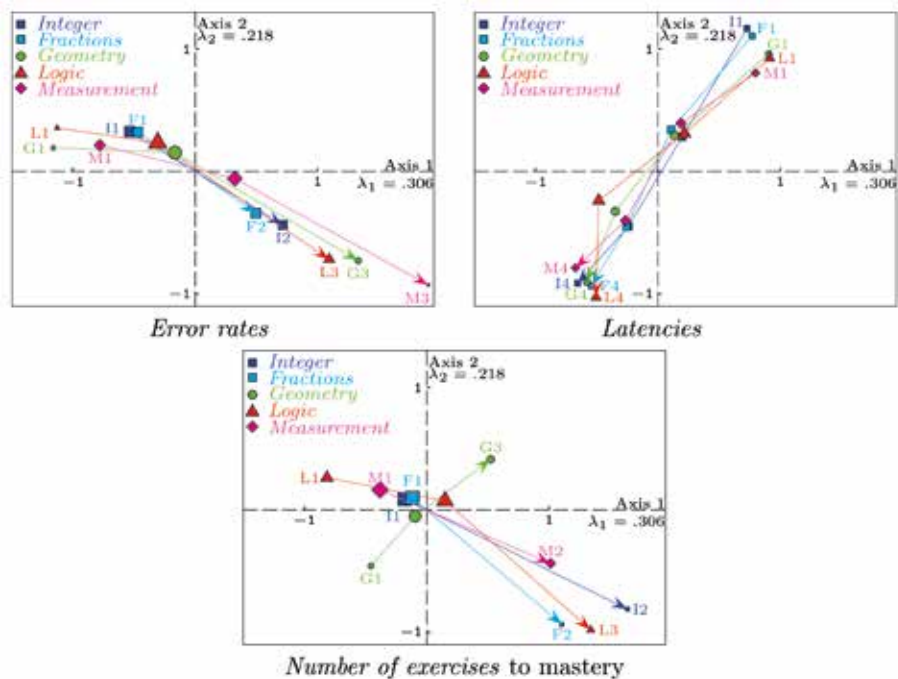


Figure 5. Cloud of categories (three types of variables) in plane 1–2.

Interpretation of axes

- Along the *first axis* (horizontal), we see an important opposition between high error rates and large number of exercises (on the right in Figure 5) and low error rates and small number of exercises (on the left). The short latency categories are located on the right, exhibiting the link between high error rates and short latencies.
- The *second axis* (vertical) is strongly related to latencies. It opposes short latencies (at the top) and long latencies (at the bottom), the latter being associated with high error rates and a large number of exercises.

Cloud of individuals

The cloud of individuals (533 students) consists of 520 observed response patterns, to which we add the following four extreme response patterns that will be used as landmarks (gray square symbols in Figure 6) of the cloud of individuals, namely:

- point A: low error rates, short latencies, small number of exercises;
- point B: low error rates, long latencies, small number of exercises;
- point D: high error rates, short latencies, large number of exercises;
- point C: high error rates, long latencies, large number of exercises.

It should be noted that none of the 533 individuals matches any one of these response patterns.

The individuals are roughly scattered inside the quadrilateral ABCD, with a high density of points along the AB side and a low density along the opposite side. This shows there are many students who make few errors, whatever their latencies. On the other hand, students with high error rates are less numerous and very scattered.

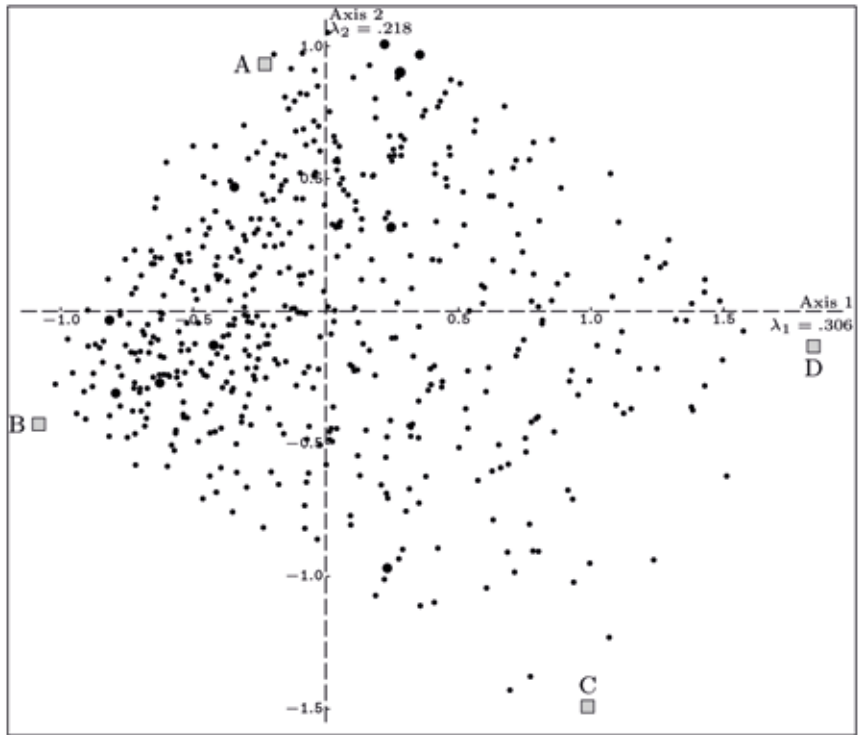


Figure 6. Cloud of individuals (response patterns) with typical response patterns in plane 1-2.

Defining clusters of gifted students

Distinguishing clusters of gifted students was one major objective of this EPGY study. Thus, we have proceeded to a Euclidean clustering, which is in harmony with the preceding geometric modeling of data. The procedure first led to a six-cluster partition, from which five clusters were constructed and retained to define a final partition of students. We will comment on the successive dichotomies leading to these two partitions; then, we amend the partition in six clusters of the AHC to get a partition in five clusters, which we will retain as a final summary and that will be designated by $\{g1, g2, g3, g4, g5\}$. The clustering is represented by a tree (Figure 7). At each step, a cluster is divided into two parts. By 'cutting' the tree at any level, a partition of the individuals is determined.

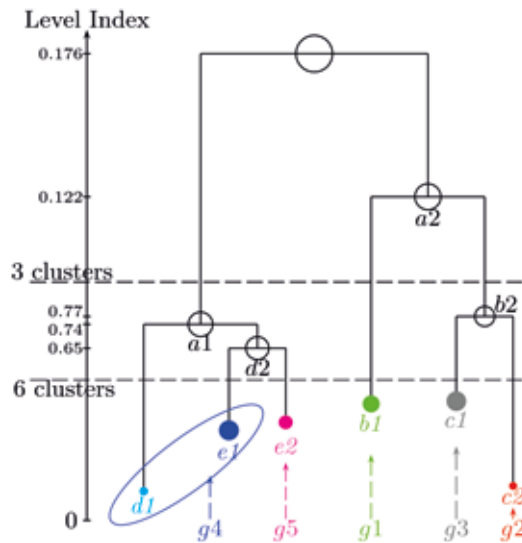
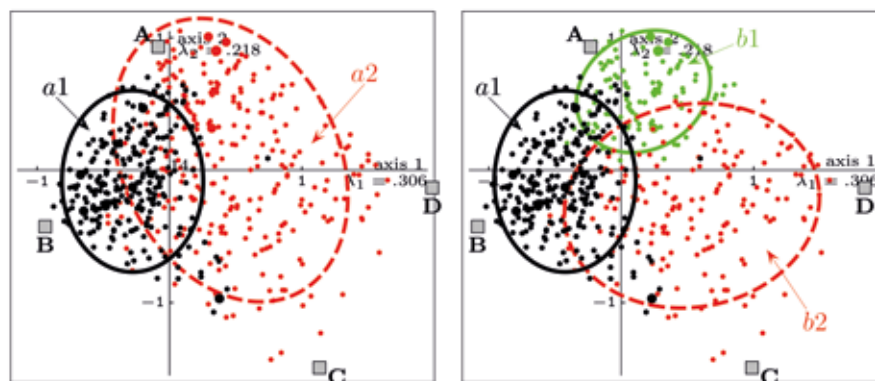


Figure 7. Superior hierarchical tree resulting in six-cluster partition.

Partition into three clusters

A cluster of individuals will be geometrically summarised by an ellipse that roughly contains 84% of the points of the cluster. At each step, the ellipse of the cluster to be divided is drawn in a dashed line.

- The *first dichotomy* separates the students into two groups, one (*a1*) of 255 students and one (*a2*) of 278 students. Cluster *a1* (black points in the following figure) is characterised by students with low error rates; it includes almost all students with long latencies and who need few exercises to master a concept. The extreme pattern B is close to this cluster.
- The *second dichotomy* splits **cluster a2** into two clusters, one of 111 students (*b1*) and another (*b2*) of 167 students. It separates out **cluster b1** which is rather compact; its first characteristic is that almost all students have short latencies and need few exercises to master the concepts of the strand, except in *Geometry*. The average error rate of the cluster is around the median. The extreme pattern A is close to this cluster.



For **cluster b2**, the distribution of latencies is for each strand near the overall distribution, with under-representation of long latencies.

To sum up: The partition into three clusters contains a cluster (*a1*) with low error rates (and rather long latencies), a cluster (*b1*) with short latencies and small numbers of exercises to master a concept and a cluster (*b2*) with high error rates.

	frequencies	Error rates	Latencies	Number of exercises
<i>a1</i>	255	low	rather long	rather small
<i>b1</i>	111	medium	short	small except in Geometry
<i>b2</i>	167	high	medium	rather large

The subsequent dichotomies lead to refining the partition into three clusters by subdividing the clusters of low and high error rates and with large dispersion of latencies.

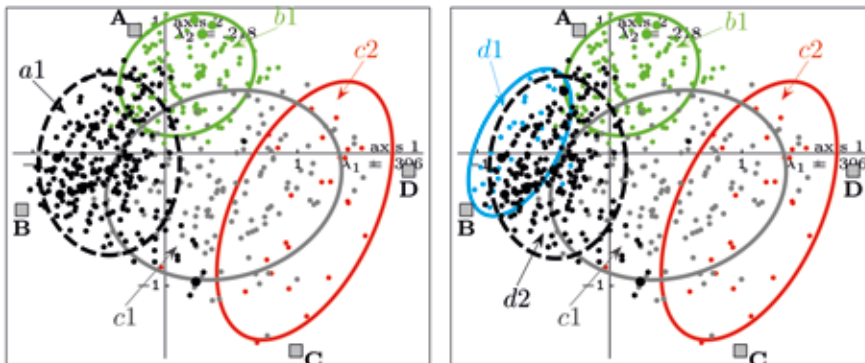
Partition into six clusters

- The *third dichotomy* splits up cluster *b2* into two clusters: *c2* with only 25 students and *c1* with 142 students; both clusters are widely dispersed. It generates the four-cluster partition.

Cluster *c2* includes students who almost all have high error rates and who do large numbers of exercises; latencies are scattered on all categories; a weak majority of students have latencies inferior to the overall median of latencies.

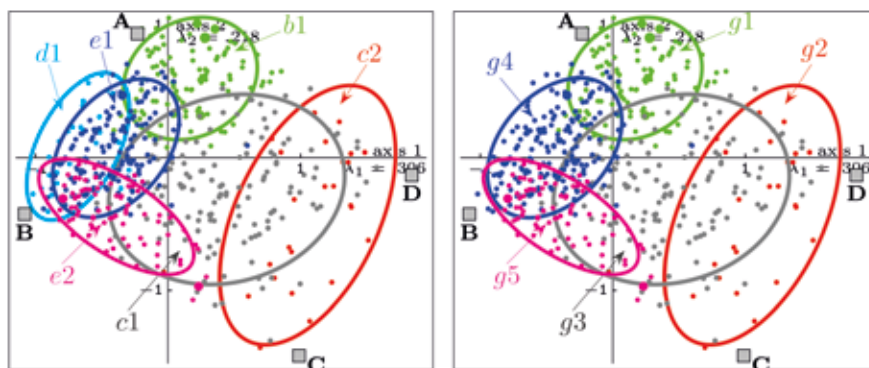
Cluster *c1* is characterized by high error rates but inferior to the average of cluster *c2*. The proportions of students with extreme latencies comprise between 10% and 18% except for short latencies in Logic and Measurement (23%). Most students who need many exercises to master a notion belong to this cluster.

- The *fourth dichotomy* splits cluster *a1* into cluster *d1* (28 students) and cluster *d2* (227 students). Cluster *d1* is composed of students who have, in large majority, low error rates, with medium latencies, and who do not need very large numbers of exercises to master a notion.



- The *fifth dichotomy* divides cluster *d2* into *cluster e2* (77 students) and *cluster e1* (150 students).

In *cluster e1*, one finds low error rates, medium latencies (proportions of short latencies vary between 5% and 11%, and the long ones between 15% and 19%). This cluster is very close to cluster *d1*, with error rates nevertheless slightly greater than average. *Cluster e2* is the one of the long latencies (above median for all the students), and with proportions of small numbers of exercises superior to the proportion over the 533 students, except in Logic.



Final partition into five clusters

The ellipses of clusters *e1* and *d1* appear to be quite close to each other, which suggests the grouping of these two clusters. Then we obtain a final *partition into five clusters*.

There are two compact clusters of well-performing students. One cluster (in green), close to point A, puts together students with short latencies and medium error rates. The other (in pink), close to point B, gathers students with rather low error rates and medium-to-long latencies. Cluster *g4* (in blue) includes students with low error rates, especially in *Geometry* and in *Logic*.

	frequencies	Error rates	Latencies	Number of exercises
<i>g1</i>	111		short	small except in Geometry
<i>g2</i>	25	high		rather large
<i>g3</i>	142	high		
<i>g4</i>	178	low		rather small
<i>g5</i>	77		long	rather small

Conclusion

Starting from three types of variables (*Error Rates, Latencies, Number of Exercises*) and five subject domains (*Integers, Fractions, Geometry, Logic, Measurement*), we have used Multiple Correspondence Analysis to construct a geometric space of individual differences among gifted students in the third grade.

The geometric analysis shows a good homogeneity of subject domains for each type of variable. It also shows that the individual differences are articulated around two scales: one of *Error rates* and *Number of exercises* and one of *Latencies*. The error rate scale is clear-cut, showing strong homogeneity; the one of latencies is not so sharp, as some subjects have both short and long latencies across strands.

The analysis provides a *geometric summary* of data. The individual points are scattered within a quadrilateral ABCD: when going down along the AB direction, latencies increase, while error rates remain constant; when going down along the AD direction, error rates increase, while latencies remain constant. The scattering of points within the quadrilateral is not uniform, showing a low density alongside CD and a high density along AB.

A Euclidean clustering is used in order to highlight *groups of gifted students*. It leads to a five-cluster partition. There are two compact clusters of well-performing students; one cluster is close to point A with short latencies and medium error rates, and the other one is close to point B, with rather low error rates and medium to long latencies (a profile little encouraged by current standards of educational testing in the United States).

These two case studies are illustrations of how Geometric Data Analysis might provide useful tools in research on culture and education.¹¹

¹¹ See for instance:

- Ekelund, Bo & Mikael Börjesson. Comparing Literary Worlds: An Analysis of the Spaces of Fictional Universes in the Work of Two US Prose Fiction debut cohorts, 1940 and 1955, *Poetics*, vol. 33, 2005.
- Börjesson, Mikael, Donald Broady, Brigitte Le Roux, Ida Lidegran & Mikael Palme. Cultural Capital in the Elite Subfield of Swedish Higher Education, *Poetics*, vol. 56, pp 15–34, 2016. <http://dx.doi.org/10.1016/j.poetics.2016.02.004>.
- Bergström, Ylva & Tobias Dalberg. Political Position-taking. The Case of Young Citizens in a Swedish Rural Mining District, *Praktiske Grunde. Nordisk Tidsskrift for Kultur- og Samfundsvidenskab*, vol. 4, pp. 7–22, 2012.
- Lebaron F. & Le Roux B. (eds): *La méthodologie de Pierre Bourdieu en action. Espace culturel, espace social et analyse des données*. Paris : Dunod, 2015.

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A Call for an Ethnography of Childhood

Marjorie Harness Goodwin (2014)

Introduction

What I would like to consider today is the importance of ethnography for understanding children's lives. In particular, today my focus is on children interacting with other children in the peer group. As sociologist Leena Alanen (1988:924) has said:

The child ... remains for social theory negatively defined, because s/he is defined only by what the child is not, but is subsequently going to be, and not by what the child presently is. The child is depicted as pre-social, potentially social, in the process of becoming social – essentially undergoing socialization.

The peer group is an important institution for learning language and culture, as cultural anthropologist Bronislaw Malinowski (1973:283) noted:

In many communities, we find that the child passes through a period of almost complete detachment from home, running around, playing about, and engaging in early activities with his playmaker and contemporaries. In such activities, strict teaching in tribal law is enforced more directly and poignantly than in the parental home.

Linguist William Labov (1970:34) has commented that “It is the local group of children's peers which determines this generation's speech pattern”. The unit of analysis for studies of social cognition, as psychologist Marilyn Shantz (1983) has proposed, is activities, as within activities we see the child not simply as a knower about the social world, but as an actor in it. With the focus on activities we can directly study directly processes of social relations in the actual interactions of the child and others, rather than using experimental paradigms, which she views as “poor analogs of actual social interactions and meaningful social contexts” (Shantz 1983:497).

Piaget and hopscotch as a situated activity system

Early work on children's activities was shaped by Piaget's writings about children's games. He proposed that "the legal sense is far less developed in little girls than in boys" (Piaget 1965:77). He felt that none of the games that girls played were as complex with respect to the organisation and codification of rules. His example of a simple girls' game was the game of hopscotch.

I set out to see if this was in fact the case, doing fieldwork among a number of children's groups: African-American working-class children in urban Philadelphia, African-American migrant farmworkers' children in rural South Carolina, middle class White children in Columbia, South Carolina, an ESL class in Columbia, South Carolina, Latina and Korean children in downtown Los Angeles, and a group of children of mixed social classes and ethnicities at a progressive school in Los Angeles.

I considered games such as hopscotch a form of situated activity system, defined by Goffman (1961:96) as a "somewhat closed, self-compensating, self-terminating circuit of interdependent actions." As Sacks (1995:490) noted, "Games provide central environments of learning about 'interchangeability of personnel' as well as 'activity-relevant' positions. Janet Lever, a sociologist following Piaget's lead, argued that "girls' turn taking games progress in identical order from one situation to the next. Given the structure of these games disputes are not likely to occur" (Lever 1978:479). However, Lever neglected to consider the role of the judge, the person who is scrutinising every move of the jumper in the midst of play. As soon as a mistake is made, stepping on a line or jumping inappropriately through the grid, the judge in the Latina group in downtown LA calls "OUT!" and does so with high-pitch and distinctive intonation contours (see figure 1).

Latina girls make use of a low high-low pitch contour, jumping dramatically to nearly 700 hz (where girls' normal voice range is 250 hz) and with extended vowels. The judge makes a very deliberate point towards the girl whose move she challenges and then provides a demonstration of the inappropriate move, physically moving through the grid. As we know from work with reported speech (Goodwin 1990), the reported action demonstrating movement of the prior player through the grid, can be transformed.

Turning to a hopscotch game played by African American migrant workers' children, we find a dramatic pitch leap as the party who is argued to have hit the line denies it with "I AIN'T HIT NO LINE!" The pitch of the denial reaches nearly 800 hz. This move also is followed by a judge's demonstration, a re-enactment and a tapping on the line where the jumper

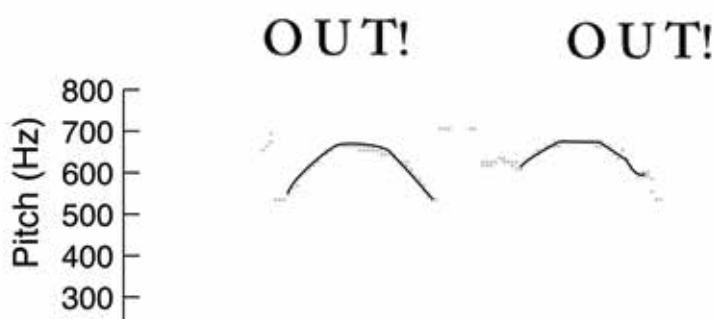


Figure 1: Calling “Out!” through heightened pitch and point.

reputedly hit. Next the jumper challenges the judges with a play hit towards them and an insult:” Shut up with your old-fashioned clothes!” (see figure 2).

In both Latina and African-American groups, girls hold one another highly accountable for their actions in the game. I found that White girls used highly mitigated language in their noticing of an offense in response to someone stepping on a line of the grid. Girls would say, “I think that’s sort of on the line though.” With utterances, such as “Your foot’s in the wr(hh)ong(hh) sp(hh)ot.” they blamed a foot rather than the jumper for the mistake and further mitigated their calls by including laughter in their noticing of an offense. Girls excused the mistake with statements such as “You accidentally jumped on that. But that’s okay(hh).” The White girls neither pointed at the violator nor assertively re-enacted the prior move. Thus, across

girls' groups we find variation in how peers hold one another accountable for their actions.

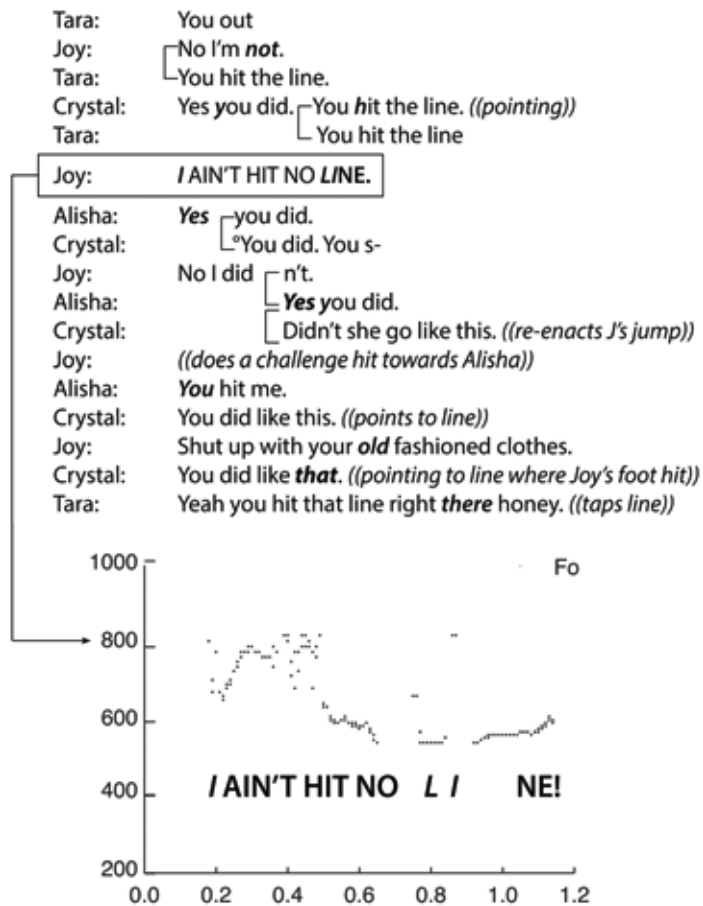


Figure 2: Dispute in hopscotch with re-enactments.

Children's notions of justice following violations of the social order

Piaget's notion of males' concern for justice permeates research until even now about divergences between males and females. Gilligan's influential book *In A Different Voice* (1982) chronicled two different moral imperatives, with males concerned with justice (equality, reciprocity and fairness) and females, an orientation towards care, the idea of attachment, loving and being loved, listening and being listened to, etc. These stereotypes get repeated in sociologists' views that boys are interested in aggressive achievement-oriented activities, while girls value social and nurturing roles (Adler and Adler 1998:55). Finally, psychologists such as Leaper and Smith (2004:993) argue that girls are more likely than boys to use language to form and maintain connections. These types of evaluative commentaries get replicated and repeated in the popular media, as we see in *As Good as it Gets*, where a young secretary asks the writer Melvin Udall (played by Jack Nicholson): "How do you write women so well?" He responds, "I think of a man. And I take away reason and accountability".

In work, I did studying African-American children in Philadelphia (ages 4–14), girls and boys were frequently in each other's presence and girls could hold their own in arguments with boys. There were striking differences in the types of accusations used by boys and girls. Boys were quite direct, as in the following:

Malcolm: **You** took the **hangers** that I took off your **bed**.

William: **Boy** you broke my **skateboard**!

Lee: Y'all just changed the whole **game** around!

Vincent: You messin up my **paper**!



Figure 3: Boys' accusations.

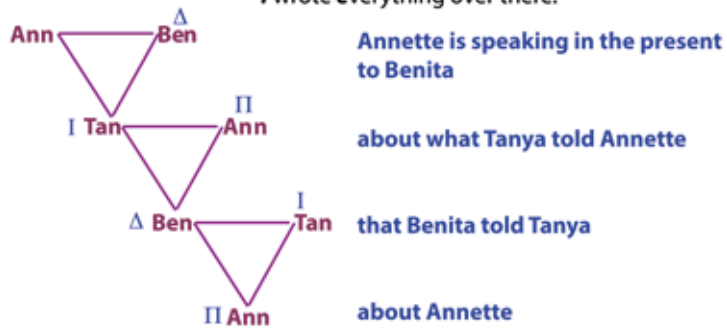
Boys' accusations dealt explicitly with violations in the midst of their game activities and pastimes. Girls' accusations, by way of contrast, were more indirect. They concern an important offense in the girls' culture, talking about someone behind her back:

He-Said-She-Said Accusations

Annette to Benita: And *Tanya* said that *you* said that *I* was showin' off just because I had that *bl:ouse* on.

Bea to Annette: Kerry said you said that (0.6) *I* wasn't gonna go around *Poplar* no more.

Barbara to Bea: They say y'all say *I* wrote everything over there.



Considering the rotation of participants throughout the statement, we find that the party who was initially talked about becomes the plaintiff in a confrontation stage. Talking about someone in her absence is considered a grave offense by the girls. The plaintiff or accuser reports what was told her by an intermediary party or instigator, about what was (reputedly) said by the defendant about the plaintiff in her absence.

He-Said-She-Said Accusations



Figure 5: Biography of positions created in he-said-she-said accusations.

Through the way in which the girls report the offense, they have built into the action an alliance of “two against one.” As Ruby stated in the midst of a he-said-she said confrontation:

Two Against One

Ruby: Well *I'm* a get it straight with the **people**.
 What Kerry,
 It's between Kerry, and you, (1.0)
 See **two-** (0.5) **two** against one.
 Who wins? The one is **two**.=Right?
 And **that's** Joycie and **Kerry**.
They both say that you said it.
 And you say that you **didn't** say it.
 Who you got the **proof** that say
 That you **didn't** say it

Figure 6: Warrant for the accusation: 2 against 1.

Stories in the he-said-she-said event

To understand how stories are used to promote this event consider how Goffman's deconstruction of the speaker in his article on "footing" (1979) is relevant here to understanding how events can get reinterpreted through storytelling. On one occasion as Bea and I were sitting on the steps of her house, a boy skated by. She commented, "That boy have ugly sneaks. Don't he". When I responded "mm yeah" she next shouted out "HEY BOY. THAT GIRL SAY YOU HAVE UGLY SNEAKS!"

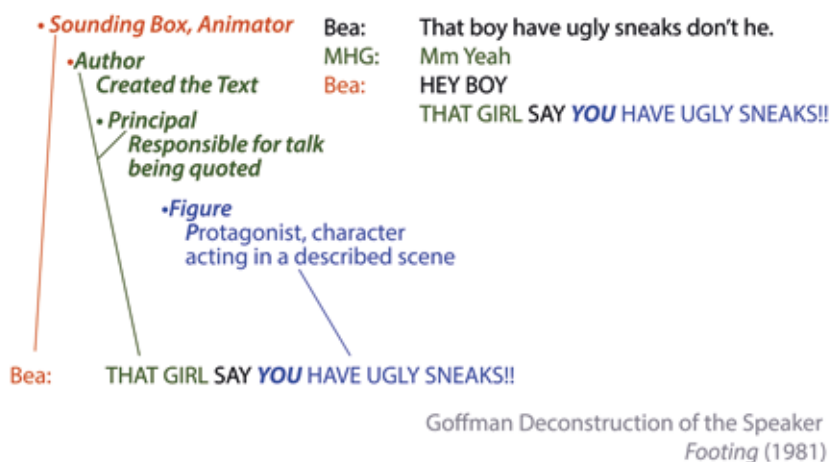


Figure 7: Reported speech and re-enactment in gossip.

Bea is the originator of the statement I agree with; she is both the sounding box and animator of a statement about the boy skating by. However, through her report of my agreement to her statement, she transforms me into the party who authored the insult, indeed as the principal party held responsible for the negative talk. In order to create drama and bring into being a future confrontation, the instigator tells a series of stories. In the following example, Bea animates an absent party (Kerry) disparaging the current hearer, Julia. She quotes Kerry as having said "If that *girl* wasn't there you wouldn't be *actin* all *stupid* like that."

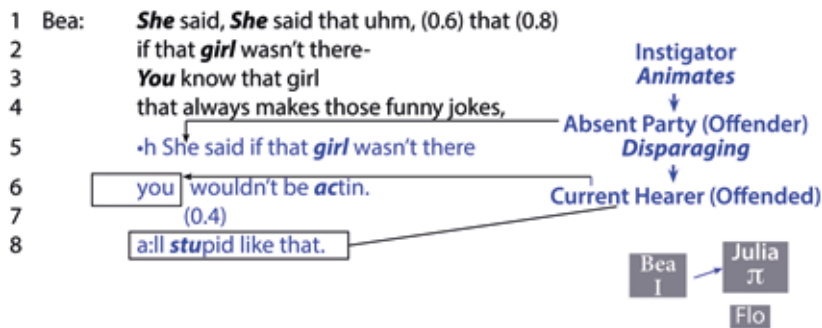


Figure 8: Animating absent party in gossip.

In response Julia challenges the depiction Kerry made of her: "But was I actin stupid with them?" (line 9). Bea continues the story, trying to elicit commentary from her interlocutors which will commit them to carrying out a confrontation. When Bea reports that Florence had said that Julia had said "Ah: go tuh-, somp'm like that." Julia responds "No, I didn't." (lines 11–12) in a soft voice. Next a hearer who was not a character in the drama provides her own commentary with a generic statement about the absent party: "Kerry *always* say somp'm. When you jump in her face, she gonna deny it."

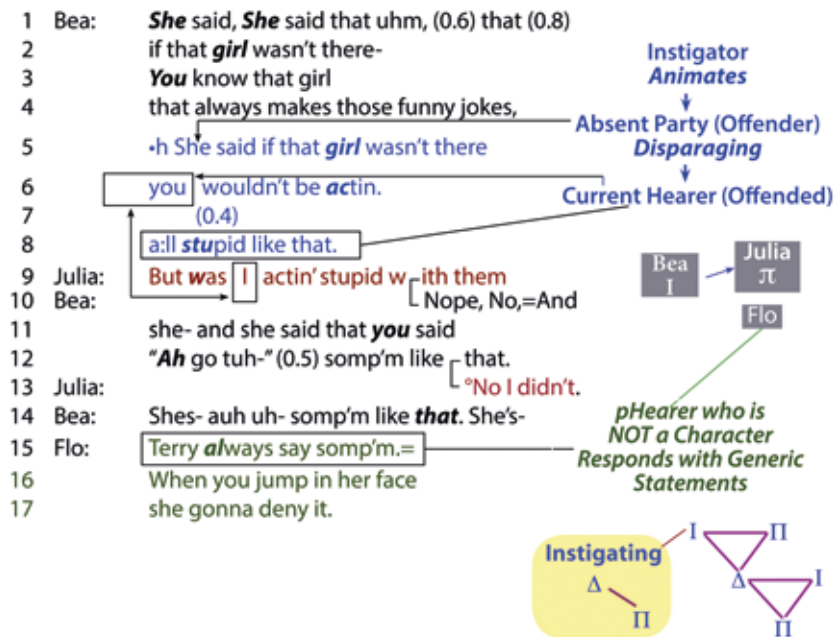


Figure 9: Hearers' talk in response to story in gossip event.

A multi-party alliance is built by reporting how others in the past stood up to the party being disparaged. Bea reports on how Kerry had excluded Julia's name on a hall bathroom paper for a number of girls to go together: "But she ain't even put your *name* down there. Me and Martha put it down." When Kerry said, she didn't want to have Julia's name on the pass (line 46), Bea stood up to her saying that in a similar situation *she* would have included her name (line 48). In response to the report, the teller seeks to elicit from the hearer a promise to confront the party who disparaged her.

Julia's next move to the report was the statement, "I'm a tell her about herself today" (line 63). Once such a statement has been made it counts as a commitment to carry out the future confrontation. Failure to do so can result in girls saying that someone backs down or moles out or "swags."



Figure 10: Building alliance and indirect solicit of promise to confront.

Notice that the ethnographer could not have elicited the types of narratives that occur here because she does not occupy a position in the he-said-she-said activity!

What we find a family of stories related through time and reflexively embedded within the he-said-she-said activity. Reports of promises to confront result in future hypothetical stories about what the party talked about, the offended party, might say: "Can't wait to see... action. I laugh if Kerry say I wrote it, so what you gonna do about it?" (line 1-7). In addition, the plaintiff speaks with other girls about complaints against the defendant and harvests a host of stories that can be used in next moves to the defendant's possible denials.

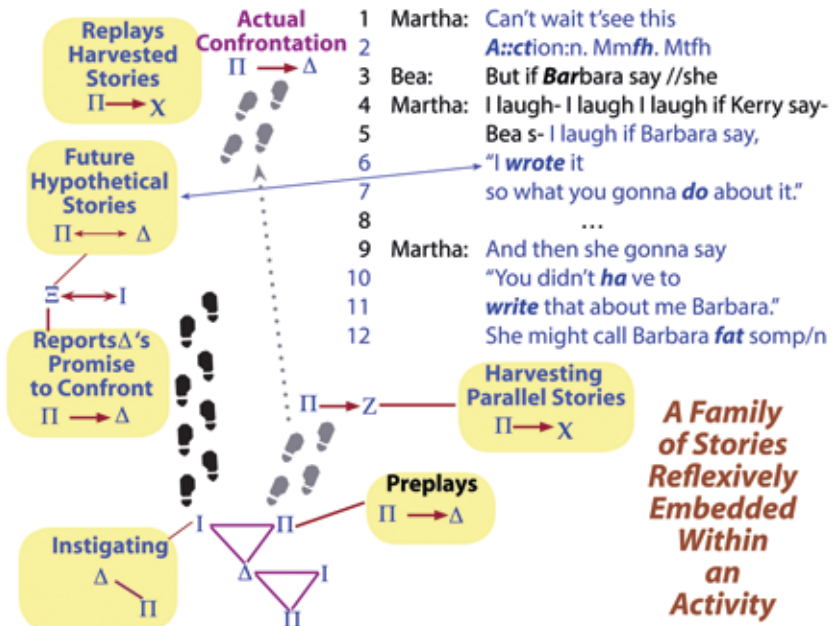


Figure 11: Family of stories in he-said-she-said.

He-said-she-said events are built not only to address the offense of talking about someone behind her back, but also to sanction those who position themselves above others in the group. The accusation statements and stories within the he-said-she-said provide a leveling mechanism, a vernacular legal system, designed for dealing with girls who violate group norms. Girls' actions within this activity, counter to Piaget, display keen attention to notions of appropriate moral rules of conduct. Girls' adjudications of offenses can take place over months and are much more extensive than the ways boys handle violations.

Constructing inequality through one-upmanship and forms of degradation

While Gilligan's notion of a "care orientation" has dominated much work on children's moral development, recently this view of the vulnerable girl has been replaced by the notion of "mean girl" (Gonick 2004:395) in public consciousness. Psychologists talk about how the aggression of girls is practiced by excluding girls and in a covert rather than overt way (Archer and Coyne 2005:215; Rigby 1997:20).

However, fieldwork I conducted with a multicultural multiethnic group in Los Angeles found that girls ages 10–12 were not always so covert. Forms of asymmetry and inequality were features of the girls' social organisation, as also has been reported initially by Norwegian social anthropologist Sigurd Berentzen (1984) and Swedish scholars (Evaldsson 2007; Evaldsson and Svahn 2012; Svahn 2012; Svahn and Evaldson 2011), and Americans looking at preschools (Kyratzis 2007). Girls in the group I studied constructed inequality through the way they made reference to signs (clothing, cars, houses) that indexed their social class. For example:

"You can play tennis every *day* in the Dominican." "My *mom's* side of the family they own *three* houses." "I've taken *ten* this year and it's *only* April."

While the girls made claims about their access to luxury items, they considered one of their classmates who followed them, Angela, who was African-American and working class, not even worthy enough to join in a jump rope game. Notice in the following frame grab that she is seated across the table, somewhat at a distance from other girls. When Lisa said "I'm gonna go get the jump ropes" Janis called out to Angela "You're last" When Angela protested with "I'm *first*" the girls said "No NO:: You're not here.

You're not even *here!*"

Positioning Angela

((Girls are sitting at lunch table))

Lisa: I'm gonna go get the jump ropes.

Janis: °You're last. ((said to Angela))

Angela: I'm **first**.

Lisa: **No.=**

Janis: **NO::**

Lisa: You're not here . Aretha: YOU'RE NOT EVEN HE:RE!

Angela: °Go:d.



Figure 12: Positioning Angela as an outsider.

The girls read the status claims that girls who put themselves above others and challenge them. They use laminating verbs such as “she thinks” and then state the valued status that a girl claims by virtue of a sign display that warrants attribution of the claim. Consider the following utterance: “Janis thinks she’s popular because she stays up to date. She likes the Spice Girls, She has Spice Girls everywhere. She wears the most popular clothes-”

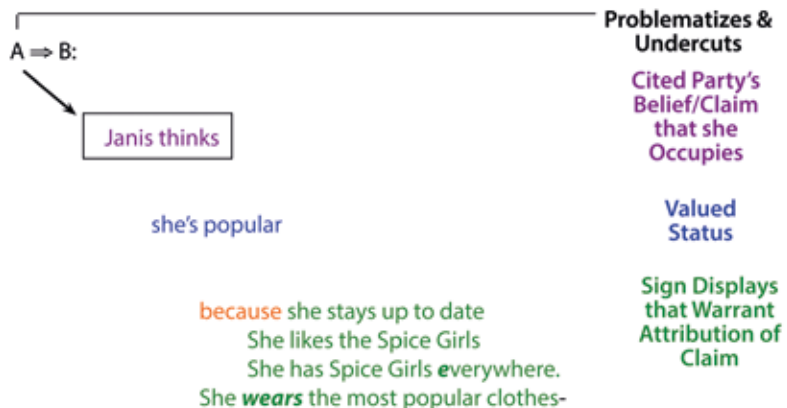


Figure 13: Problematizing status claims.

By stating “She thinks” a speaker is problematising and undercutting the claim being made: being “up to date” because one wears Spice Girls clothes and has Spice Girls paraphernalia. Thus we find actors with quite complex mental lives being construed through the sign displays that they make.

When these girls position themselves in this way they are open to challenges by girls in the group who talk about them in their absence. On one occasion Janis excluded three girls, including Angela, from playing softball because Janis’s boyfriend, who was organising the game, told Janis she could only have three girls playing on the field. In response, the excluded girls, Sarah, Aretha and Angela, yelled insults from a distance towards Janis: “I *HATE THOSE PANTS! THEY’RE UGLY!*” (lines 12, 15). This resulted in Sarah and Aretha affiliating with each other in the midst of talking negatively about Janis:” Oooooo! *Girlfriend!* (line 16).

Alignment in Assessment Sequences

1	Angela:	Tell me naturally	
2		Do you really like Janis?	
3	Aretha:	Janis does everything that’s trendy .	Janis positions herself above others
4		She thinks that she’s so popular	
5		‘Cause she stays up to date.	
6	Sarah:	Look at her pants.	
7		(2.0)	
8	Sarah:	I don’t <i>like</i> being trendy.	
9	Angela:	She’s not even matching.	
10		To tell you the truth.	
11	Sarah:	I got this three years ago. Trust //me.	
12	Aretha:	I HATE THOSE PANTS! ((yelling towards Janis & Sean thrusting head))	Yell insults at Janis from a distance
13		((looking towards Janis and Sean)) (0.8)	
14	Sarah:		
15	Aretha:	THEY’RE UGLY! (0.8)	
16	Sarah:	Oooooo! Girlfriend! ((looking at Aretha))	
17	Aretha:	They are. Look at ‘em.	

Figure 14: Sanctioning putting oneself above others.

When Angela attempted to join, saying “They look like Shaka Zulu”, (line 21), she was ignored. Aretha and Sarah produced hand slaps or high fives (lines 27–31), affirming their converging assessment about Janis.

18 Aretha: [They look like some **boys'** shorts.
 19 Angela: They look-
 20 Angela: Okay.
 21 They look like- (Shaka) Zulu.
 22 Aretha: [You know how boys wear their shorts?
 23 They look like she's trying to be like-
 24 She wants to- *h **match Sean!** ((eyeball roll))
 (0.8)
 25 So she's wearing some **tren-dy-**
 26 Sarah: [Sean has a shirt like that!
 27 ((raises arms to clap))
 28 Sean has a shirt like that!
 29 **Girl Girl Girl!** ((high fives Aretha))
 30 **Girl! Girl!** (0.3) Girl! eh heh heh!
 31 Gi(hh)rl//frien-!
 32 Angela: **eyeah!!! Yeah!!!** ((as Angela reaches over Sarah to slap
 33 Aretha's fists, Aretha's and Sarah's arms go down))
 34 Yeah::



Alliance against
Janis

Figure 15: Affirming a converging negative assessment.

In order to participate Angela had to reach over the shoulders of Sarah in order to join in with the celebratory hand clap.



Figure 16: Angela's distal participation.

Often she was excluded from them their games or lunch conversations as is visible from her seating positions, further from the main group.

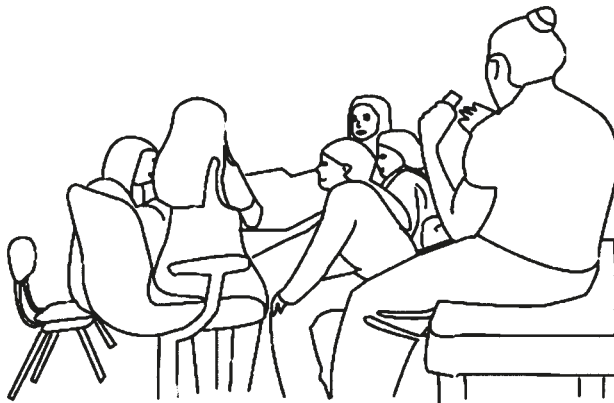


Figure 17: Angela's position at the periphery.

While in the past example insults were hurled from some distance to someone who put herself above others, in the next example we find that Angela is degraded in the presence of others. When she begins to eat pudding with her tongue she is told that her actions are disgusting. The girls produce loud response cries and remove their bodies from the table, positioning themselves away from her.

Girls' Insult

- 1 Angela: **When you grow up, you gonna to be working**
- 2 **at Pick and Save.**
- 3 Girls: ah hah hah [hah HAH HAH HAH HAH HAH!
- 4 Sarah: **So? Are you going to be working?**
- 5 Emi: You're **not even going to be working!**
- 6 (Linda): [(At Sears.)
- 7 Sarah: **I know!**
- 8 Angela **So? You gonna be-**
- 9 Linda: You can't find a job **anywhere.**
- 10 Melissa: [Angela you'll- you'll have to be-
- 11 **You'll(hhh) be-** Degrade current participant
- 12 **You'll be cleaning out-the gutters.**
- 13 Emi: [Everyone will- eh heh heh!
- 14 Girls: eh heh hih hih hih!
- 15 Angela: **Well that's better than** [working at **Pick N Save.**
- 16 Emi: [Everyone will **reject** you.
- 17 Kathy: **Chimney Woman.**
- 18 Melissa: *h **As if** the gu(hh)tters are going to accept her ((smile voice)).
- 19 Angela: **At least I don't eat jello.**
- 20 Girls: Ah ha hah hah!

Figure 18: Degrading Angela through insult.

And while ritual insult is frequently about aspects of the other that are not true (Evaldsson 2005; Labov, 1972), in interactions with Angela, the girls select features that are real rather than fictional to depict Angela, arguing that she is not going to be working (or if so, at a low-class store), not being able to find a job, possibly cleaning out the gutters. Indeed, the negative person descriptors that are selected tell us much about valued features of culture. In Sweden among boys of working class immigrant background negative person descriptors include being poor, having limited Swedish language proficiency, dressing like a girl, or being like a “Gypsy” (Evaldsson, 2005).

Conclusion

Bullying, a worldwide problem (Sanders 2004), is usually not investigated ethnographically. Psychologists such as Pellegrini (1998:166) argue that:

The time has come in our study of bully-victim relations to complement self-report and laboratory methods with direct and indirect observational methods of youngsters functioning in the natural habitats in which these problems occur.

As psychologists (Shweder et al. 1987:16) have said:

Despite the fact that morality deals with decision making concerning what is appropriate, fair, and right to do in a particular situation, for the past thirty-five years, the psychological study of morality has focused attention on reasoning about moral situations rather than on moral action itself.

Close ethnographic analysis of the language practices used by children problematises many of the stereotypical notions textbooks proliferate regarding girls' and boys' lives. Ethnography allows access to the lived experiences of children interacting with their peers. We discover that girls exhibit a heightened concern with rules in games, with notions of justice and a concern for equality, reciprocity and fairness. They put into place elaborate vernacular processes for sanctioning those who violate their local community norms. In dealing with peers, they can also practice elaborated processes of exclusion and bullying, exhibiting anything but a tendency towards the “care orientation” hypothesised by Gilligan. The value of ethnographic study is that we can hear the voices of the children themselves as they articulate their social organization for each other. This permits a more nuanced view of children's social worlds on streets and in playgrounds.

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What Are Schools Good For?

Perspectives from Economics and History

David Mitch (2014)

It is truly humbling to receive this honour from such a distinguished university and faculty along with such an eminent group of other honorary doctors. My scholarly career has focused on the economic history of education. My core discipline is Economics. However, my choice of this line of work has been based on my enjoyment of working in archives and with primary source materials. And so I have much appreciation for the discipline of history as well. I also started out as something of an undergraduate philosophy major and have closet interests in that field as well. Since I am receiving this great honour from a Faculty of Education, I would have thought I would reflect on what insights examining the history of education from an economist's perspective might offer to educators, throwing in a dash of philosophy as well.

Perspectives from economics and philosophy

A standard definition of the discipline of Economics is the study of the use of scarce means to satisfy competing ends (Robbins 1932, p. 15). The long-acknowledged problem to which this definition points is that Economics cannot directly resolve the question of which ends societies should pursue and it is perhaps here where philosophy steps in (Knight 1922).

This tension between means and ends surfaces when economists and philosophers discuss education and schooling with each other. A current Spencer Foundation sponsored book project features the collaboration of the prominent economists of education Helen Ladd and Susanna Loeb with the philosopher Harry Brighouse (Ladd, Loeb, Brighouse and Swift, 2016). At a Public Policy conference this past November, I heard this group present. The economists were arguing that schools should be evaluated according to the "educational goods" they produce where they seemed to take it as given

what an 'educational good' is. They could good then move on to consider efficiency concerns about producing the most educational goods for given expenditures of money and allocations of other scarce resources or more concretely raising student test scores employing standardised measures.

In contrast, a standard approach taken by philosophers as to the aim of education and schools is to promote human flourishing. Some of this contrast comes through in the work of Amartya Sen, Nobel Laureate in Economics, and arguably a philosopher as well as economist, in his notions of capability approaches and development as freedom (Sen 1999).

An underlying view of schooling as promoting human flourishing can arguably be traced back to the European renaissance as writers on pedagogy came increasingly to try to incorporate aspects of human psychology and perspectives on the mental development of children. Writers such as Erasmus, Vives, and Comenius broke important ground in bringing out the importance of thinking about human psychology and its implications for personal development in thinking about what schools should aim for and how education should be practised (See Bushnell 1996, Chap. 3; Cubberley, 1920, pp. 408–416).

An emphasis on flourishing and personal development in the renaissance is evident in the frequency in which analogies with the cultivation of plants surfaced in pedagogical writings during this era, as literary scholar Rebecca Bushnell (1996) has argued. Plant analogies were also fully in evidence in the early 18th century charity school movement in Britain. The prominent Anglican Bishop, White Kennett (1706) took as his biblical text for his Sermon in London on "The Charity of Schools for Poor Children Recommended in a Sermon Preached in the Parish-Church of St. Sepulchers, May 16, 1706" the following passage from the 144th Psalm, Verse 12:

That our Sons may be as Plants grown up in their Youth; that our Daughters may be as Corner Stones polished after the Similitude of a Palace.

Although Kennett notes the difference by gender, he punts on the issue of why the psalmist chose a different simile for the education of sons than of daughters:

Why our Sons are compared to the Young Plants, as if Nature were stronger and more self-sufficient in them? And our Daughters to polished Corners, as they wanted a more exquisite Art and Skill to improve and adorn them? This probably was never meant, and there should be no indulging of Fancy in interpreting the Word of God (p. 5).

I will return in the last part of my talk to this contrast by gender. However, at this point, I would like to suggest that this emphasis on flourishing and analogies with cultivation of plants leaves open the possibility of radical uncertainty about what the outcome of schooling will be. Indeed, I can point out that recently both economists of education and U.S. bond-rating agencies have seen this uncertainty as fundamental to the financing of elite private institutions of higher education in the United States.

Earlier this month (January, 2014), at the annual meeting of the American Economics Association in Philadelphia, the prominent Stanford economist of education, Carolyn Hoxby pointed to this uncertainty of educational outcomes as the source of alumni donations that allows Ivy League institutions such as Harvard and Princeton to finance their high levels of expenditure per student in contrast with non-selective institutions of tertiary education such as community colleges. Community College finance in the U.S. is relatively straightforward. Costs per student are relatively low and are directly covered by tuition charges to students along with some government subsidies. At the community college, services are paid for when rendered albeit loans and credit are also often involved. In contrast, at institutions such as Harvard or Princeton, despite their much higher tuition levels, the costs per student are greatly in excess of these tuition levels as well as other immediate subsidies. Instead these institutions rely on their considerable endowments in large part funded by donations by successful alumni to finance their expenditures. Hoxby's perspective is that rather than providing a good that is paid for when services are rendered, these institutions are making investments premised on establishing alumni loyalty and sense of connection and attributing their later success in life to their undergraduate origins. The point is that it is unpredictable, how successful alumni will make their fortunes. And the ones most likely to contribute the most are perhaps those successful in commerce and business rather than such well compensated professions as law and medicine. (See Hoxby (2016) for details of her argument).

This same principle of uncertain but predictable donations of unusually successful undergraduate alumni as a source of elite college finance was in evidence some 15 years ago, when Moody's the credit rating agency lowered the bond-rating of my own alma mater the University of Chicago on the grounds that its undergraduate enrolments were too small and its alumni loyalty insufficiently strong to be a major source of donations in the later lives of the alumni. (For full account of this episode see Boyer (2015), Chap. 6).

I recently (in June of 2013) attended my own 40th college reunion at the University of Chicago. And one major donor from my class, Sanford Grossman who has life sciences institutes¹, had an enormously successful academic career as an economist including tenured positions at Stanford and Wharton School and winning the prestigious John Bates Clark Best Economist Under the Age of 40 medal but went on to make his real money running a hedge fund using quantitative financial strategy trading techniques. Another one of my fellow undergraduate economics majors, Gary Hooper, who has been a major donor with a dormitory named in his honour, made his first millions of dollars running a computerised book inventory company which he sold to be the basis of the online Barnes and Noble book operation and has since moved on to run an economic and business information service which he sold to Dun and Bradstreet². That much is unpredictable about schooling outcomes is suggested by the presence of transformational technologies in recent decades produced by college dropouts such as Bill Gates and Steve Jobs and to turn to more historical examples, James Watt and the steam engine.

The distinguished economist Hugo Sonnenschein as University of Chicago President did encounter pitfalls in responding to market forces by expanding the size of the undergraduate college at Chicago and thus managing to alienate many major constituencies including undergraduate as well as graduate faculty, not to mention current students at the time, and he was forced to step down (See Boyer 2015, Chap. 6 for details). Having provided some perspectives from Economics and Philosophy, let me turn to some perspectives from history.

¹ See: <https://sciencelife.uchospitals.edu/2016/08/24/center-for-quantitative-biology-and-human-behavior-established-with-gift-from-sanford-gross>

² See: http://housing.uchicago.edu/houses_houses/max_palevsky_residential_commons/h Hoover_house/

Perspectives from history

The study of history is valuable for challenging contemporary presumptions that are not well supported by either theory or evidence. Here I want to take up four common presumptions:

- a. that technical change is skill-based and that schooling expands due to a race between technology and schooling
- b. that education is of greater value in industry and commerce than in agriculture
- c. that schooling is primarily about cognitive rather than non-cognitive skills and
- d. schooling for girls as well as boys is intended to promote gender equality rather than gender differences, given my limited time to touch on the issues involved in each of these.

Technical change and the demand for skills

Let me turn first then to technology, industrialisation and schooling. My initial interest in the economic history of education sparked by a footnote in a paper written over a half-century ago by Nobel Laureate in Economics Douglass North. North stated in the concluding footnote to this chapter:

I do not know of any studies that have been made of the changing demand for skills and knowledge during industrialisation, but it does seem to me that it would be a rewarding piece of research. Clearly the kind of human capital that is most complementary with physical capital varies in development. The continuing complaint of underdeveloped areas that they have too many unemployed intellectuals and lawyers does not indicate that they have abundant human capital, but only that they have abundance of certain types (North 1971, p. 281).

The question of how the demand for skills and knowledge has changed over the course of industrialisation and other economic change does seem intriguing. But as I found out, it is not a straightforward one to address. One can perhaps try to measure changing demand for skills by looking at changes in wage premiums by occupation over time. But this leaves open the question of how skilled a given occupation is, the extent to which skill is acquired by schooling, and whether and how the skill content of occupations has changed over time (Katz and Margo, 2014). Recent trends have left uncertainty over whether technology is skill exhausting or skill-saving. One can detect trends in either direction. For a fuller analysis, see Acemoglu and Autor (2011). If one allows for induced innovation, the possibility that technology responds to factor scarcity and wages of various types of skilled

labour, the results are unclear. Insofar as skill premiums rise, then induced innovation implies that technology will shift to more unskilled labour. This is evident in the smart design of cash registers to use unskilled workers at minimum wages to operate them. Historically, this is evident in the textile industry with the introduction of ring spinning to make use of low skill female and child labour to substitute for more skilled male labour. If one allows for labour unions and bargaining and power relations between workers and capitalists, then the direction of technology becomes even more uncertain, as William Lazonick (1979) has pointed out.

Relative demands for cognitive and non-cognitive skills in agriculture and industry

Ambiguities about the demands for education as technology advances and modernisation proceeds are evident if one considers its role in agriculture. There is often a presumption that agricultural activity makes less of education and skill than manufacturing or commerce. This is the premise behind the recent important study by Botticini and Eckstein (2012). They argue that an emphasis on being able to read the Torah in Jewish culture lead the Jews to focus on commerce and skilled crafts, which would make more use of literacy skills than farming; but this is based more on premise than historical fact. While farming can be practised without formal education, formal education can also yield high returns to agriculture. In part this because technology can be a major source of productivity advancement in agriculture. This is one of the premises behind the establishment of land grant universities in the United States in the last half of the nineteenth century (Huffman and Evenson, 2008); and it has been established in a range of cultural contexts from the diffusion of hybrid corn in the mid-twentieth century U.S. to the green revolution in India, that education promotes this diffusion (Griliches 1960; Foster and Rosenzweig, 1996). In my study on comparing the influence of literacy on career mobility in rural Norfolk vs. industrial Birmingham in mid-nineteenth century England, I found a substantially stronger influence of literacy on upward mobility in rural settings as it allowed movement into more managerial farm positions such as bailiff and even into running farms as such than in Birmingham in which no influence of literacy on upward mobility from unskilled laborer positions to skilled artisanal positions was in evidence (Mitch 2005).

However, more is involved than just the adoption of technology. Finis Welch (1970) in his seminal study of the role of education in agriculture distinguished between what he called worker effects – the skills of the farmer

and allocative effects, the decision making involved in changing agricultural activities and responding to product prices. Similarly, T.W. Schultz (1975) highlighted the role of education in facilitating what he termed the ability to deal with disequilibrium. Adam Smith (1776), in Book V of the *Wealth of Nations*, emphasised the great diversity of tasks and natural conditions that the farm worker faced compared with the monotonous routine of the factory worker and argued on these grounds that agricultural work was more likely to both require and utilize cognitive skills than factory work. What can be entailed here is not simply decision making skills but the changing habits or what labour economists are increasingly recognising as non-cognitive as well as cognitive skills.

The role of cognitive and non-cognitive skills in the provision of education by gender

The Role of labour market and non-cognitive skills arise when considering provision of schooling for women. Recently have the phenomenon in a number of women achieving higher levels of educational attainment than men. Historically, it has generally been the case that women's education has lagged behind that of men. But given women's limited labour market participation, one may want to raise the question of why any provision has been made at all.

Adam Smith in Book V of *The Wealth of Nations* noted how the non-labour market role of education and the emphasis on non-cognitive skills in schooling for women actually implied more responsiveness to market forces in their schooling and hence more effective provision:

There are no public institutions for the education of women, and there is accordingly nothing useless, absurd, or fantastical in the common course of their education. They are taught what their parents or guardians judge it necessary or useful for them to learn; and they are taught nothing else. Every part of their education tends evidently to some useful purpose [and note the non-cognitive, behavioural emphasis in this passage]; either to improve the natural attractions of their person, or to form their mind to reserve, to modesty, to chastity, and to economy; to rend them both likely to become the mistresses of a family, and to behave properly when they have become such (Smith, 1776, Book V, Section V, i.f., paragraph 47).

In fact, there has been a long-standing tradition since the renaissance of emphasising that schooling was MORE important for women than men since male education would be heavily shaped by on-the-job experience while women should be more sheltered from real-world experiences.

A notable example of this is in the work of the renaissance educational theorist Juan Luis Vives, who served as an educational advisor to Henry VIII. While in England, Vives wrote *The Education of a Christian Woman* (1524/1538), which contain the following passages:

I do not require that the same care should be taken in providing a nurse for a boy as for a girl.

Quintilian put it well when he said,

In the manner of morals, he was not so concerned, since the boy learns those outside the home more often than in the home...but since we do not wish the young girl to be as learned as she is chaste and virtuous, care must be taken on the part of parents that she not be defiled by anything moral or dishonourable, and that nothing of that nature be acquired through the bodily senses or through her early upbringing (Ibid, p. 54).

Virginity is such a great and noble subject that any discussion of it neither can nor should be brief...I define virginity as integrity of the mind, which extends also to the body, an integrity free of all corruption and contamination. But the essential part of this purity and integrity is situated almost entirely in the mind, which is also the source of all virtues. Consequently, those who preserve the body intact but whose mind is defiled foolishly arrogate to themselves the name or praise proper to virginity (Ibid. p. 80 (37)).

By 1800 in England, Robert Acklam Ingram was arguing for providing a distinctive schooling experience for poor girls than poor boys. In his arguments, he seems to be channelling Adam Smith rather than the Old Testament. In his *Essay on the Importance of Schools of Industry and Religious Instruction in which the necessity of promoting the good education of poor girls is particularly considered* Ingram makes the Smithian argument that work experience rather than schooling is likely to shape the emotional and mental development of the working classes:

... the general character of the lower classes depends much more on the nature of their accustomed employments, than is commonly suspected (p. 13).

Acklam goes on to draw distinctive implications for this for the social experiences of girls:

We could wish, therefore, that girls should be trained up to such occupations as have a tendency to generate a sedate and orderly deportment, such as exhilarate the animal spirits, without retaining them in a state of continual agitation, such as also are rather sedentary, but accompanied with a moderate share of exercise... (p. 13).

Boys are commonly trained up from an early period of life to the proper business of their stations. And the necessity of being constantly engaged in some kind of employment is a species of discipline, beyond what poor girls, in general, experience (p. 23).

The care of poor girls is incomparably more urgent. Too generally are they trained up in no habits of profitable industry, in no kind of domestic economy and good arrangement, and almost barbarous ignorance of moral and religious obligation. And in consequence, the number of steady and industrious workmen appears to much exceed that of women, who are equally careful and diligent in their sphere (p. 24).

Women of quality as well as men argued for distinctive schooling for girls. Although perhaps not as clearly drawing on such Smithian arguments, Sarah Trimmer, in her advocacy of charity schools and schools of industry for girls as well as boys in England, argues that integrating instruction and employment in spinning and needlework with religious and basic reading instruction was particularly efficacious for girls because it would relate to their subsequent employments in life:

For girls, it is very easy to find intermediate employments; spinning wheels, both for wool and flax, should be constant appendages to *Charity Schools*, not only upon the principle of economy, but for exercise, particularly the long running-wheel, which will be found very conducive to the health of those children especially who belong to the Charity Schools in London. They should also by turns do all the household work belonging to the school. Plain work is so evidently useful to women in general, but to the poor in particular, that no Charity Girl can be deemed properly educated who has not attained to a tolerable proficiency upon the needle (pp. 21–22, *Reflections upon the Education of Children in Charity Schools* 1792).

Acklam's views can be seen as persisting in H.H. Vaughan's report on Kent, Surrey, and Sussex in the Parliamentary Report on Women and Children in Agriculture, 1843;

On reasons for early school leaving for boys:

... for labour is the agriculturalists' special education, as school is his general education (p. 155).

Now the employment in agriculture, i.e., the special education of the agriculturalist, is of a purely practical and material kind, and furnishes a discipline the most opposite to the formal education of school (p. 157).

In most parts of these counties, the education of girls is not very seriously affected by their employment in field-labour, as in earlier years they are rarely engaged in it. Their attendance for instruction is proportionately steadier, and their stay

at school longer than that of the boys: in two or three instances in which I took a note, it appeared that four-fifths or five sixths of the school were commonly present, where two-thirds or three-fourths constituted the usual attendance of the boys. Whether their education is upon the whole more successful is questionable. The sphere of a woman's occupation in the lower classes of life is limited. Domestic service is the general lot—for the greater part service of a coarse description, though domestic, and requiring a combination of active and robust, clean and quiet habits, for which a special discipline seems peculiarly necessary. Such discipline is not given in agricultural work, which if habitual, accustoms the whole frame to action upon too broad a scale for domestic life; the eye becomes regardless of precision and cleanliness, the habits undomestic and unfavourable to personal subordination. It seems agreed on all hands that much field-work in early life is a bad exercise for a woman's future duties. This feeling is carried so far in some districts, that leave of absence from school is not granted on the plea of earning money by such means; and where the practice is more common and venerate, it sometimes turns out a serious obstacle to domestic service, especially if it offers any inducement of an attractive kind. ... (p. 150).

One tangible possible indicator of distinctive educational aims for girls compared with boys in England is the emergence and persistence until well into the twentieth century of single sex education for both boys and girls at the primary as well as secondary and university levels. Below the age of sex, mixed-sex schooling does seem to have prevailed by the middle of the nineteenth century in the form of infant schools. But above that age, single-sex schooling, though by no means universal, was certainly widespread at the primary level in England. I will not reflect further here on the use of the term mixed-sex rather than coeducation for this phenomenon in later nineteenth century England though considering the significance of this shift in terminology could be interesting. The prominent educational investigator, Michael Sadler, who came from a family with a prominent tradition of social reform, in his article on "Co-Education" for the 1911 edition of the *Encyclopaedia Britannica* reported that in England as of 1901, roughly half of all schooling departments at the primary level were mixed-sex, a proportion he reports as about the same as in 1891 and 1881 reports. In this respect, England differed markedly from the U.S. and even Scotland (see Tyack and Hansot 1990). Tyack and Hansot document that in the U.S., co-education was the norm in urban as well as rural schools by the mid-nineteenth century despite opposition in some quarters. Sadler indicates that by the early twentieth century, co-education had become far more widespread at the lower secondary level in Scandinavia and the Netherlands as well as to a lesser degree in Germany and France than in England. Sadler attributes the

persistence of single-sex education in southern Europe to Catholic influences on popular education.

In England, it appears that mixed-sex education was always more common in rural areas where low levels of enrollment militated against the expense of maintaining separate schooling departments for boys and girls. In large urban areas, single-sex education was clearly in evidence. School Board reports for Birmingham and London for the last quarter of the nineteenth century indicate dominant enrollments in separate boys' and girls' departments along with some presence of mixed departments as well.

The Report of the School Board for London issued in the early 1900s suggests only quite limited movement by the time the board ceased operation towards mixed departments. Page 152 of that report has a figure displaying the percentage of mixed departments as a share of the total between the formation of the School Board for London in 1873 and 1900. In 1873, when the board commenced operations, mixed departments were 20 percent of the total. The report attributes such a high percentage to the incorporation of numerous small voluntary schools under the board's supervision. By 1875, the percentage of mixed departments had plummeted to well under 10 percent, reaching a trough of 4 percent in 1889. By 1900, the percentage had increased from that trough to 10 percent.

Theory and practice of co-education

Single-sex education often seems to have been the default option when enrollment levels were high enough to make separate departments by gender feasible. Discussions of coeducation typically focused on whether this would be feasible rather than considering reasons for preferring single-sex education. Sadler in his 1911 discussion of the opposition to coeducation notes that mixed education was generally seen as disadvantaging girls by subjecting to them to what he termed the "danger of intellectual and physical overstrain." The opponents of co-education generally acknowledged that coeducation had beneficial effects on the behaviour of boys, but that these benefits were outweighed by the adverse effects on girls. In addition to behavioural effects, another leading argument for single-sex education for girls is that this facilitated more emphasis on domestic and artistic elements of education deemed more suitable for them. In contrast a standard argument in favor of coeducation was based on Pestalozzi's view that educational institutions should be organised around the example of the family.

Conclusion

Single-sex education appears to have been gradually phased out in primary schools during the first half of the twentieth-century. This is suggested simply by the far greater prominence given to debate about single-sex versus mixed-sex education at the secondary than the primary level over the course of the twentieth century. However, given the dominance of the primary education sector over the course of the nineteenth century, the prevalence of single-sex education at that level over the course of the nineteenth century may have been an important influence on subsequent twentieth-century developments in secondary education. This is a history that as best I can tell still needs to be told.

Single-sex education is of more than historical interest. At the American Economic Association meeting earlier this month that I have already referred to, there were two papers presented examining single-sex education in South Korean middle and high schools (see, for example, Soohyung Lee et al., 2014). Interestingly, the outcome measures considered in these papers were not just test scores or graduation rates, but also looking at the influence on non-cognitive behaviours such as willingness to pursue a more competitive approach in lottery games; and more generally economists of education are giving more consideration to non-cognitive, behavioural outcomes from schooling.

This emphasis on non-cognitive, behavioural and potentially non-labour market outcomes, especially for girls, has resonance with the publicly stated motives for establishing and funding charity schools and other popular schooling movements in eighteenth- and early nineteenth-century England, decades prior to the onset of state involvement in popular schooling. Religious and moral behaviour featured far more prominently in mission statements of such movements than reducing illiteracy or even ignorance more generally.

This suggests that the study of the past can continue to offer alternative perspectives on what schools are good for – even in countries such as Sweden where as best I can tell compared with England (or even the U.S.) far less attention has been given to single-sex schooling as an alternative to promoting human flourishing.

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Recognising Learning

A Social Semiotic Multimodal Argument for a Pedagogy of Recognition

Gunther Kress (2015)

Learning is the outcome of the semiotic work of an individual's transformative engagement with an aspect of the world which is the focus of her or his attention, with principles brought by her or him to that engagement. The process of learning leads to a change of the individual's semiotic / conceptual / social resources and, in the ceaseless transformation of these 'inner' resources, in inner and outward social action, there is a constant re-making of identity. After an overall introductory framing, the chapter provides some more detailed accounts of specific aspect of the approach, in particular *signs* and *sign-making*; design; a sketch of a *social semiotic account of communication*; aspects of *mode* and *multimodal composition*; aspects and ethics of *recognition*.

A social semiotic multimodal approach to learning: an introduction

Social Semiotic Multimodal theory provides essential tools for an understanding of *learning* and for a plausible account of what learning is. While some theories of learning [Vygotsky, 1986; Bakhtin, 1986] focus on the notion of *concept* (a cognitive notion, oriented to mental processes), Social Semiotics uses the notion of *sign* (a semiotic notion, oriented to social processes). In Social Semiotics, the cluster of *sign-making / meaning* and *meaning-making / sign-making-as-meaning-making / learning / knowledge* forms an integrated, complex field. Social Semiotics provides the overarching theory; and there is the *domain*, the *field*, in which *meaning-making* takes place, now generally referred to as Multimodality. Social Semiotics deals with all

means for making meaning; it includes signs made *in* and *with* modes and signs made outside modes. While Social Semiotics provides a comprehensive *theory of meaning*, Multimodality (from here, MM) (the total of the many modes available in any one community) provides a *map* of the domain in which the theory applies, and for which the theory attempts to provide a plausible account.

MM is not a theory – it is one aspect of the theory of Social Semiotics – but it does have theoretical import: it asserts that language is not a sufficient means for *making* or *understanding* the full range of meanings that humans make and use. It marks out the field for the investigation of meaning; setting out which *modes* are available for *making meaning material* in a particular community; and it elucidates some of the major features of modes. It has a far-reaching theoretical effect in its claim that all modes, always in combination with other modes, are drawn into meaning-making.

In Social Semiotics, and in MM therefore, the two linguistic modes – *speech* and *writing* – are treated as just two modes among all modal resources available for making meaning. Where previously it had been taken for granted that *speech* and *writing* were central – in Education, for instance; in learning, certainly; and in many fields beyond these – that is not seen as tenable any longer. If meaning is made in all modes, then the overall meaning of a ‘message’ is the result of the combination of meanings contributed by all the modes used in a ‘message’, seen as a complex of modes, a *multimodal complex*. In such complexes, the contribution of each mode is both *specific* (it elucidates certain aspects) and it is *partial* (it cannot account for all aspects) in terms of the overall meaning. That is true for all modes whether for *image*, for *speech*, for *writing*, as much as for *gaze*, for *gesture*, for *objects-as-modes*, and so on. In Social Semiotics, this aspect of modes is dealt with by the category of *affordance* (Gibson, J. J., 1983): modes have potentials and limitations for making meaning, as a consequence of a combination of their materiality and their social histories of use.

The ‘social’ in Social Semiotics points to several assumptions. First and foremost, it asserts that *meaning* ‘arises in’, is the outcome of social action and interaction. Meaning is the result of *semiotic work* done in social settings; with *socially made cultural resources*; by *socially formed actors / agents*. The semiotic work of ‘sign-making’ produces the basic entities of semiotics: combinations of form and meaning, ‘signs’. *Sign-making is meaning-making*.

Multimodality points to the fact that meaning is *made evident* through socially shaped material resources: *modes*. In any community, there are a number of *modes* beyond those of *speech* and *writing*, as well as a few other ‘canonical’ modes, *number* for instance. These constitute the socially shaped,

shared cultural-material resource of a community for the materialisation of meaning in representation. *Meaning* is always made with more than one mode, in specific combinations, as multimodal complexes. Ever more frequently, in many sites and in many modal complexes in which meaning is made material, *speech* or *writing* are not necessarily central.

For theorisations of *learning*, the effects of these assumptions are profound. It means that we must attend to *all* signs in *all* modes that are present in and constitute *learning environments* – whether we are *designers* of these environments or we engage with such environments. As designers of learning environments, we must be aware – on the one hand – of what each mode separately and all modes conjointly contribute to the meaning(s) of that environment. On the other hand, we must be aware that all *signs* in the modal complex of the learning environment will act as – or can potentially be taken as – *prompts* for engagement. That is, the person who engages with the learning environment never engages with all the signs of that environment, but always only with selected signs.

This has consequences for assessment. That is, we can no longer confine our attention to *speech* or to *writing* – or to any one mode – as ‘central’, as ‘dominant’, or as ‘prior’, in assessing what has been learned. Irrespective of how an issue was (re-)presented in a learning environment, the learner’s response has to be taken and understood in its terms. The ‘documentation’ of learning – whether it is seen as *rating*, *assessment*, *(e)valuation*, *judging* – has to take account of *all* signs in *all* modes that are present in the materials on which judgements are based. In these ‘documenting activities’, all the modal resources present in the materials being assessed have to be encompassed. In an MM approach, assessment has to focus first on what resources were available in the learning environment; then on which of these seem to have been ‘taken up’ by the person being assessed; and on all others, present in the materials being assessed.

There is a need, in this approach, to be aware that in the learner’s engagement with the learning environment, learning will be based on any one or more of the modes present; it may be based on modes beyond those envisaged as relevant by those who have constructed the environments of learning.

In Social Semiotic theory, there is an assumption that semiosis – *meaning-making* – is constantly ongoing. In this ongoing semiosis, there is provision for changes of two kinds: change within a mode – *transformation*, and change across mode – *transduction*. Both are likely to occur in the learner’s engagement with the learning environment. Indeed, both are an entirely usual and unremarkable expectation by those who are ‘teachers’ in such

processes. A teacher might ask students in the most usual manner to 're-make' meaning which they had made in an experiment in the science lab as a written *report*; or to produce an *image* (say as a *concept map*) from a demonstration seen performed by the Science teacher. Changes within and across modes have far-reaching effects epistemologically and ontologically; they need to be fully understood by the person who designs learning environments or who assesses responses to such environments.

Conceptions of learning touch on and bring in 'the social' everywhere: as *agency*, as *power*, as *identity/subjectivity*, as *knowing*, in all its manifestations. In describing the features of *the social* which characterise a site of learning, Social Semiotic theory makes a distinctive contribution to the understanding of learning, whether in classrooms for instance, in other formal sites of learning, or in sites which are entirely outside the formal-institutional: the home, work, peer-groups etc. In other words, in all sites of learning the social characteristics need to be accounted for.

This is an expansive notion of the field of learning, within a large frame of relevance, so much so that we might indeed ask "What site is not a site of learning?" or indeed "Where is *not* learning?"

If we assume that learning is shaped by features of the social environment, then one of the first questions to be posed is just that: "What are the characteristics of the social in this environment?" and 'In what ways are these characteristics similar to, or in what ways are they different from this other site?' or "In what ways is this site distinctive, in relation to its likely effect for and on *this* learner?" Such questions are essential if we wish to shape the relation of the learner with the social characteristics of the site of learning, and with those of the wider social environment.

There are other crucial questions about the social. Currently, perhaps one of the most significant is the matter of *stability*. In an era of intense social diversity, of social fragmentation, whether at the micro-level of the local, at the meso-level of the school or at the macro-level framing of society and beyond: issues about environments of or for learning are just about impossible to bring into some coherence in these conditions. "Is the social stable / is it perceived as stable?" Questions about the different change of pace at the micro-level and the meso-level affect institutional sites of learning: there, groups defined by *age* (that is, by the sociological category of *generation*) meet, with often entirely different assumptions about questions such as *stability*. An older generation may insist on assumptions – say about *framings* (e.g., genres) or *coherence* (i.e., means of social and semiotic cohesion) which are, quite simply, neither known nor shared by the younger

with the older generations. A category such as *cohesion* will appear in a very different social and semiotic form on a site of one of the social media than it will on a more 'traditional' site. Or, as a different example, there are micro- and macro-level questions about the change of social pace: 'Is "the social" changing at a different pace, with different effects, for different generational groups?'

In thinking about learning at any level, of any kind, Social Semiotic theory (with its foci on *agency, power, diverse cultural resources, interest*) offers an encompassing frame. In all questions these features are combined with the effects and demands of the *affordances* of modes involved.

This approach to learning, with its basis in *sign-making = meaning-making = learning*, breaks with the tradition of making 'The School' (using that term as a generalisation / abstraction) and its accounts of learning both the focus and the point of departure. For the better part of four decades now, learning has been moving beyond the confines – material and conceptual – of 'the school', in all kinds of ways. In trying to provide explanations of this expansion of sites of learning, one response has been to invent a plethora of new names – new 'entities', new *kinds* of learning seemingly – through the use of adjectival and morphemic modifiers: professional-, life-long-, adult-, life-wide, early-, extracurricular, school-based, formal and informal, online-, digital-, e-, m-, learning.

This rush to naming shows a poverty of theorisation, and a facile understanding. One might ask "How is e(lectronic) learning different kind of learning than m(obile) learning?" or "How does digital *learning* differ from online *learning*?" In a Social Semiotic approach, there is on one hand an account of *learning*, and separately there are, on the other hand, accounts of distinct *environments of learning*. In the separation of *learning* and *environment*, the specific effects of the latter on the former can be made evident and explained; with useful insights into specific features of each.

In the account here, the focus and the point of departure is the process and the phenomenon of learning: wherever that may be taking place. Theoretically, if the basis of the approach is *sign-making = meaning-making = learning*, then we need to start with an account of sign-making

Sign-making: the *motivated sign*

Any and every sign and sign-complex tells us something about how a sign-maker knew and saw the world at the time of the production of the sign. It also makes evident a (small) selection of what was learned. Take the following example: A three-year-old, sitting on his father's lap, draws a series of circles, seven to be exact (see Figure 1). When he has finished, he says: 'this is a car'.



Figure 1. Drawing by a three-year-old child: 'this is a car'.

The question arises as to how this is or could be "a car". While drawing, the child had said: "here's a wheel, here's another wheel, that's a funny wheel.... this is a car". For him the *critical feature* of a car was its 'wheelness': it had (many) wheels. The critical feature of a wheel was that it was circular; and so, wheels were aptly represented by circles. The critical feature of a car was that it had many wheels; and here "a car" was represented by the arrangement of seven circles.

To represent wheels by circles rests on the process of analogy: wheels are like circles. The result of this analogy is a metaphor: 'a wheel is (like) a circle'. Similarly, with the representation of 'a car': "a car is something with many wheels". The sign, and the meaning made here, is the result of a sequence of two metaphors: wheels are (like) circles and many circles (/heels) make a car. For this sign-maker, the signifiers (the form) 'circle' and 'many wheels' are *apt* (that is, their material form and their histories of use make them suitable) to be the carriers of the signifieds (the meaning) of 'wheel' and of 'car'.

We might ask further why and how, for this three-year-old, a circle could be the signifier for a wheel; and how wheels could be the critical feature

for 'car'. The answer to the first question seems self-evident: Both are round. 'Roundness' provides the linking feature for the analogy. As far as the second question is concerned, the answer might be that if we imagined the eye-level view of a three-year-old, looking at the family car (in this case a 1982 VW Golf, with its prominent chunkily visible wheels, especially at the three-year old observer's height) we might conclude that his position in the world, literally, physically, but also cognitively and affectively, might well lead him to see cars – at least on occasions – in that way. His drawing / sign represents his "position" broadly speaking, his "interest", arising out of his (physical, affective, cultural, social) position in the world at that moment, vis-à-vis the object to be represented. From the perspective of learning, we can say that his *interest* shapes his *attention* to a part of the world and acts as the *motivation for principles of selection* (Kress, 1997).

The point is that it is the *interest* (in the sense just given) of the sign-maker/meaning-maker which shapes what is taken as criterial about an entity, at the moment of its representation. The child's drawing suggests and realises a view of a part of the world that is historically, socially and culturally shaped. What the meaning-maker takes as criterial determines what (s)he will represent about that entity or phenomenon. The drawing is the result of the child's *semiotic work* in his *engagement* with a part of the world, it makes his distinct interests material.

Three points are crucial about this example. First, the relation between meaning (signified) and form (signifier) is not an arbitrary one. It is motivated. That is, the *form* that suggests itself to the sign-maker is the best possible, the *apt* means, to be the carrier of the *meaning* of the sign-maker, at this point. The signifier (in its material form and in the history of its prior uses, in the way in which it is known to the sign-maker – a personal history of two years of making circular drawings) satisfies the *interest* of the sign-maker in seeking an *apt* means of expressing the *signified*. The relation of form and meaning is a motivated relation; this sign, like all signs, is *made* on the basis of a motivated relation of form and meaning. Second, the sign is based on what – at the moment of making the sign – is *criterial* to the maker of the sign about that which is to be represented. All signs represent that which is criterial about that which is to be represented. In that sense the sign is always *full* and *partial*: *full* in the moment of making and *partial* in relation to the many other features which make up the object. Every sign is *motivated* by the interest of the maker of the sign. The sign is always both 'full' representation and always ever only a part of some entity or phenomenon. Third, each sign is newly made. In Social Semiotics, the assumption is that all signs – with no exception – are newly made in the moment of their

use, in the manner just described. Signs are never *used*; signs are *newly made*. In Social Semiotic that is taken to be the case for all signs.

The first of these two points allows us to make hypotheses about the *interest* of the sign-maker (in our case here, as *learner*): the sign is the trace of the semiotic work of selecting an apt signifier for the signified. The choice of signifier provides an insight into the principles underlying the making of the sign. When the sign is made in response to some prompt, it gives insight into the sign-maker's semiotic work of *selecting* elements from the prompt; and of the semiotic work of making a sign that aptly represents – for her or him, at this moment – an apt response. The third point, the partiality of the sign, gives us, in the case of the response, an indication of what was considered to be criterial by the sign-maker about the prompt and what was not taken as relevant or criterial.

The three assumptions – namely that each sign is the product of a motivated relation of signifier and signified; that the sign focuses on that which was criterial for the maker of the sign in that which was the prompt; and that the sign is newly made – allows us to make profound, far-reaching and relatively secure hypotheses about the sign-makers' assumptions. They force us to take their agency seriously. And, the fact that the sign made is always newly made shows something banal and profound: creativity is an ordinary, everyday process and phenomenon. Each of these three force us to treat the semiotic work of sign-making with the utmost seriousness.

Each instance of sign-making entails this act of creativity. On each occasion, with each new sign a new meaning is made. In Social Semiotics creativity is seen as usual, banal. The task is to accord recognition to this creativity; and to find means of putting it to use. In most cases, the new meaning is unremarkable, small; yet each instance adds its cumulative effects, in the constant changes of the inner resources of the learner. Constant, usually entirely unremarkable learning is an inevitable outcome of this re-making of inner resources. A re-making of “inner resources” is at the same time a constant (re-)making of identity.

With a slight shift in our perspective, with a different “lens”, we can regard any sign as both a sign of the interest of the sign-maker and as a sign of *knowing*. “Knowing” – knowledge – is constantly produced in sign-making. To explore this further, here is a different example. (The example comes from the work of my colleague Jeff Bezemer; see eg Bezemer and Kress, 2016).

A medical student is standing at an operating table. The surgeon and the student are about to start operating on a small lump on the patient's tummy. As the patient is lying flat on his back, the lump is not visible. The operating light is focused on the patient's navel. Before the surgeon makes the first



Figure 2a: Medical student touches patient.

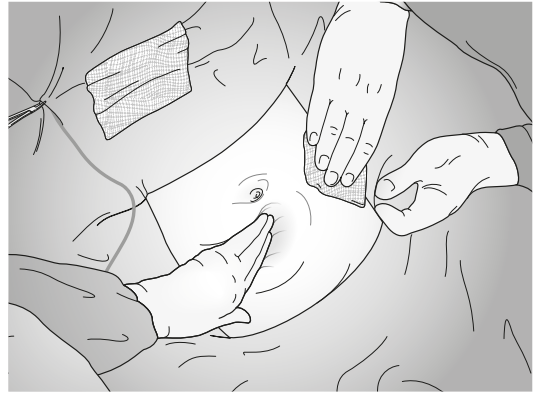


Figure 2b: Surgeon touches patient.

incision, she points with her left hand to where the (presently invisible) lump that they will operate on is located and asks the medical student if he wants to have “a feel of that”. The medical student replies “yeah”, lightly touching at three different points around the focal area with a swab in his left hand. He then ‘feels’ superficially with his right hand. He holds his hand flat, putting gentle pressure on various points with the tip of his fingers, covering an area of about 3 inches below the navel. He also makes a sweeping movement in between two pressure points as shown in Figure 2a.

The surgeon then joins him in ‘feeling’, using her left hand. Her hand is slightly tilted, she creates more pressure with the tip of her fingers, reaching deeper into the tummy below the navel, as shown in Figure 2b.

The pressure points mark out and make visible the circumference of the lump. This is then followed by a grasping action by the surgeon involving her middle finger and her thumb, which lasts for a couple of seconds.

The surgeon’s action – her *touch* – is rather different from the student’s. The surgeon’s touch is more specific, deeper, firmer, involving (the tip of) a flat, angled hand, as well as a grasping action; the student’s touch is broader, more superficial, and involves (the tip of) a flat hand only.

The different characteristics of their actions signify different *engagement* with the ‘lump’, and in that, different *interest* and *knowing*. The surgeon’s actions were designed to plan the incision: where to cut with her scalpel. The student’s actions were designed to feel the lump. The surgeon knew what to expect; the student didn’t. Thus, the actions of surgeon and medical student point to different resources, different means of *embodied* knowing, and *demonstrate* different trajectories of prior learning. Their actions, as signifiers, are apt to carry the meanings of each. The signs both make are motivated. At the same time, the actions of both lead to and *constitute*

learning. With the making of their actions, their *semiotic work* – much as a child's making marks on paper – they have expanded their resources for making meaning: in this case, for 'reading' lumps of a certain kind, and the specifics of the lump in this patient. The two have also learned about the other sign-maker from their demonstration of learning: the medical student has *interpreted* how the surgeon touches, and the surgeon has *interpreted* how the student touches.

Translated to a social semiotic multimodal account of learning, we say that every sign made is new, an 'innovation'; its making is an act of 'creativity'. The ongoing, unceasing process of transformative engagement, of integration in 'inner' transformation, with a constantly new constantly transformed resultant inner state, constitutes learning.

The effects of their interpretations of each other's sign-making have changed their 'inner' resources. The effects of that change in resources will be evident in their subsequent actions; they will transform all future actions. For instance, in these subsequent actions certain features of their actions may be highlighted: foregrounding, through slow motion, say; or attention to the precise direction of a movement. Learning is the effect of such sign-making. With every sign made, the sign-maker's knowing is transformed; this applies to the student and to the surgeon. Neither could *not* learn from touching the patient.

This can serve as a means of accounting for all instances of learning. It supplies an answer to the question: 'What or where is NOT learning'. To complete this, a further step needs to be taken, by assuming two kinds of situations. One is where learners-as-sign-makers are or have been *addressed*: for instance, by teachers, supervisors, curators or by any other institution or by any person taking responsibility for the learning of others. The other is where learners are not ('directly') addressed, whether as learners or otherwise. The examples below feature both kinds. The former illustrate *communication*, involving two sign-makers, making and re-making (complex) signs. The latter illustrate learning in the absence of such *communication*.

Considering both, we recognise that *learning results from engagement with the world, irrespective of the degree to which others were involved in shaping that engagement*. What is at issue is the matter of the *recognition of the agency of learners*.

Recognition of learners' agency also provides the rationale for insisting that sign-makers do not – 'simply', so to speak – copy, or 'acquire', straightforwardly 'internalise', or 'absorb' signs made by others. Social Semiotics rejects a simple (or indeed an elaborated) *sender-message-receiver model* as an account for communication, and hence rejects that model as an account

of learning. Learning, it hypothesises, rests on *principled, transformative engagement*, however or by whomever that engagement is shaped. As an approach, it resonates with other contemporary social theories of learning, such as Lave and Wenger's [1991] theory of legitimate peripheral participation. It shares their view that: "Conventional explanations view learning as a process by which a learner internalises knowledge, whether "discovered," "transmitted" from others, or "experienced in interaction" with others [...] Learning as internalisation is too easily construed as an unproblematic process of absorbing the given, as a matter of transmission and assimilation." (ibid. 47). Instead of measuring the "transmission" of knowledge, here what is at issue is the semiotic work done by learners, and the transformative *principles* that learners bring to bear as they engage with the world around them.

Much of this view resonates with what Christoph Wulf describes as *mimesis* (Wulf, et.al. 2010, 2011). With colleagues, he writes:

Mimetic learning, learning by creative imitation, constitutes one of the most important forms of learning. Mimetic learning does not, however, just denote mere imitation or copying: Rather, it is a process by which the act of relating to other persons and worlds in a mimetic way leads to an enhancement of one's own world view, action, and behaviour. Mimetic learning is productive; it is related to the body, and it establishes a connection between the individual and the world as well as other persons; it creates practical knowledge, which is what makes it constitutive of social, artistic, and practical action.

Wulf and colleagues illustrate 'mimetic learning' with an example of a theatrical performance by schoolchildren, involving singing and dancing on stage in front of parents and teachers. Wulf *et al.* (ibid.) see their performance as a 'creative imitation' of the performance of a video clip featuring a German musician who had a hit the on charts at the time. Through this mimetic re-enactment of the 'original' body movements in the video clip, the children learn.

This turns the still largely taken-for-granted power relations (in communication as much as in learning-as-communication) on its head: it is the 'audience' who guarantees that communication has happened, not the 'rhetor'; and it is the *learner* who guarantees that there has been learning, not the 'teacher'.

Learning takes place in any form of engagement. In each case, it is the learner who decides what that *learning* has been about. The surrounding (often institutional) environments and the power exerted in and by them tend to disguise – or have tended to do so until now – this basic fact about both communication and learning more or less successfully and effectively

(Hodge and Kress, 1988; Kress, 2010). Assessment regimes encourage those responsible for the learning of others to measure the outcome of learner's engagement against a yardstick pre-defined by those in power.

Just to be clear however, this is not to reject the need, or a wish, in many cases, to orient a given audience to a body of knowledge (a 'curriculum'). It is not an invitation to a (constructivist) free-for-all. It is an invitation, an exhortation, to take *both* all learning and all means of displaying learning equally seriously. Thus, instead of concluding, 'he didn't learn anything', a social semiotic multimodal approach insists on exploring how the learner has *transformed* the signs addressed to her or him; and also, insists on exploring those signs that learners made without having been directly addressed as learners. That constitutes a core aim of the framework proposed here: to provide means for making visible – for recognition – that which frequently or usually is or remains (nearly) invisible, unnoticeably minute, and frequently exists beyond 'official' recognition.

The question of "curriculum" – of what is to be or needs to be known – is a quite different matter, to do, in the case of institutional sites, with the purposes and aims and needs of the community which supports an institution. The same principles apply in the case of non-institutional sites, maybe of "individual" interest.

Communication

In the approach put forward here, the taken-for-granted assumption is that *communication has happened when there has been interpretation*. That turns many notions of communication, not to mention notions of (occasions of) teaching–learning on their heads. This, together with the notion of the *motivated sign* is the underpinning foundation of a *pedagogy of recognition*.

According agency, power and responsibility – though of different kinds – to both participants in communication and in learning can be the basis of a socially and individually ethical approach. An understanding of different yet shared agency, power and responsibility are taken as integral to an ethically founded pedagogy of recognition.

Summing up briefly at this point: Meaning arises in social-semiotic interaction; that is, it is the result of semiotic work by social actors, acting with socially made cultural resources in producing *signs*. *Signs* are the product of semiotic work; the sign is the unit in which meaning is made material and evident. In Social Semiotics, the *process of learning* is an instance of interaction, of communication, of semiotic work. *Learning* is an instance both of the process of sign-making and an outcome of interaction and/or of

an engagement with the socially configured world. *Communication* is an instance of interaction par excellence. Environments and occasions of learning and teaching are instances of communication: to have a plausible theory of learning it is essential to have an apt theory of communication. For Social Semiotics, the apt theory of communication focuses attention on the agency of those who make meaning and re-make meaning; it accords appropriate recognition to their semiotic work. That is so regardless of the social 'roles' or positions of those engaged in this process: whether as learners, teachers or students, irrespective of status, whether as 'professionals', as 'amateurs' or as novices.

Reciprocal sign-making is the basis of the view of communication put forward here. A sign produced by an initial maker for a specific or imagined addressee. This *sign-as-message* is taken by an addressee as a 'prompt'; in relation to the *interest* of each, which shapes their *attention*, she or he *selects* elements of the prompt. In doing so she or he changes the elements selected from the message, and produces a new (inner) sign. The "change" can be one of *transformation* – a change within a mode – or of *transduction* – a change of mode. Somewhat loosely, this process can be called "interpretation"; it entails an underpinning assumption that the interpreter should be able to be specific about the form this "interpretation" has taken. As the *prompt* is most likely to be in the form of a *multimodal complex*, it is likely that the elements selected from the prompt are signs in different modes, and hence some element may be transformed and others transduced in the process of interpretation.

In an instance of communication, the interpreter may be someone who had been intended as an addressee, by the maker of the sign, or it may be some other person who regards him/herself as addressed. Usually that person is a participant more or less closely associated in some event involving a group of some kind, professional or otherwise.

Modes and multimodality

There is a need, in an MM approach, to be aware that in the learner's engagement with the learning environment, learning will potentially be based on more than one mode, on any one or more of the modes present; and it may be based on modes beyond those envisaged as relevant by those who have constructed the environment of learning.

In Social Semiotic theory, there is an assumption that semiosis – *meaning-making* – is ceaselessly ongoing. In this ongoing semiosis, there is provision for changes of two kinds: change within a mode – *transformation* – and

change across mode – *transduction*. Both are likely to occur in the learner's engagement with the learning environment; indeed, both are an entirely routine expectation by those who are 'teachers' in such processes. A teacher might ask in an entirely 'normal' manner for students to 'remake' meaning made in an experiment in a science lab as a written *report*; or to produce an image (say a *concept map*) from a demonstration seen performed by the Science teacher. Changes within modes (*transformations*) and across modes (*transductions*) have far-reaching effects epistemologically and ontologically; they need to be fully understood by the person who designs learning environments or who assess responses to such environments.

Modes are characterised by affordances which offer the potential for representation, each mode differently so; affordances also impose constraints, limitations. In relation to learning that has two important implications. First, the modes available to the sign-maker *shape learning*; that is, the modes used in a learning environment both shape and limit what can be learned. Second, modes put constraints on *and* provide the potential for *demonstrating* learning. That is, in assessment, a learner can only demonstrate such learning as the available mode(s) afford(s). For instance, what the medical student learned by touching the patient will have been different from what he might have learned by drawing a cross-section of a fatty lump under a skin. Conversely, asked to draw what she or he had learned, this student would find it difficult or impossible to convey what he had learned by touch.

Each mode offers a specific lens for engagement with the world; each mode draws attention differently to features of that which is to be represented, signified: that which is to be communicated. No mode can draw attention to all aspects of an entity or process; different modes draw attention to different aspects. Learning to *touch* by reading about touching is not likely to be satisfactory for the medical professional. That is, modes shape and structure engagement and potentials for learning. A multimodal complex is therefore essential in bringing to attention those aspects which are essential in a given environment. *Speaking* to someone, *writing*, *drawing* a map, *performing* an action, all provide distinct potentials for learning, showing and experiencing the world newly, and differently.

This makes *design* central to the shaping and production of environments of learning. Whatever the purposes, professional or everyday, it is essential to bring together into a multimodal complex those modes which provide the requisite 'lenses' for that which needs to be recognised. *Design* goes well beyond former notions of being "competent communication", let's say in writing, where it was assumed that full competence with the resources of writing – grammatical, syntactic, textual, lexical – would guarantee

success in the purposes of written communication. The multimodal world of representation asks that apt choices are made from the modal resources available. That includes aptness in terms of audience; aptness in terms of what is to be represented and communicated; aptness in terms of means of dissemination. *Design* takes “competence” – seen as a full awareness of the affordances of the modes available for a task – as given. It goes beyond that: design assumes the ability / capacity to bring these resources into an appropriately arranged / composed complex.

“Competence” assumed full understanding of a mode and its relation to certain well-understood social tasks to be accomplished through the use of that mode. It was part of a world seen in terms of “fitting the individual to (relatively well-known) stable social purposes”. *Design* assumes full understanding of the affordances of all modes and the capacity to utilise these in relation to a task that has ‘emerged’: *design* demands the capacity to respond to novel situations and the requirements of them. While competence fostered dispositions for stable and therefore predictable social conditions, *designs* demands and, in that demand, fosters dispositions for dealing with social conditions of instability and provisionality.

That difference has profound consequences for expectations for learning – particularly in institutional environments. It also provides a metric for the sufficiency of schooling.

Each mode offers partial potentials for learning about aspects of the framed world. To give one example, discussed elsewhere in more detail (Kress, 2010), consider learning about cells. One fact about plant (or animal) cells is that they have a nucleus. When a sign of that fact is made in *writing* or in *drawing*, a learner is required to consider the relation between cell and the nucleus differently in the two modes. Drawing, for instance, prompts the question: ‘Where in the cell is the nucleus located?’ ‘Is it in the centre of the cell, or somewhere else?’ as the student whose drawing is depicted here suggests.

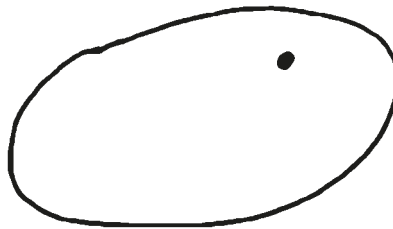


Figure 3: Drawing of a Cell.

Writing, or *speech*, prompt different questions to those posed by *image* about the relation of cell and nucleus. For instance, the epistemological affordances of writing (and *speech* similarly) might suggest the question: “How is the relation between the cell and the nucleus characterised?” “Is it as a *possessive* (‘a cell *has* a nucleus’) or as a *spatial* relation?” (‘The nucleus is *in* the cell’). The epistemological (and ontological) affordances of *image*

differ from those of *speech* or *writing*. They might prompt a question such as “Where in the cell is the nucleus located?” “What size, relative to the cell, is the nucleus?” Each mode brings with it specific *epistemological* and *ontological* commitments: I cannot draw a cell without placing the nucleus *somewhere* within the cell. As a teacher, I might not pay too much attention to that – unavoidable – demand, though a student in the science classroom may well regard my placement as criterial. The distinct learning potentials of different modes are recognised across different communities. The carpenter’s sketch, the architect’s 3D model, the police investigator’s drawn reconstruction, the researcher’s diagrams and transcripts, all “fix” a specific “take” on the matter in focus. In doing so, each serves the purpose of *learning*, and produces specific forms of what is to be known. Each exploits the distinct potential of modes to provide different insights into the world in focus and framed.

The cell example shows that as learners make signs, they may be required to “shift” meanings made in one mode or ensemble of modes to another mode or ensembles of modes. Each “shift” entails re-constituting the meaning in terms of the affordances of the modes used: in a single sign or in a new ensemble; always shaped by the designer’s interest and agency. Given the distinct affordances of different modes, with their distinct epistemological or ontological commitments, there is no possibility of a “perfect translation” across modes. “Translations”, “shifts” across modes, can only ever produce different “takes” on the world.

Forms and possibilities of *relations* of entities, of *composition* and *arrangement* (‘syntax’) differ from mode to mode. That is particularly the case across modes which are temporally instantiated (*speech, action*) or spatially (*still image, 3D model*). Change produces meaning and change of meaning. There is however a distinction to be made between change within a mode (*transformation*: the *entities* and *relations* of the mode are the same) and a change across modes (*transduction*: the *entities* and *relations* change from the originary to the new mode). In the first case, it might be a change, say, from one genre to another: from a *report* to a *narrative*. What stays constant will be the *lexis* of the mode of writing, the *syntax* and the *grammar / morphology*: what changes is the genre. It is an epistemological change. An ontological change in mode, is one from a mode which is temporally instantiated, say *speech* for instance, to one which is *spatially* instantiated, say *image*. We might make a distinction between *re-arrangements* and *re-organisations*. In *re-arrangements*, the term *transformation* is apt: the *relations* and *entities* remain the same, though their arrangement will differ. In *re-organisations*, the term *transduction* is apt: kinds of rela-

tions and entities differ. The arrangements will be those of the new mode. An example is the shift from the teacher's "can someone *tell* me something about a cell?" to her "Can you come to the front and *draw* what you have just said?"). Changes across modes – *transductions* – involve changes of *relations* and *entities*. Meaning is re-made in terms of the new mode; that is not a matter of re-arrangement.

Any change, whether inter- or intra-modal, produces changes in meaning and as such constitutes learning. From the perspective of formal learning, with clear curricular aims, these modal differences hold great potential both for exploring precisely such distinctions and for designing multimodal complexes as learning-environments, so as to achieve the best access for learners in terms of relevant 'knowledge'.

Signs and *signs of learning*

The signs and sign-complexes produced in response to a prompt (whether in interaction or in engaging with a learning environment) can, plausibly, be called *signs of learning*. They can, hypothetically at least, be seen as traces of interpretations in the prior interaction or engagement. And as such they constitute, hypothetically, evidence for the sign that had been inwardly produced.

In any setting, institutional or otherwise, when a teacher considers *signs of learning*, she or he always needs to consider what means were available to the learner to *demonstrate* or *document* their learning, and ask how the *modes* available would constrain or facilitate the learner's re-making of the sign or the sign-complex. This has significant implications for evaluation: whether as school teacher or as researcher, if one wants to collect and interpret 'evidence' of learning, the modes provided to the learner to produce that evidence need to be considered carefully (we will not explore the consequences of mis-recognition or lack of recognition in this chapter). Any limitation on the modes available to the learner leads to a limitation on the learner's potential to demonstrate what (s)he has learned. So, for instance, asking science students to demonstrate what they know about cells in *writing* will lead to different accounts and therefore potentially to different assessments of learning than asking them to do so in *image*, or in a 3D model (see Kress *et al.*, 2001). Asking someone to 'write up' what they know puts severe constraints on 'evidencing' their *tacit*, embodied knowledge.

This is a challenge that those shaping the learning of others are also faced with. In clinical settings, *simulation* (in 4D, often) plays a highly significant role. Here too, the kind of simulation used will have crucial effects. Equally,

by allowing learners to demonstrate learning in different modes the range of what is and what can be recognised can be vastly expanded

In the medical / clinical example discussed above, the two practitioners learned about the other sign-maker in their joint action: the medical student *interpreted* how the surgeon touches, and the surgeon *interpreted* how the student touches. The effects of their interpretations of each other's sign-making changed their 'inner' resources. The effects of that change in resources are likely to transform all future actions. For instance, in subsequent actions certain features of their actions may be highlighted: foregrounding, through slow motion, say; or attention to the precise direction of a movement.

Modes, through their affordances, suggest potentials, forms and structures, each mode differently so. That has two important implications. First, modes put constraints on *and* provide the potential for *demonstrating* learning. Second, modes available to the sign maker shape learning. What the medical student learned by *touching* the patient will have been different from what he learned by *drawing* a cross-section of a fatty lump under an area of skin. Different modes offer different lenses in an engagement with the world; each mode draws attention differently to features of the signified – that which is to be represented. In doing so, modes shape and structure engagement and potentials for learning. *Speaking* to someone, or *writing*, or *drawing* a map, or *acting*, provide distinct potentials for learning, showing and experiencing the world newly and differently.

In any setting, institutional or otherwise, when a teacher considers *signs of learning*, she or he always needs to ask what means were available to the learner to *demonstrate* or *document* their learning, and ask how the *modes* available would constrain or facilitate the learner's re-making of the sign or the sign-complex. This has significant implications for evaluation: whether as school teacher or as researcher, if one wants to collect and interpret 'evidence' of learning, the modes provided to the learner to produce that evidence need to be considered carefully (we will not explore the consequences of mis-recognition or lack of recognition in this chapter). Any limitation on the modes available to the learner leads to a limitation on the learner's potential to demonstrate what (s)he has learned. So for instance, asking science students to demonstrate what they know about cells in *writing* will lead to different accounts and therefore potentially to different assessments of learning than asking them to do so in *image*, or in a 3D model (see Kress *et al.*, 2001). Asking someone to 'write up' what they know puts severe constraints on 'evidencing' their tacit, embodied knowledge.

Learning and the digital technologies: the new social

This discussion has been about the processes of learning. It has, very deliberately, kept discussion of (technological aspects of) environments of learning to one side. The two are distinct issues even though they do touch and affect each other everywhere. Here I will simply mention several factors which seem to me to bear careful examination.

First it is necessary to remind ourselves that human evolution – or even just “change” – does not proceed at the same pace as does technological change, say with the introduction of some new appliance. In other words, principles underlying learning will change at a much slower rate than technological or even social change. There are nevertheless many features of the present landscape of communication which do already effect the “how” of meaning-making. I’ll mention some of these without further elaboration.

There is now a recognition that the semiotic landscape has changed and continues to change. That has affected and is continuing to affect the relative significance, the place and salience of modes in that landscape. *Writing* for instance is less prominent now in communication than it had been; and its semiotic / informational load is shifting to other modes, *image* most prominently among these. The pace of contemporary communication has greatly increased, and that is true particularly of the social media. That has effects on all other aspects of communication. In anglo-phone societies – or maybe just in the UK, the abbreviation *tbh* (to be honest) is now frequently used where before syntax, grammar or lexis would have been used to convey facticity. The size of units of communication has changed enormously: this is a trend that started with email and texting, though the social media have intensified that. The effect of ‘generation’ now needs to be considered much more than it had to be until some twenty years ago.

With the intensification of speed in communication, and the enormous reach of social media entirely beyond what had previously been recognised as distinct social groups – e.g., Twitter as the currently prominent example – where can *meaning* find its anchorage? What can replace the range of modal forms – *could, would, might, is likely, possible, etc.* as well as modalities expressed in grammatical and syntactic forms, to indicate nuance and gradation in relation to fact, truth, and so on?

The massive reduction in the size of texts/messages in most of the screen-based media does pose the urgent question as to how can or will complex ‘arguments’ be developed or read in the future? How will learning be affected by the habituations of new generations to the massively de-

creasing size of texts? Or with the diminishing role of writing? Do “we”, as academics, know enough to comprehend (never mind accomplish) the shift to *multimodal complexes*, now compressed or reduced or newly composed, to fit the various sizes of screen – of tablet, smart phone, and less and less the laptop computer – with enormous changes in meanings, and equally enormous shifts epistemologically and ontologically?

As I write this, I feel sure that taken together these factors make it reasonable to speak of a tectonic change in the semiotic landscape. Given the entire connectedness of the social, of the semiotic, and of forms of knowledge, this currently seems to be the most urgent question.

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Interpretive Reproduction in Children's Peer Cultures

A Reflection on My Career in Childhood Studies

William A. Corsaro (2016)

Introduction: The early years

My career of empirical research and theory building in the sociology of childhood owes much to my inspirational mentors and to stimulating and supportive colleagues in the United States and Europe. While an undergraduate at Indiana University I was introduced to Symbolic Interactionist theory in the writings of G. H. Mead and other pragmatic philosophers, the Chicago school of social psychology, and the work of Erving Goffman. One mentor, Allen Grimshaw, was among the first sociologists to do research in sociolinguistics and introduced me to the growing scholarship in that field especially that of Goffman, John Gumperz, Aaron Cicourel and others working in the areas of discourse analysis, ethnomethodology and conversational analysis. When I went off to graduate school at North Carolina, I knew that the department was highly quantitative and there was less interest in social psychology, but I was surprised to discover several of those working in social psychology were behaviourists in line with B. F. Skinner.

In many ways, my struggle with behaviourism and my developing interests in sociolinguistics lead me to take special interest in research on language acquisition in the early 1970s. This work involving the direct observation and recording of the early speech of young children caused great problems for behaviourist views of learning and the emergence of Chomsky's dominance in linguistics and his more nativist views of language acquisition. The research in language acquisition also led to my interest in children and a re-examination of socialisation theory in sociology. I found the work on socialisation influenced mainly by functionalists like Talcott Parsons stifling in its "forward looking" perspective on how children must be trained to

internalise and fit into society. Stimulated by the work in language acquisition, I turned to constructivist theorists like Piaget and Vygotsky, who offered views of young children as active agents in their development and socialization. I decided on a dissertation project in which I would expand the work on language acquisition by directly examining adult-child and peer interaction from a broader view of the development of communicative competence. To do this I was convinced that I needed to collect video recordings of everyday interaction of young children.

Here is where another of my mentors, Leonard Cottrell, played a crucial role. Leonard Cottrell was an active member of the Chicago School of sociology and actual student of G. H. Mead. He served as a probation officer and marriage counselor in Chicago as part of his training and published in the fields of family and socialisation (Cottrell, 1969). I was fortunate to have him for a teacher in a social psychology course in my first year as a graduate student. The next year he retired, but in his words “we continued to teach each other” as I would meet him informally to discuss my interests in children and the related work in ethnomethodology, discourse and conversational analysis. When I told him about my plan to collect video data of young children’s interaction, he was intrigued.

At this time, as far as I know there was not any or very little research involving video recording in the social sciences. The available technology, large studio cameras and reel-to-reel video recorders were expensive and certainly beyond my means to purchase. Cottrell, who had served at the Russell Sage Foundation (one of the oldest and prestigious social science research foundations in the United States) for many years before coming to North Carolina, had brought with him a rather ample research grant. He kindly offered me needed funds for video equipment to carry out my dissertation, which was the key launching point of my career.

I must say at first that I did not know what I was doing. I persuaded two of my fellow graduate students to let me video record their children (two boys who were two-and-a-half years old and a girl who was around five years old) in interaction in their homes with the parents and a play room I set up with a few toys in my department. I recorded naturally recurring routines in the home and the spontaneous peer play of the children in which I participated when they asked me to join. When I repeatedly viewed and then began to transcribe these data, I was struck by the richness, density, and complexity of what had seemed routine interaction when I was recording it. With this new technology, I was convinced that contemporary social psychological theories of interaction fell far short of capturing this complexity.

My dissertation was chaired by Glen H. Elder and pioneer in life-course research (see Elder, 1974, 1994) whose work was later important to my interests in life transitions. Elder was a key supporter and mentor throughout my career. Also on the committee were Cottrell and David Heise who was later my colleague and a co-author at Indiana University (Corsaro and Heise, 1990). In the dissertation, itself and early publications (see for example, Corsaro, 1977) I focused on patterns of how adults talked to children. Communication involves the negotiation of meaning in specific interactive contexts. When interacting with young children, I found that adults soon learn that this negotiation process differs from what takes place, and is routinely taken for granted, in adult interaction. Young children do not always fill in the details nor carry on conversation with an explicit notion of topic or definite rules for turn-taking and sequencing. As a result, adults often structure interactive events with young children by the way they talk to them. Although the adult is using language in a controlling manner in such instances, the conscious intention is not one of social control but rather is centered on the negotiation of shared meaning. Adults use language to continually expose children to the normative order, often taking the interactive event initiated and of special interest to the child and connecting it to more general notions of what is correct or possible in the adult world. Here I saw socialisation as a process of negotiation, appropriation, and reproduction.

Well struck by the complexity of the adult-child interactive routines, I was overwhelmed by the peer interaction I recorded. Here were young kids who Piaget and nearly all developmental psychologists at the time were saying were egocentric and not capable of sustained interaction with peers. I saw in my data that this was clearly not the case. The role and fantasy play I recorded was highly complex, innovative and creative. I was convinced children played a major role in their own socialisation from a very early age.

Middle years, ethnographies in preschools, peer culture and interpretive reproduction

I needed to expand on these early data by carrying out a much more extensive micro-ethnographic study of children in a peer setting like a preschool, which took me to the University of California, Berkeley, where I received a post-doctoral fellowship. In Berkeley I again encountered problems regarding recording equipment as the portable video recorder that was available at the child study centre preschool was an early model which restricted viewing to only that particular type of recorder. I was helped to solve this problem by John and Jenny Cook-Gumperz (Jenny turned out to be my

first collaborator, Cook-Gumperz and Corsaro, 1977) who introduced me to a pioneer in child language studies, Susan Ervin-Tripp. Susan had funding to do video recording of adult-child interaction, but knew little about the best available recording equipment at the time. We worked out a deal in which I advised her on the purchase of equipment and I later collected video data in a family for her. I was then able to continue to use the equipment for my research in the preschool. This arrangement took some time, but the delay in getting the equipment was a blessing in disguise.

During the wait, I learned as much as I could about the preschool setting, teachers, staff, and children before the school year began. When the children did arrive, at the suggestion of one of the teachers, I observed for several weeks from a concealed area which was a part of the study centre. Here I learned all the children's names, the daily activities in the preschool, where and when various types of teacher directed and children's free play occurred and how the teachers and other adults interacted with the children. I took copious field notes and developed a reactive field strategy (in which I let the children react to me and draw me into their play rather than trying to initiate interactions or control them in any way as the other adults did). Using this reactive strategy, the kids came to see me as an atypical adult or a big kid and refer to me as Big Bill. In this and several later ethnographies I entered into kids' everyday activities, gained acceptance, collected field notes, and later collected video recordings, which were grounded in patterns in my field notes (see Corsaro, 1985; 1994).

As I did in my dissertation study, early on in my time in Berkeley I observed children participating in sustained interaction in free play. Again this went against what Piaget believed, but my theoretical approach at this point was still guided by the constructivist views of Piaget and Vygotsky. I believed that children were active agents and contributed to their own socialisation in their interaction with adults and peers. Then I observed something that took me in a new direction. This discovery was related to the kids' challenging of adult school conventional rules. One rule involved restricting kids from bringing their own toys or other articles to school.

The teachers had the rule because they knew that the kids would often get into disputes over such items, which also might be damaged. The kids did not like the rule, so they found a way around it, what Goffman called a secondary adjustment. They brought small items (like little race cars, toy animals, action figures, and dolls) which they would conceal in their pockets. However, they never played with these items alone, but showed them to other kids (and sometimes to me) and played with them surreptitiously. When a teacher would come near they would quickly return the toys to

their pockets and they felt empowered at gaining control over the teachers and the rule. The teachers often noticed, but looked the other way as long as no disputes occurred over the smuggled items.

I recorded many instances of these secondary adjustments and others related to clean-up time and restrictions regarding types of play in certain areas of the school. I thought “wow” these kids not only engaged in sustained peer interaction they were creating their own peer culture. Consider the bringing of small items from home. Surely the kids did not get this idea from adults. They did not go home and tell their parents that the teachers said they could not bring toys from home to school and their parents said “Well take your toy race cars or Polly Pocket dolls and hide them in your pockets.” No, the kids came up with these secondary adjustments collectively on their own. The documentation of a collectively shared peer culture and general features of peer culture were central to my new way of thinking, which took me beyond constructivist views to an interpretive view (see Corsaro, 1985, 1990, 2014).

In Berkeley and later in Italian preschools and in a Head Start center for economically disadvantaged children and in private preschools in the Midwestern United States I documented two key aspects of peer culture. First, I found children develop a strong desire *to do things with each other*. This desire to participate (or what I call *communal sharing*) leads children to create and share a peer culture. At the same time, children are developing a sense of doing things together, they are also running up against boundaries represented in the reactions and rules of teachers, parents and other adults. Adult ideas, materials, rules, and restrictions can be seen as frames or boundaries within which features of peer culture emerge and are played out. In fact, attempts to deal with the rules and authority of adults is of crucial importance in the children’s development of a second basic theme of peer culture, *children’s desire to challenge adult authority and gain control of their lives*. These general themes of control and communal sharing are central to the peer culture of preschool children. I came to define peer culture as a stable set of activities or routines, artifacts, values and concerns that children produce and share in interaction with peers (Corsaro, 2009, 2014; Corsaro and Eder, 1990).

As I documented various aspects of children’s peer cultures, I moved in an abductive manner from the data and existing theory related to children, language, and social reproduction in the work of Bruner, Cicourel, Giddens, Goffman and others to develop the notion of interpretive reproduction as an alternative to socialisation. The term *interpretive* captures the innovative and creative aspects of children’s participation in society. Children create

and participate in their own unique peer cultures by creatively taking or appropriating information from the adult world to address their own peer concerns. The term *reproduction* captures the idea that children are not simply internalising society and culture but are actively contributing to cultural production and change. The term also implies that children are, by their very participation in society, constrained by the existing social structure and by societal reproduction (Corsaro, 1992, 2014)

To capture interpretive reproduction, I want to discuss a brief video clip from my research in an Italian preschool. This was my second time doing research at the school. I had spent nine months with the children and their teachers in the previous year, and now I was back for a two-month follow-up. I was with three boys who were talking about military matters—the navy, warships, and the boss or *il capo* on such ships—as they dug holes and buried rocks in the dirt. At some distance, I saw three other children marching around the yard carrying a large, red milk carton. The teachers used the carton to carry play materials to the yard, and I had seen the children playing with it before. What I did not know was that the carton was now a forbidden object. As I was to find out later, earlier in the year, before my arrival, a child had placed the carton on her head and chased after several other children. She eventually fell and suffered a minor injury. After this incident, the children were prohibited from playing with the carton.

But they were playing with it today. In fact, they were now marching in my direction, and I could begin to make out their chant. It sounded like *Arriva la barca! Arriva la barca!* (Here comes the boat! Here comes the boat!) I was not sure about the last word, though; it could have been *barca* or *banca* (bank). They were right up close to me now; Antonio was leading the way, and Luisa and Mario were helping him carry the carton. There was a bucket inside the carton, and it was filled with rocks.

“*La barca?*” I asked Antonio.

“*No, la banca coi soldi!*” (No, the bank with money!), he said as he cupped his hand in a familiar Italian gesture.

I was intrigued. These kids had created a whole new dimension in banking, a bank that makes house calls! “Give me some money,” I said to Antonio.

The children now put the carton down, and Mario took out the small bucket with rocks and said, “I’ll give the money to him.” “How much do you want?” he asked. “There are thousands. . . .”

“Forty thousand,” I quickly responded. (This sounds like a lot, but 40,000 lire was only about 25 dollars.)

Mario began counting out the rocks, doing exactly as they do in Italian banks by announcing the final sum as he counted out each 10,000 lira note: “Forty thousand, forty thousand, here’s forty thousand.”

But he counted only three rocks. “No, no, three—thirty thousand. I said forty!”

“Four,” said Luisa. “Four!”

Mario then reached in the bucket to get more rocks and counted, “Thirty, forty, here,” and handed me three more rocks and then a fourth.

“Sixty now,” I said laughing. “Seventy. I said forty!”

Luisa was now getting impatient with Mario and seemed to think she could be a better bank teller. “Four, he said four!” she exclaimed as she reached to take the bucket from Mario.

The three children now began to struggle over the bucket, and Antonio scooped the rocks from my hand and dropped them back into the bucket. “Let’s go,” he commanded. And the children marched off again, chanting, “*Arriva la banca! Arriva la banca!*” I waved and called out, “*Ciao la banca!*”

This example captures two important aspects of interpretive reproduction. First, children are active, creative social agents who produce their own unique children’s cultures while simultaneously contributing to the production of adult societies. Take the Italian preschoolers. They were not supposed to play with the milk carton. But they did not like the adult rule, so they played with it anyway. They created a unique “traveling bank”—an idea taken from the adult world but extended and given new meaning. Their bank is especially interesting because it predated the existence of ATM machines in Bologna and elsewhere in the world and can be seen as a sort of a precursor to this adult invention.

Second, childhood—that socially constructed period in which children live their lives—is a structural form. When we refer to “childhood as a structural form,” we mean, as Jens Qvortrup (2009) has argued, it is a category or a part of society, like social class and age groups. In this sense children are members or incumbents of their childhoods. For the children, themselves, childhood is a temporary period. For society, on the other hand, childhood is a permanent structural form or category that never disappears even though its members change continuously and its nature and conception vary historically.

Later years: Comparative ethnographies, and early education pedagogy and policy, life transitions and priming events

My later comparative ethnographic research with impoverished Black children in American Head Start centres, middle-class American children in private preschools, and with Italian children in progressive early education centres coincided with a range of similar interpretive and language-based studies of children and youth and was part of the growing field of childhood studies in the United States and Europe. I expanded my work to the general area of comparative early childhood education and most recently to the direct study of the life transitions of children and youth.

I was especially influenced by the ethnographic and child language studies of Candy Goodwin (see especially 1990, 1998, 2006) and Barrie Thorne (1993) in the United States and Ann-Carita Evaldsson (see especially 1993, 2003, 2009 and Evaldsson and Corsaro, 1998) and Karin Aronsson (see 1998; Aronsson and Evaldsson, 1992), and others in Norway (Berentzen, 1984; Kjörholt, 2002, 2003; Qvortrup, 1993, 2000, 2009) and Great Britain (Christensen and James, 2008; Christensen and Prout, 2002; James, 2009; James, Jenks and Prout, 1998; Mayall, 2002). In comparative ethnographic work published in numerous articles and my text *The Sociology of Childhood* (2014), I explored children's peer cultures, friendships, gender relations, and literacy with several students and colleagues (see Aydt and Corsaro, 2003; Corsaro and Maynard, 1996; Corsaro, Molinari, Hadley and Sugioka, 2003; Corsaro and Nelson, 2003; Corsaro and Rizzo, 1988, 1990). We found, for example, that Italian and African-American children shared much in common in regard to language styles, friendship processes, disputes and conflict resolution while differing strikingly from American middle class children (Corsaro, 1994). These findings related both to cultural differences as well as teacher interactive styles and pedagogy across the preschools. With my students and colleagues Luisa Molinari and Katherine Rosier, I explored how the experiences of the Italian children prepared them and their parents well for the transition to elementary school while those of the African-American children and their parents often led to misunderstandings and transition problems. Katherine Rosier and I pursued these transition problems for a group of African-American families in several articles (Corsaro, Molinari and Rosier, 2002; Rosier and Corsaro, 1993) and Rosier developed more extensive transition narratives of the families in her important book, *Mothering Inner City Children* (2000).

In an over six-year longitudinal study in Modena, Italy, Luisa Molinari and I documented and further developed our findings of the Italian chil-

dren and their families. We focused specifically on life transitions related to friendship processes, literacy, parental involvement, and school and community relations in our book *I Compagni: Understanding Children's Transition from Preschool to Elementary School* (2005; also, see Corsaro and Molinari, 2000). In this book, we developed and used the notion of priming events to capture transition processes and we also provided detailed discussion of the Reggio-Emilia pedagogy.

Priming events involve activities in which children, by their very participation, attend prospectively to ongoing or anticipated changes in their lives. These events can be formal or informal. The most important formal events were the preschool visits to the elementary school and their discussions and reflections on these visits with their preschool teachers. In mid-May, they made two visits to the nearby elementary school that most would attend in the next school year. I accompanied the children on these trips and video-recorded many of the activities. During the first visit, we were met by the school principal, who gave us a tour of the art, science, and music labs, the playground, the gymnasium and the cafeteria. We then spent some time in a first-grade classroom whose teacher was the mother of one of the children from our preschool group.

In our second visit, we were met by the fifth-grade teachers and students, who took us to their classrooms. In September the preschool children would join one of four new first grade groups, which would be taught by the current fifth grade teachers. The older children took the preschoolers under their wings and led them to their desks, showed them their work, and told them all about their class and their teachers. The preschoolers were thrilled by the attention. The older children, in turn, experienced these visits as a priming event preparing them for leaving the school and the teachers they had worked with for the last five years.

On the days following the visits, during meeting time in the preschool, general discussions were held about what the children had observed and learned. In these discussions, the children had the opportunity to ask questions and talk about any concerns, fears, or curiosities about the coming transition. The discussions covered a wide range of topics including the arrangement of the desks in the elementary school classrooms, with the teacher's desk at the front; the fact that there would be no opportunities to nap; that there would be less time for play and more time for work; that there would be a lot of homework; that there was a gymnasium; and that the toilets were separated by gender and were different from those in the preschool. Finally, several children mentioned their older siblings and things that the siblings had told them about elementary school.

The trips to the elementary school clearly served as important priming events, as the reality of the transition was brought fully to life. In the discussions, some children stated that they were very eager to enter the first grade, but all expressed some concerns and worries, which the teachers tried to ease. Near the end of one of the discussions, Sandra composed a little song: "I want to stay in preschool and not go to first grade." She smiled as she sang, knowing that this was not possible, but still communicating her regret at moving on to the next stage of her life.

Other important formal priming events involved some of the children's interactions with and reflections on activities with older siblings who had already made the transition to elementary school. In our interviews parents frequently referred to the importance of siblings noting that having older siblings could make the transition much smoother. In those instances, where this was the case both parents and children pointed to interactions and discussions between the siblings about what first grade would be like including having homework, learning to read and write, and having less time for play. In the case of those children without older siblings, parents expressed more concern about how their child would adjust to the transition (see Corsaro and Molinari, 2000; 2005).

Informal priming events were often more nuanced and embedded in everyday routines and activities of the school and peer culture of the preschool. When the preschool children talked about first grade, they often referred to age: Kids go to elementary school when they are six years old. When discussing age and elementary school the children frequently referred to the experiences of older siblings or relatives. These discussions were often embedded in recurrent routines in the peer culture. Like other Italian preschool children, I have studied, these children frequently participated in *discussioni*, complex debates and discussions about their lives and elements of their peer culture (Corsaro and Rizzo, 1988). In the following example, a debate which occurred near the end of the school year about who is responsible for a broken pencil evolves into a stylised and (in the end) playful exchange of threats that is related to the children's connection of age with elementary school.

An argument develops between Marina and Angelo. Supposedly Marina said Angelo had broken Elisa's pencil. I did not actually hear this since Marina left the area and supposedly told Elisa this, who also was no longer in the area. In any case, Marina has now returned and Angelo has followed her, saying she is a liar and that her nose will grow longer than Pinocchio's for telling lies. Marina denies that she has lied, and after several exchanges the children start making threats. Angelo says his brother in first grade will beat up Marina. Then Marina

says her brother in second grade will beat up Angelo's brother in first grade. Angelo now says that his brother in third grade will beat up Marina's brother in second grade. Angelo still seems to be taking it all pretty seriously, but Marina starts to smile, and she is laughing when she says that her cousin in fourth grade will beat up Angelo's brother in third grade. Angelo smiles at this and the dispute ends.

Some of the threats made in the example could actually be carried out because both Angelo and Marina have a brother in elementary school. Reality clearly was being stretched, however, as the threats became more fanciful. In fact, the children's engagement in what Flaherty (1984: 75) calls "reality play" ("the harmless toying with the cultural or interpersonal expectations apropos" to the contingencies in a given episode of interaction) is important in several respects.

First, the serious concern about lying to a friend was addressed in the everyday routine of discussion. The use of stock phrases and references such as the length of Pinocchio's nose are common in *discussioni*, and reflect the appreciation of stylised debate among Italians as opposed to more serious dispute.

Second, the use of more subtle humour or "reality play" (the impossibility of having siblings at every grade level) lightened the seriousness of the discussion even more, and deftly connected a typical peer spat to the children's ongoing concern about ending their time together as a group and moving to a new school. Even more subtly here, the two friends are also addressing the fact that they will not often see each other again as Angelo (although he made the school visit) will not make the transition to the public school with his classmates as he will be attending a private Catholic school. Thus we see that the children's thinking about age in terms of where they are and where they are going in the educational system is anchored in the everyday routines of peer culture.

In my most recent work in Trondheim, Norway with my colleague Berit Johannesen we further explored transitions and priming events in terms of children and youth participation and celebration of Norway's constitution day. Here relying on both observations and in-depth interviews over several years we linked priming events to intergenerational relations, community involvement, and national identity. We focused primarily on youth both native and immigrants (called *Russ*) making the transition from high school to university or work. First, through their creative participation in traditional rituals *Russ* develop and share their own collective identity while also contributing to civic society more generally. Second, intergenerational relations play a central role in the *Russ* experience and through their activities with

younger children and adults *Russ* reflect on their own temporal positions in the generational order. Our analysis contributes to better understanding of the changing nature of the symbolic value of *Russ* in Norwegian society, debate about the growing commercialisation of youth traditions and activities in a global economy, and the complexity of the liminal aspect of rites of transition (see Corsaro and Johannesen, 2014; Corsaro, Johannesen and Appoh, 2013).

Conclusion

After my retirement in 2013 I have ended data collection but continue to work with several Ph.D. students, do consulting on projects, and undertake new editions of my text *The Sociology of Childhood*. In doing the latter I keep abreast of the latest theoretical and methodological developments in childhood studies—a field that is vibrant, diverse and growing. There is some debate regarding the direction of new theory in the field, and some are doubtful of the need for the ever-increasing number of ethnographies of children and youth. While always open to new theoretical directions, I do, however, believe there is always a need for more ethnographies and other careful empirical research. I believe it is, as it was in my case, from direct observation and participation in the worlds of children and youth that rich and insightful theory springs and is nourished.

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Students at Campus Blåsenhus, Uppsala University. Photo: Staffan Claesson.

‘Flogged into Learning’ or ‘Treasured Moments’

A History of Education from Below

Jane Humphries (2016)

Introduction

Sometime in the 1830s, a Romany child, Cornelius Smith, was travelling with his family around the midlands of England. The family made a precarious living from the activities of gipsy artisans as both parents were chair caners and basket makers: “It was their custom to travel from place to place; thus, rambling to fairs, feasts, and races. I was dragged up in darkness, misery, and sin and became very daring and wicked and loved the roaming life intensely”.¹ But at some point, in this unpromising childhood, on arrival in a small Cambridgeshire town, he noticed groups of children laughing and talking and all hurrying in a particular direction. As he reports in his autobiography written some 40 years later, he followed the local boys and girls. Their destination was a ‘ragged school’, a self-help institution set up by philanthropic locals to provide a basic education for poor children.² Cornelius peered shyly round the door and saw the children beginning to learn. He was filled with a yearning to join in, to get an education and to belong in this world of learning. “For some time, I was afraid to enter, they stared at me so. Gaining courage however, I crept inside. My little heart was panting for something I had not got”.³ Cornelius’s rehabilitation takes many years and involves periods of progress and periods of backsliding. He cannot settle at a job, spends time in prison, drinks, and loses his wife and newborn baby in a small-pox epidemic, but the memory of the ragged school echoed

¹ Cornelius Smith, *The Life Story of Cornelius Smith*, (Manchester and London, n.d.), p. 1.

² For an introduction to the history of Ragged Schools see: https://en.wikipedia.org/wiki/Ragged_school

³ Smith, *Life Story*, p. 12.

throughout his hard-lived life causing him eventually to master the written word. He learns to read. This paper is about men and women like Cornelius, whose struggle for education is set against a backdrop of economic change, demographic pressure and vigorous institutions of social control.

The history of education is usually told in term of progressive state-led provision trickling slowly though the class structure to eventually lap over 'the great unwashed'. Administrative and bureaucratic records dominate the sources, so it is not surprising that the perspective is institutional and legal. The standpoint is definitely from above; it is a story of provision as seen by the providers. In contrast, several creative historians have used unusual sources to provide some insight into how ordinary people perceived education, how it fitted into their view of the world and themselves, what they read and what they made of their reading.⁴ This literature, while subsidiary to the mainstream, provided my inspiration to write about the struggle for schooling in the context of early industrialisation marked as it was in the British case by stagnant living standards and a high incidence of child labour. How was schooling understood, valued, and above all, obtained under these circumstances?

Voices from below:

British working-class autobiographies as a source

My 2010 book, *Childhood and Child Labour in the British Industrial Revolution* focussed on the early industrial boom in child labour but was drawn to consider working-class schooling as the falling age at which children started to work infringed educational possibilities. The book was unusual in drawing extensively on ordinary people's own experience as described in working-class life writing.⁵ My sources included 617 life accounts by working men, most of whom spent some time describing their education or lack of it. These life stories were analysed systematically with both qualitative and quantitative evidence extracted and studied. Both my subtitles are quotations from these memoirs. One defect of this work is that I used only men's life accounts in the analysis, which critics suggested might have led to an

⁴ John Burnett, (ed.), *Destiny Obscure: Autobiographies of Childhood, Education and Family from the 1820s to the 1920s*, (London, 1994); David Vincent, *Bread, Knowledge and Freedom*, (London, 1981); Jonathan Rose, *The Intellectual Life of the British Working Class* (Yale, 2001).

⁵ Burnett and Vincent (see n.4) were pioneers in drawing this powerful and rich source material to the attention of other historians. Rose also incorporates autobiographical source material.

unbalanced reading.⁶ Men and women undoubtedly had different life experiences and unequal life chances but how did this affect their schooling? A current research project is concerned with the construction of a similar data set of women's life accounts in order to be able to compare these systematically with the men's stories and so put some flesh on the bones of gender inequalities in the period.

It is important to provide a quick summary of my most prevalent findings from the men's life accounts beginning with their work experience which I saw as limiting and constraining educational opportunities. First, my research confirmed classic accounts in seeing the era of industrialisation (1790–1850) as witnessing a boom in child labour, manifest particularly in a declining age at starting work. Young child workers (under ten years of age) became more common. Second, child labour was endemic, entrenched in both traditional and modern sectors of the economy. It contributed actively to the developing divisions of labour and organisational changes that sustained traditional units of production and maintained their competitiveness. Third, however, mechanisation of production went hand in hand with the relative expansion of child labour which therefore played a strategic role in the development of factories and thereby the growth of the textile sector, as other authors had claimed. Child labour was both a cause and a consequence of the breakdown in traditional regulation of the labour market and the undermining of craft skills. Finally, the upsurge in child labour was explained by the demand for child workers but the supply side in terms of family poverty, absent fathers, the unreliability and inadequacy of men's wages, mothers' inability to shoulder a breadwinner role, and large sibling groups also contributed. These factors were brought together and shown to interact through a model of the labour market with child labour. A prediction was that child labour impacted schooling outcomes and experience. Maybe Britain's famous early start down the industrial road, dependent as it was on child labour, carried within it the seeds of later setbacks in the form of retardation in human capital: a form of hysteresis not hitherto considered.⁷

The history of child labour had a further important characteristic. It was not one of linear uninterrupted 'progress'. Working people themselves organised and struggled for change. True child labour disappeared by the end of the nineteenth century, brought to an end by the slow but-after-1850-

⁶ See Ginger Frost, 'Review', *Journal of British Studies*, April 2011.

⁷ For a traditional account of hysteresis see, Knick Harley, 'The legacy of the early start', *Cambridge Economic History of Modern Britain*, Vol. II, edited by Roderick Floud, Jane Humphries and Paul Johnson, (Cambridge, 2014).

steady rise in men's wages, a shift in occupational structure away from child-intensive sectors, a slow decline in fertility (offset to some extent by declining infant mortality), increasingly effective protective labour legislation, a spreading social recognition that childhood should be protected as a space for learning and playing, and falling numbers of families with inadequate or absent breadwinners as men increasingly shouldered the main burden of familial support.⁸ Frail breadwinners became more robust. Schooling since it became cheaper and increasingly obligatory on parents also played a role, although its 1880 introduction was surprisingly late by European standards.

The tardy delivery in Britain of state schooling is worth emphasis. Eighteenth and early nineteenth-century schooling relied on local, charitable and religious initiatives and was consequently patchy and uneven in quality. Many children received what schooling they obtained from their parents within the family. Poor parents struggled to scrape together the funds needed to pay for local schools especially if they had several children bunched closely together. Ironically rivalry between the Anglican Church and the Nonconformists promoted educational outreach as the two movements competed for congregations. The British Society, formally the Nonconformist British and Foreign Schools Society, was established in 1807 to promote nonconformist schools followed by the Anglican National Schools Society in 1811 to establish Church of England schools. The resulting networks of voluntary schools began to receive public funding from 1833, but it took almost forty years for this trickle of state support to be centralised in terms of the establishment of a system of public schools and then Foster's Act was only permissive, allowing local authorities to establish board schools if so inclined. It was another decade before schooling became compulsory and free. By this time Danish national schools had been in existence over 60 years.

As background, the family circumstances described by the male autobiographers were revealing. Family life was structured by primarily nuclear households, but within networks of kin and community which have been overlooked by family historians fixated on census data or household listings. Accounts of family life brought greater clarity to the characteristic that I termed 'Breadwinner Frailty', that is the structural inadequacy of men with insecure jobs and low wages to support precociously dependent families. Mothers were the centres of these families emotionally and physically, but burdened by childcare and domestic responsibilities and lacking the skills and physical strength that were rewarded in the labour market, they

⁸ For an account of these developments see the author's BBC documentary, 'The Children who built Victorian Britain', www.bbc.co.uk › *Factual* › *History*.

were unable to provide *economic* support. Fathers were distracted, absent, non-existent and unreliable with a historically distinctive frequency. Families in this era of high fertility were often very large, though many children failed to survive into adulthood. Most autobiographers remembered at least one brother or sister's death and many remembered a series of such passings. Formal institutional support for families that fell on hard times even before the 1834 Poor Law Amendment Act was increasingly harsh and conditional.

Statistical analysis of age at starting work conditional on family circumstances and structure showed that poverty was the main force behind early work. Children in poor households were the primary secondary earners and where fathers were missing or incapable, they were the chief breadwinner; they gained esteem from this role. There were worse things than child labour, an empty belly for example or a hollow-eyed mother beside herself with anxiety about how to feed her younger children.

Attendance at school for children in families such as these was deeply problematic. The high fertility of the early nineteenth century left the age structure of the population skewed; bulging cohorts of children and adolescents put pressure on schooling infrastructure and personnel despite the timid expansions described above. Even if families were not in dire poverty, school fees were a drain on their resources. These direct costs of school attendance were not trivial. Daniel Chater, for example, started at a local 'seat of learning' where fees were 6d a week when his father earned only 18s and there were three younger children. A board school was eventually opened nearby but still charged 3d a week and by then Chater Senior's wages were irregular: 'there were occasions where even that sum was too large'.⁹ Even more serious was the indirect costs of school attendance, the earnings that were forgone when children attended school instead of working.

Working men's memories of schooling

Working men remembered their schooling. Most of those in the sample of writers had some formal schooling though some in all generations except those born late in the study period (i.e. after 1870) never attended a school. For many men, it was possible to reconstruct how many years they had attended school, a dimension of education that it is very difficult to estimate from institutional sources or local material such as school log books, which either never focus on or lose track of individual children. The autobiogra-

⁹ Daniel Chater, *Autobiography of Daniel Chater*, TS, (Brynmor Jones Library, University of Hull, no date).

phies, however, enable average duration of school attendance to be computed for different time periods and compared with estimates from other sources in table 1 below. There was no gradual increase in the length of time that boys attended school instead the evidence confirms that the duration of schooling dipped as the intensity of child labour increased and pressures on schooling infrastructure intensified (see table 1).

Given the importance of children's earnings to family budgets, working people adopted various stratagems to fit schooling around child labour. Strategies involved early school attendance to try and obtain basic skills before children were old enough to be able to work even in the child-hungry labour market of early industrial Britain. More important still was the use that working families made of Sunday schools and night schools. Children also made use of opportunities for informal education provision often alongside working. Too much should not be made of the autodidacticism evident in these accounts as the selected sample of autobiographers undoubtedly overestimates the quest for learning in the population as a whole. But the evidence of working people's search for ways to fit some education around the need for children to work suggests the depth of the desire for education. Sunday schools capture this. They boomed in these years. Among the autobiographers, 30 percent of the cohort born 1791–1820 attended Sunday school, rising to 32 per cent for those born 1821–50 and 36 per cent for those born 1851–1878. This record is consistent with other sources which show that attendance at Sunday schools exceeded attendance at day schools. The autobiographies also illustrate the eager exploitation of other sources of instruction, at the feet of parents for example, or in the kind of ragged school that Cornelius Smith stumbled upon. Sunday schools appear to have rescued many boys from total ignorance. Street urchin William Davis led his blind father around the streets of Birmingham as he begged and sold water. As he describes it, he was rescued from the gutter by a local philanthropist who introduced him to St Peter's night school where he learned to read and write later attending Sunday school where he rose from monitor to teacher and superintendent and a classic model of paying back by handing on to others the opportunities that he had seized.¹⁰ Among the autobiographers such informal and struggled for schooling was usually remembered with pleasure.

The schools which poor children attended were small and run from their homes by elderly women or disabled men. Teachers were unqualified but often experienced. They taught the basics with an emphasis on the 'Three Rs',

¹⁰ William Davis, 'Autobiographical Letter Written to H.M. Cashmore in 1932', MS, (Archives Division, Central Reference Library, Birmingham, no date).

Table 1: Average years of schooling

Autobiographical evidence		Evidence from other sources	
Date of birth	Years of schooling (count)	Date of evidence	Years of schooling
Lowest–1700	4.89 (9)		
1701–1750	3.64 (22)	circa 1700	3.0 ^h
1751–1760	3.50 (8)		
1761–1770	4.20 (12)		
1771–1780	3.96 (25)		
1781–1790	3.08 (26)		
1791–1800	3.42 (24)		
1801–1810	3.01 (38)	circa 1805	2.3 ^a
1811–1820	2.93 (66)	circa 1816	3.0 ^g
1821–1830	2.51 (68)		
1831–1840	2.37 (48)	1834	3.25 ^c
		1830–1839	2.6 ^f
1841–1850	3.33 (45)	1846–1851	5.0 ^a
		circa 1850	3.0 ^b
1851–1860	3.42 (62)	1851	4.0 ^d
			5.0 ^e
1861–1870	4.79 (62)		
Post–1871	5.38 (29)	1867–1871	6.6 ^a
All decades	3.48 (544)		

Sources: ^a Matthews, Feinstein and Odling-Smee, 1982; ^b Rural schoolmaster, quoted in Anon. 1895; ^c National Society, quoted in Parliamentary Papers, 1835, p.4; ^d 1851 Census, Report on Education, quoted in Silver and Silver, 1974, p.38; ^e West, 1973; ^f Madoc-Jones, 1977; ^g Parliamentary Papers, 1816; ^h Mitch, 2004. For these sources see, Humphries, *Child labour*, p. 314.

i.e., reading, writing and arithmetic. Yet in many ways the organisation and curriculum of these schools fit the period. For small children to be able to attend in an ear without mass transport, schools had to be available in every street and hamlet. They needed to be local and widespread. Since schooling was paid for by parents with many calls on their scarce resources, they also needed to be cheap which ruled out spending on infrastructure. And as Phil Gardner has emphasised their proximity to home meant that parents could reclaim their offspring at any time should an opportunity arise for them to be useful or enjoy temporary employment. The narrow curriculum was also tailored to working-class needs for while there was neither time nor money for specialist subjects the ability to read, write and do some elementary mathematics unlocked the gates of knowledge. Children with the motive and ability could later read for themselves in areas of specific interest.

The quality of these types of school has been debated.¹¹ Indeed Jonathan Rose, one of the prosecutors of 'Dame Schools' drew on working class autobiographies to justify his condemnation. My reading from an expanded set of similar sources is more sympathetic. James Mullin, for example, was taught by a consumptive weaver as his equally ailing daughter worked at the loom in the background. His studies were punctuated by their laboured breathing, but he accumulated valued scraps of knowledge and honoured their memories: "Poor old master, peace be to thy shade! After the lapse of 60-odd years, thy form rises before me".¹²

The pursuit of learning did not end with childhood. Astonishingly, 198 autobiographers, almost one-third of the sample, attended night school or pursued some kind of education as adults, suggesting that investment in oneself was widespread. Of course, again, the autobiographers constitute a selected sample of serious and thoughtful men with above average aspirations. Moreover, even within this group not everybody was receptive, particularly to the kind of education on offer.

While the dame or infant schools for the working-class were remembered with fondness, secondary schools were less venerated. These schools were larger and often had very big classes. Even well on into the nineteenth century, masters were unqualified: "In those days, any shattered being wrecked in mill or mine, if he could read John Bunyan, count to 50 backwards, and scribble the Squire's name was considered good enough for a pedagogue",

¹¹ T.W. Laqueur, *Religion and Respectability, Sunday Schools and Working-Class Culture*, (New Haven, 1976); 1976; Jonathan Rose, *The Intellectual Life of the British Working Classes* (New Haven, 2001); Phil Gardner, *The Lost Elementary Schools of Victorian England*, (London, 1984).

¹² James Mullin, *The Story of a Toiler's Life*, (Dublin, 2000).

remembered John Harris.¹³ Under such circumstances, discipline was harsh and often applied in random but ritualised fashion. Schools were sites of violence. Some boys were deterred. J.R. Clynes' schooling left him with "Nothing but a fear of birching and a hatred of formal education" but he, like many others, was brought around to learning by a later and less ferocious exposure. At the aged of 10, he started work in a factory and was required by law to attend a factory school where he was awakened intellectually.

David Mitch has argued that early industrial employment only rarely required literacy and numeracy and so the economic returns to schooling were limited for the generations who lived through the industrial revolution.¹⁴ The sample of autobiographers challenges this thesis. It includes many men whose education appeared to help them get on even in surprising walks of life such as the army. Moreover, a statistical analysis relating the status boys achieved later in life to the education they had received while controlling for other factors suggests that at the margin additional schooling did indeed help men to rise in the world. Some men reported that their parents did not value education and thought it a waste of time and money but others had ambition for their offspring, though it was ambition rooted in the brutal realities of working-class life. Academic advancement beyond a certain point was unlikely to prove beneficial. Working-class lads were destined for manual labour and the optimal education was one which enhanced access to better paid work or promotion within manual labour. An education was not an ace in the hand of a working-class boy though it might help obtain an apprenticeship or secure advancement into a low level managerial position. But boys and their parents also understood that working-class life was insecure and uncertain. Education provided some insurance against illness or injury since it provided employment opportunities outside manual labour. School teaching, for example, was neither well paid nor prestigious until the later nineteenth century, but it put bread on the table of many physically disabled men. More generally, literacy and numeracy provided a platform if opportunity knocked and boys had a chance of moving ahead. Altogether then, the autobiographical evidence studied both qualitatively and quantitatively, provides fresh insight into working-class education in this period. However, is this account distorted by the focus on male writers? Ginger

¹³ John Harris, *My Autobiography*, (London, 1882).

¹⁴ David Mitch, *The Rise of Literacy in Victorian England: The Influence of Private Choice and Public Policy*, (Philadelphia, 1992); David Mitch, "Education and Skill of the British Labour Force", in R.Floud and P. Johnson (eds): *The Cambridge Economic History of Modern Britain, Vol. I, Industrialisation* (Cambridge, 2004).

Frost suggested that limiting my attention to boys and men was particularly damaging to my account of family life and children's relationships with their parents, but perhaps also the men's stories misrepresent the schooling experience. Is it possible to compile a parallel set of working-class memoirs by women and compare what they report about their education with the experiences of the men? Was it the same for girls?

Gendering the memories

The focus on male writers was not the result of choice but dictated by the sources themselves. There are far fewer working-class autobiographies written by women and they would have been swamped by the male sample if included in the initial analysis. However, I have now put together a sample of over 200 working women's life accounts and the experiences they depict can be compared with the male outcomes.¹⁵ Evidence from the women's accounts is less systematic and there are many more missing values in the summary data set, which means that the search for commonalities often relies on small samples but a preliminary comparison of educational experience is possible and is the focus of the rest of this short paper. There are similarities and differences in the experiences by gender, some predictable but some surprising!

Girls born in the era of the Industrial Revolution experienced the same pressures towards early working, indeed analysis of age at starting work from the autobiographies that have been identified suggests that they had a slightly younger age at starting work. Moreover, like their male peers the girls experienced a falling age at starting work when comparing those born before the classic era of industrial expansion with those born in the crucible of industrialisation. They also experienced the same pressures to start work: family poverty, absent or incapacitated fathers, and large families. For example, Mrs. Burrows, a member of the cohort born 1821–1850, started work aged 8 in an 'agricultural gang' as her mother despite working "like a slave" could not support all her children without help and her father was bedridden with a "tumour in the head".¹⁶ Thusly, girls as well as boys were caught up in the early industrial boom in child labour. The only significant difference in their experience appears to have been that a girls' first job

¹⁵ A list of these sources will be included with an extended and documented version of this paper.

¹⁶ Mrs Burrows, 'A Childhood in the Fens about 1850–60', *Life As We Have Known It by Cooperative Working Women*, edited by Margaret Llewelyn Davies, (London, 1930)

was often as a mother's helper in their own homes, assisting with younger children and sometimes enabling mothers to go out to work and earn wages. Boys were not exempt from childcare and domestic duties but this rarely substituted for paid work.

Schooling was different. Table 2 compares the preliminary estimates of years of schooling extracted from the sample of female autobiographies with the evidence from the much larger sample of male accounts. Until the era of state support, girls received less education.

Table 2: Years of schooling, girls compared with boys, from working class autobiographies.

Cohort	Girls: mean years (sample size)	Boys: mean years (sample size)
1627–1790	1.96 (12)	3.74 (102)
1791–1820	1.19 (29)	3.09 (130)
1821–1850	1.64 (34)	2.80 (159)
1851–1878	4.11 (34)	4.40 (157)
1879–1892	7.30 (43)	n.a.

Gender discrimination can even be observed within families as brothers were sent to school when sisters were kept at home. Thus “Old Sally”, whose life story was relayed by Flora Thompson in her evocative account of Victorian village life was actually taught to read by her brother fortunate enough to be sent to school and generous enough to share his scraps of learning.¹⁷ The women's life accounts describe the same manoeuvrings to fit some school attendance into the spaces left by the need to work, and, in the case of girls, to care for younger siblings. They too started school early, went with high frequency to Sunday school, attended night schools and pursued other sources of informal education often as in Old Sally's case within the family.

Stepping away from autobiographies for a moment to a different kind of source, household accounts often include information about schooling costs, from which it is possible to construct estimates of attendance of individual family members and compare the experience of brothers and sisters. However, such sources are rarely available for working-class families. One rare account book has survived for a humble family living in the north of

¹⁷ Flora Thompson, *Lark Rise to Candleford*, (Oxford, 1939).

England in the early eighteenth century.¹⁸ Richard Latham was a small-scale farmer who kept careful income expenditure accounts for his growing family 1724–1767. The accounts record payments that Latham made for “school wages” for named children as his family grew from which I have inferred the attendance at school of his one son and seven daughters. The most important point to emerge from this quantitative family history is that Latham invested most in his only son and second child Richard, known as Dicy. However, despite the family’s humble circumstances, the girls did get some schooling. Interestingly the older girls attended school for longer periods of time than did their younger sisters, but alas, as Dicy had no younger brothers, it is not possible to see if he benefitted from a rank as well as a gender advantage. Unfortunately, in this case the son preference was a losing strategy as Dicy died in 1747 before attaining his majority. The girls in the family however proved industriously engaged in spinning outwork (and incidentally not all matrimonially inclined) and lent important financial support to the growing family. Sadly, their earnings from spinning are not recorded in the accounts. Later several Latham girls were able to obtain positions in service, perhaps enabled to move in this direction by their little bit of learning.

These findings confirm the impression from qualitative sources that in the eighteenth and first half of the nineteenth century parents were less willing to pay for girls’ education or send them to school. The deepening involvement of the state and spread of subsidised schooling appears to have had dramatic implications for girls. But even free schools might not have attracted girls to the same extent as boys because girls had another widely-sanctioned use from an early age: they could help in the home especially in terms of looking after babies.

The sources are replete with examples of girls withdrawn from school to help or substitute for mothers. Elizabeth Andrews, for example, started school at age 4, following the strategy of laying down some education before other uses of time became imperative. Andrews “loved school from an early age” but “had to leave at 12, owing to our large family and the coming 9th baby”. She showed little regret at the early demise of this little sister as it meant “I had a chance to return to school for another year”.¹⁹ But eventually Andrews was forced to leave her beloved school to help in a household containing three adult miners and 6 children. “Washing, ironing, cooking

¹⁸ Lorna Weatherill, (ed.): *The Account Book of Richard Latham, 1724–1767* (Oxford, 1990).

¹⁹ Elizabeth Andrews, *A Woman's work is Never Done*, (South Glamorgan, Wales, 1957), pp. 9–10.

and mending were endless”.²⁰ Andrews was invited to return to school and train to become a teacher but her parents could not afford the train fare to Aberdare needed for the course and she was put to learn dressmaking instead. Other girls shared a similar fate. Withdrawal from school to help in the home was sometimes permanent and precipitated by tragedy. Catherine Maclaughlin recorded that her life changed when she was ten years old. “My mother died in child birth. She must have been 36 or 38 years old. I remember the day very clearly carrying my baby brother who was not yet 2 years old to the priest’s house a mile away, at the request of a neighbour who had come to see her, but it was too late. When we got back her face was covered up. Then I had to run to the foundry to give my father the bad news. As in other times [of child birth] the bed had been brought downstairs so she remained there until her funeral two days afterwards and we lived in the scullery”.²¹ Andrews and Maclaughlin represent the many women who as girls were required to interrupt and eventually leave school by the need for additional domestic labour and childcare in their families of origin. The alternative was to see their beloved mothers even more burdened and ground down by the oppressive labour involved in maintaining a home life and caring for younger children. Girls and the women they became were only too conscious of the strains and stresses of many childbirths and large numbers of children because they saw evidence of this in their families of origin, undermining their mother’s health and wellbeing and sometimes spilling over to blight their own early lives.

As far as the motives to attend school are concerned, until new opportunities in school teaching, and clerical and shop work opened towards the end of the nineteenth century, rigid divisions of labour and stern social norms meant that few working women could aspire to rise in the world even if they had some schooling. The economic returns to education were even less obvious for working-class girls than boys. However, they may well have existed as the Latham girls escape from farm labour and hand spinning into what appears to have been respectable service employment suggests.

Girls’ experience of schooling was both similar to and different from that of boys. They were less commonly subjected to harsh discipline and physical punishment even in senior schools and the vast majority reported pleasure in attendance and learning. Girls and the women they became were often hugely appreciative of lifelong gifts that education bestowed even if

²⁰Elizabeth Andrews, *A Woman’s Work*, p. 10.

²¹Catherine Maclaughlin, Handwritten manuscript, (Brunel University Archive, no date).

it had no palpable economic benefit. Pride was one thing. James Mullin's mother "plumed herself vastly on being able to read and write – a distinction that placed her far above the majority of our neighbours".²² Literate women were also grateful for a skill which, whatever its dubious economic return, unlocked lifelong sources of pleasure and satisfaction. One important source was the ability to directly access the word of God by being able to read the bible. The autobiographies are full of women whose faith enabled them to triumph over the most adverse circumstances and that faith was reinforced by daily reading of God's word. Mary Saxby, was not a pious woman. As a child, a runaway and delinquent and as an adult imprisoned, vagrant, abused, prostituted and abandoned, her faith based on her own serious reading helped her to survive.²³

Education was then a treasured gift, and, for women, one which had a further important implication. Literate women could teach their children and struggle to ensure that they too could access the world through reading. Again, the autobiographies are full of children learning the basic skills at their mothers' knee or of children like James Mullin, whose literate mother was determined that he should inherit the status and access to the world that came with literacy.

The women's bequest

The male autobiographers included many men who as adults became reformers, using their education to remedy the wrongs that had blighted their childhoods and create institutions that would help working people to live better lives.²⁴ They fought against exploitation in the labour market becoming trade unionists and politicians and advocating protective labour legislation and the development of social security. But they also sought to advance working class education, to improve housing conditions and to spread self-help institutions such as Friendly Societies, small-scale savings banks and cooperatives. Some of the working women also sought to improve conditions and make life better for their children and grandchildren. They shared many of the same causes as their male peers. Andrews, who we met above withdrawn from school to help at home and forced by poverty to lower her academic aspirations, eventually established her own successful small

²² Mullin, *Story*, p. 11.

²³ Mary Saxby, *Memoirs of a Female Vagrant Written by Herself*, transcribed by Stuart Hogarth, (Dunstable, 1806).

²⁴ See 'The Children who built Victorian Britain', www.bbc.co.uk › *Factual* › *History*.

business while involving herself in local labour politics. In due course, she met a man with similar socialist beliefs and they spent a long and active life together: "Our married life was a real partnership" with both campaigning and organising on behalf of the Labour Party. As an activist in the Labour Party, like many of the men in the sample of autobiographers, she was enabled by her education but also driven by her experiences to campaign for better working and living conditions. But she and other women were able to make an additional *gendered* contribution to the campaign for improved life chances for future generations. Many girls, as suggested above, regretted having to leave school to care for the (to them) unnecessary and burdensome stream of additional siblings that arrived in these families at all too regular intervals. Moreover, they saw the misery and strain that large families and many births meant for working mothers. These emotions stayed with them and prompted their identification of another area that needed reform: maternity and maternal care. Some campaigned for the controversial right to limit family size though most thought this best done through abstinence. Others fought for family allowances which would give mothers the resources to raise their children, and yet others sought to improve the health and wellbeing of women in pregnancy and childbirth by developing mother and baby clinics and improved obstetric services. Andrews, for example, used her influence within the Labour Party to argue for the development of formal training for midwives and the 1918 Maternity Act. These women brought issues that were beyond the male sphere into the public arena, many of which related to the health and wellbeing of children. In this way educating women, then as now, had profound social implications that were undoubtedly beneficial to all.



View from the Uppsala Botanical Garden. Photo: Annica Alvé.

The Role of Education Policy in the Experience of Teaching

A Sociocultural Perspective

Jim Ryder (2017)

School teachers experience continual policy reforms that seek to influence their professional practice. In this contribution, I explore these 'levers of change' using a sociocultural perspective on teaching. This perspective draws from broader conceptions of human activity and meaning, making in society as an interplay between individual agency and social structures. Agency focuses on the goals and choices of the individual. Social structure captures the role of social interactions, formal institutions and policy settings. The sociocultural perspective emphasises the complexity of teaching. Teachers are navigating powerful, and continually shifting, social, institutional and policy structures in their daily workplace activities. I explore these themes of teacher agency and social structure by drawing upon examples from two studies of teachers' experiences of policy reform, one conducted in England, the other in Sweden. Both studies involved longitudinal interviews with teachers of science as they navigated complex structures of curriculum and assessment reforms. Overall, this analysis emphasises the complexity of teaching, but also how an understanding of this complexity can lead to the design of effective ways of supporting teachers' work through policy reform. Suggestions of positive ways forward include ensuring coherence across multiple policies and requiring the exercise of local flexibility in the enactment of teacher development policies.

Education policy and the teacher

Education policy has been characterised as 'the authoritative allocation of values' (Kogan, 1975). Thus, a national or state-wide policy to teach and assess socio-scientific issues (such as climate change or the treatment of genetic

diseases) within compulsory schooling carries both authority (school leaders and teachers are expected to 'follow' the policy) and values (someone believes that this is an important thing for all young people to learn about, and perhaps act on). The policy is 'allocated' in that those working in school have not necessarily been involved in deciding that this is an area of the curriculum that needs to be made compulsory, even if many may agree with this as an emphasis. Developing the frame of 'policy' more broadly (i.e. beyond education settings) Colebatch (2009) emphasises how policy involves decisions about what gets noticed, what is seen as important, agenda setting, statement of goals (what we are trying to do), and (crucially) allocation of resources such as funding and sustaining organisations to support/monitor the 'implementation' of policy.

Furthermore, because science education has many stakeholders there are many education policies and these policies often change as stakeholders (and their authority) shift over time (Fensham, 2009; Ryder & Banner, 2011). In the case of science education different stakeholders might emphasise: encouraging students to choose science or engineering courses at university (professional scientists and engineers); developing students' ability to think and act creatively to solve problems (employers); develop an interest in, even a passion for science as a subject (scientists, science teachers); attaining good grades in high-stakes attainment tests (politicians, students, parents). Thus, teachers are responding to multiple policies, often all at the same time. This can result in tensions, but also alignments, as explored later in this paper. Furthermore, experienced teachers often report a sense of 'policy cycles' in which old policies came back again after a period of time:

I sense the education pendulum here, I do sense it, and I think we've moved away from [subject matter knowledge] but I just sense it will come back again (Ryder & Banner, 2013, p. 505).

Similarly, a recent newspaper blog reported a teacher of English in the UK reflecting:

Every new initiative in education is a reaction to what has preceded it. We had no coursework, then 100% coursework, then a gradual slimming down, until we got back to where we started: no coursework. We had "chalk and talk", then group work, then developing ideas through discussion, now we're at entertainment through PowerPoint (which is just a technologically impressive form of chalk and talk). English language examinations began with comprehension, analysis of grammar and *précis*, then became focused on creative processes,

allowing students time to write at length with bare stimulus, now we're back where we started. What goes around has come around.¹

Teachers report these constant policy cycles as frustrating (given the time and resources involved in changing as a teacher) and also leading to (arguably understandable) cynicism and unwillingness to respond wholeheartedly to policy shifts.

Thus, education policy plays a key role in shaping teachers' practices. However, policy rarely (if ever) dictates the detail of teacher practices. There is no such thing as a 'teacher-proof' education policy. Rather, teachers are agents of change rather than objects of change. Teachers have an essential role in enacting policy within their specific local settings. In other words, teachers need to 'make meaning' of education policy. To better understand this process of policy enactment we turn now to broader conceptions of meaning making in social life.

Teaching: A sociocultural perspective

The sociocultural perspective conceives of human activity and meaning making in society as an interplay between individual agency and social structures (Wenger, 1998; Wertsch, 1990). Agency focuses on the goals and choices of the individual. Social structure captures the role of social interactions, formal institutions and policy settings. However, agency and structure are not seen as fixed, separate or in opposition. Rather, each constitutes the other in a duality: 'a single conceptual unit that is formed by two inseparable and mutually constitutive elements whose inherent tension and complementarity give the concept richness and dynamism' (Wenger, 1998, p. 66). For example, an individual's choices are in part shaped by social and institutional contexts; conversely, social interactions in society are constituted through the goals and values of individuals. Working from Giddens (1984), Sewell (1992) develops a theory of structure that emphasises the role of human agency and the potential for change, providing tools of particular relevance for an analysis of teachers' responses to policy reforms. He distinguishes 'resources' (i.e., sources of power in social life) and 'cultural schemas' (i.e., internalised processes or norms). In a school setting resources include teacher knowledge, school buildings and classrooms, curriculum and assessment policies. Schemas include routines of school life, teacher-student au-

¹ Secret Teacher: An invasive alien species is taking over education, The Guardian Online, November 2016. http://gu.com/p/5cxtv?CMP=Share_iOSApp_Other

thority relations, and perceptions of the purposes of education. Crucially, resources and schemas are seen as ‘mutually sustaining’ over time. However, they can be subject to change. Thus, for Sewell, human agency becomes ‘the actor’s capacity to reinterpret and mobilise an array of resources in terms of cultural schemas other than those that initially constituted the array’ (p. 19).

Applied to school science teaching the sociocultural perspective emphasises how teachers are navigating shifting continuities and contradictions within a powerful network of personal goals, social, institutional and policy structures (Ryder, 2015). For example, Kim, Tan & Tanlaue (2013) examine teachers’ experiences of a science curriculum reform in Singapore that emphasised ‘enquiry-oriented pedagogy’. This ‘progressive’ reform was perceived by many teachers in their study to contradict the strong focus on high stakes national testing of more ‘traditional’ academic student learning outcomes, leading to teacher anxiety and struggle. However, the process of reform enactment is not necessarily problematic for teachers (Coburn, 2004). Several studies include cases in which navigating the contradictions associated with an externally imposed policy results in enhanced motivation and a strong sense of personal development for teachers, e.g., Milne, Scantlebury, & Otieno (2006). These studies demonstrate that forms of teacher agency are strongly linked to structural characteristics (i.e. resources and schema) within specific social, institutional and policy contexts. It is worth emphasising that teacher agency is not seen here as the same as teacher *autonomy*. The latter suggests that teachers’ practices should be shaped largely by the individual teacher based on his/her personal perspectives on teaching; ‘teachers should be given the freedom to teach’. However, as illustrated with examples later in this contribution, *agency* emphasises an ongoing process of teachers actively shaping their practices drawing upon their personal perspectives but also responding to broader features of the complex social and institutional context of teaching (Priestley, Biesta, & Robinson, 2015).

Examples from studies of teachers’ responses to policy in England and Sweden

Here I explore themes of agency and social structure in teaching by drawing upon examples from two studies of teachers’ experiences of policy reform, one conducted in England the other in Sweden. In 2006, a new national science curriculum for 14–16-year-olds was introduced in England. The reform emphasised the teaching of socio-scientific issues and the nature of science, alongside the more traditional focus on canonical science knowledge and

skills. The outcomes of this reform were examined as part of a three-year longitudinal study conducted at the University of Leeds: the Enactment and Impact of Science Education Reform (EISER) study. This included a designed sample of 22 science teachers from 19 schools in England who were each interviewed consecutively over three years to explore their experiences of the reforms (Ryder & Banner, 2013). The second study, conducted by colleagues at Uppsala University, explored the experiences of school science teachers as they enacted multiple curriculum and assessment policy reforms in Sweden: national curriculum reform and local grading (for all subjects), and (within science) national tests at Y6 (students aged 12–13 years). Two individual interviews separated by 6–9 months were conducted with each of 13 teachers from 10 schools (Ryder, Lidar, Lundqvist, & Ostman, manuscript under review).

Theme 1: The significance and interplay of agency – structure

The following teacher, from the Swedish study, identified her personal goals in teaching as ensuring that students have ‘fun’ in science lessons and that they work for intrinsic rewards such as gaining and supporting their interest in the subject. However, she saw the national testing and grading policy at Y6 as working against her personal goals, resulting in a clear contradiction that she is struggling with:

I am so scared [for my students] because my colleague out there talking about the grades, like “this is what you must do”, to use them as a motivation thing [with students]. And I have not even mentioned the word grades [to my students]. Instead I have said I want you to think about this (...) that you really write so that you understand the experiment when you read it in six months or so (Sweden_T9).

Here we see aspects of both teacher agency and social structure. The personal goals of the teacher are clear and she is active in promoting these through her activities with young people in her classroom. However, the exercise of this agency involves navigating her way through broader structural features of her work context: social interactions and institutional norms and expectations (other teachers in her school talking about ‘what you must do’); and the expectations of the policy itself – the requirement to give students grades for their work. This teacher’s response to these contradictions is both affective and strategic. She described herself as ‘scared’ and ‘terrified’; these experiences had significant personal consequences for her. However, she worked to maintain the primacy of her personal goals by subverting and de-emphasising the process of grading with her students.

Turning to the English study, the following teacher talks about an alignment of policy reforms in the national science curriculum with initiatives specific to his school (a school-wide focus on skills for students aged 11–14 years across all subjects):

So the whole skills thing is really a big thing in [this] school and we're just bringing in a Key Stage 4² passport where they have to hit certain skills before they can move to Key Stage 4. So the whole discussion thing, and other things like that [within the new science curriculum] is kind of what we're trying to push being taught more anyway (England_2B).

This coherence between an aspect of the national science curriculum policy reform and a local school policy on skills was an enabling and supportive feature of the policy structures within which this teacher was exercising his agency.

Theme 2: Policy reform as an impetus for change in the traditional practices of schooling

One of the outcomes of the reforms in England was a reduction in the amount of practical work in the classroom compared to before the introduction of the reforms in 2006. In part this followed from spending more classroom time on discussions and debates about socio-scientific issues and the nature of science, as required by the new national curriculum. For the following teacher, this also involved re-examining the pedagogical purposes of practical work:

I think it has caused me to re-think why you do practical work. I think in the past you just, 'oh I'm going to test this leaf for starch because that's what you do', but at the end of it, 'why are you testing it for starch when you've just told me actually the plant makes sugar?' (...) It just makes you think again, 'Why am I doing this practical and what am I hoping they're going to get out of it?' rather than just do the things that traditionally you've always done (England_4A).

Here then the authority of the curriculum reform (as a source of power in social life) led to a re-examination of what is, for many science teachers a defining feature of school science teaching: practical work. Practical work has the characteristics of Sewell's 'cultural schema': an internalised, taken-for-granted norm or routine in the social life of schools. However, the impetus of the curriculum reform, focussing on debates and discussions, here led to an explicit focus on the purpose of practical work, bringing this

² In England: Key Stage 3 (11–14 years old); Key Stage 4 (15–16 years old).

school tradition into explicit focus and (potentially) re-shaping it to new cultural schema.

The following example from the Swedish study shows how the impetus for change provided by education policy reforms can result in significant new social practices within (and between) schools. The Swedish reforms required national tests to be marked locally by teachers. However, there was no clear statement on how this should be done. This resulted in a wide range of different approaches devised by individual schools, and in some cases groups of schools. The following teacher describes how the need to mark national tests locally resulted in productive teacher collaboration in her school:

There are very good educational discussions when we mark together. It is a very good skill to sit together and think about how important this is and discuss what to follow up in class. It feels good with the national tests in that way. But perhaps it is not really the main purpose of the tests, I do not know, but it is certainly a result of them which I think is good (Sweden_T3B).

Other teachers referred to productive collaborations between teachers from different schools within a municipality, again as a result of the need to devise local approaches to the marking of national tests. Following Sewell, the policy of local marking became a 'resource' that led to enhanced teacher agency and a shift in forms of social interaction within these schools. An important feature of the reforms that enabled this outcome was the flexibility in how these compulsory tests were marked. This flexibility supported, indeed required, local teacher agency.

Theme 3: The extended practice of teacher agency and its distinction from teacher autonomy

The following reflections from a teacher in England highlight several features of the practice of teacher agency:

I think we've all been scared to [teach about socio-scientific issues using discussions]. When we've done it most of us have enjoyed it (...). We also need to talk more to history and other subjects (...) about that type of teaching. I taught [Religious Education] last year, partly to do that, and I really learned a lot from that. It was such a change to have a lesson where it was all about the thinking and not about the learning facts. A huge difference. It felt like I was cheating. It felt like I wasn't teaching because they didn't have to learn loads of things (England_10A).

This teacher had a doctorate in science. She had a strong identity as a scientist who teaches science. Teaching about socio-scientific issues, as required by the national curriculum reform, challenged that identity. However, this

challenge resulted, for this teacher, in an impetus to engage in new practices (e.g. teaching Religious Education, talking to teachers of history about the pedagogy of discussions in the classroom) with the intention of learning about new approaches and changing her own classroom practices. This process was challenging, time-consuming and 'scary'. However, ultimately there were positives for this teacher: 'when we've done it, most of us have enjoyed it'. The example also illustrates a distinction between teacher agency and teacher autonomy. The latter suggests that teachers should be left to make their own decisions about pedagogy in the classroom. With such autonomy, it is unlikely that this teacher would have used discussions in her science classroom. As stated earlier, for Sewell, human agency is 'the actor's capacity to reinterpret and mobilise an array of resources in terms of cultural schemas other than those that initially constituted the array'. Although not the focus of data collection in the research study, we can imagine this teacher actively reinterpreting 'discussions' from contexts of Religious Education and history into the science classroom, resulting in new forms of science pedagogy that potentially can become new 'cultural schema' in the science classroom.

Theme 4: Differing expressions of teacher agency

Drawing from the Swedish study this section illustrates differing expressions of teacher agency in response to external reforms. The examples again demonstrate the distinction between teacher autonomy and teacher agency, and the active and extended process involved in expressing agency in a complex policy environment.

The following teacher described the assessment reforms as overly prescriptive. As a highly-experienced teacher she had established traditions (e.g., using individual student development plans) and personal values (e.g., promoting student co-operation in the classroom). She experienced the assessment reforms as a process of domination over her traditions and values:

Twenty-one tests for me to correct and to know how to teach during the spring semester in [Y6]. This no other category of worker in Sweden would do. No dentist would agree to this, for example (Sweden_T8).

Elsewhere this teacher talked about asserting her 'freedom' to not assign an 'F' grade to a student. Here we see the exercise authority; this teacher has authority over the detail of her work as a marker. The following teacher reported similar views, also positioning teachers against other occupations:

It's about a check on us. I do not think that raises the status of the teaching profession, but there must be a belief in us in our profession. It is we who are educators. I find it hard to believe that they would introduce this kind of control on what doctors do (...) I feel attacked (Sweden_T6).

For both these teachers the externally imposed assessment reform resulted in a loss of agency that challenged their sense of professionalism.

However, other teachers in the Swedish study appeared to welcome, or even seek out, external guidance over their work:

Yes, the national tests are surely what is good. There is still something concrete where one can see: "Yes, what is it they [government policy makers] want?", because it's pretty sketchy in the curricula (Sweden_T1B).

What is in focus, and what they are looking for, simply put? How do they want you to think about teaching? (Sweden_T10).

These teachers appear to transfer authority over aspects of their local work practices to external policy makers (Donnelly, Buchan, Jenkins, Laws, & Welford, 1996). Their work appears to be dominated by the policy, with teacher agency strongly shaped by the detail of imposed policy structures. They appear to seek framing discourses of what others value to inform their practice. By contrast the following teacher referred to both external guidance and teacher agency:

National tests, then there are examples of tasks on the National Agency for Education. You use them more to see the level, areas and so. You work from them in various ways. So that's how you are affected by national tests. You know what is important and then you try to steer the teaching to what you might not previously have emphasised (Sweden_T4).

This teacher accepted the authority of external reforms to guide her work, i.e. she saw herself as responsible for the enactment of government policy. However, at the same time she identifies herself as a source of what is valued ('you know what is important'). She also describes her role to 'work from them in various ways', i.e. to 'reinterpret and mobilise' (Sewell) the reforms in her working context; a strong exercise of teacher agency.

The five teachers above provide differing expressions of teacher agency in response to external reforms. These can be seen as representing different emphases in terms of accountability to external policy and local autonomy. Teachers 6 and 8 identify an emphasis on accountability to external policy resulting in a strong sense of deprofessionalisation and loss of agency. By

contrast, Teachers 1B and 10 place the emphasis on seeking external framing discourses to shape their practice, thereby de-emphasising local autonomy. By contrast, for Teacher 4 agency involves explicitly and proactively seeking to practice a balance between accountability to external policy and local autonomy over her work activities.

Implications for education policy development and enactment

The analysis above suggests features of policy contexts likely to support teachers in engaging effectively with external education policy. The starting point is to recognise 'policy' from a teacher's perspective. Take the example of the introduction of socio-scientific issues within a national curriculum. Teachers are, in some way, responsible for responding appropriately to this curriculum reform. However, at the same time, they are also responsible to the many other reforms and stakeholders within education. Thus, teachers need to introduce approaches to teaching socio-scientific issues in their classroom, but in doing so they need to take account of how such teaching relates to national inspectorate expectations, its impact on student attainment as monitored both within school and also via national examinations (are socio-scientific issues represented in these examinations, and if so, how?), how different students respond to such teaching and how all of this activity relates to their personal beliefs and goals as teachers. Given this complexity, policy contexts should seek coherence across distinct policies (Oates, 2011). Those responsible for developing policy reforms should ask how an individual reform interacts with other reforms being experienced by teachers. Pursuing our example of socio-scientific issues, policy makers could ensure that socio-scientific issues are recognised as valuable by the national school inspectorate and that socio-scientific issues feature appropriately within national examinations.

The potential to exercise local flexibility in the enactment of policy reforms is crucial. Each individual teacher is working in very different social-institutional and policy contexts. There may be commonalities across external contexts, but variation soon emerges within internal school contexts and further still within the personal biographies and beliefs of the teacher. In principle, all teachers cannot enact a curriculum reform in the same way. Good teaching involves enacting the core features of the curriculum reform but adapting these as appropriate to local contexts. Detailed, authoritarian curriculum texts leave little room for local adaptation and therefore constrain teacher responses (Wallace, 2012). What is needed is an

over-arching policy, with core principles, but with sufficient scope to enable the exercise of local flexibility. This enables teachers to adapt reforms to their distinctive local school context whilst also retaining core elements of a system-wide policy (Squire, MaKinster, Barnett, Luehmann, & Barab, 2003). Such flexible policy elements have the properties of 'boundary objects', supporting meaning making between distinct communities of practice (Wenger, 1998).

A further message for policy makers is that they recognise the potential role of 'policy mediators' in the enactment of policy within school communities. Policy makers should identify, and provide resources for, mediators who can act as intermediaries between policy and school communities (Lander & Osborne, 2008). Crucially these mediators need to take on a genuine two-way process of brokering, rather than acting as 'advocates' of external reform.

Conclusion

It is crucial that policy makers recognise that the form and content of their policies, and the genre of associated policy texts, carry implicit messages about the role of teachers in policy enactment. Based on the outcomes of empirical studies, it is argued here that policies aimed at supporting professional learning need to promote an appropriate balance between responsibility and autonomy in science teachers' work. Features of policy contexts likely to support this balance include: recognising the multiple policies to which teachers are responding; seeking coherence across these policies; enabling (indeed requiring) the exercise of local flexibility in the enactment of teacher development policies; and building structures that encourage teachers to take control of their professional development. Teachers can be encouraged to take control of their enactment of policy; working against a focus on external monitoring of teachers, towards a 'social contract' model in which teachers actively exercise responsibility for societal demands on their role in schools. Overall, whilst it is important to consider the detail of teachers' knowledge and skills as enacted within the classroom, greater consideration needs to be given to the broader social and political contexts of their work.

The 2013 yearbook of the Consortium of Institutions for Development and Research in Education in Europe (CIDREE) provides an overview of policy contexts in 13 countries across Europe (Kuiper & Berkvens, 2013). The yearbook editors describe the outcome as 'a curricular smorgasbord' (p. 14) of different, and shifting, regulation and de-regulation policy con-

texts. In some countries, there is a shift towards stronger 'output' regulation via national assessment policies. Other countries are introducing stronger 'input' regulation via highly prescriptive curricula goals and content. Most countries make policy reference to the centrality of teachers, but the degree of 'space' for local teacher autonomy designed into curriculum reforms varies widely. Interestingly, given its common policy positioning as a 'high performing' educational system, Finland is identified as having a distinctive policy context that emphasises:

... intensive cooperation between national and local levels with teachers in the key role as experts, trust in teachers and local authorities, and engaging stakeholders in a productive dialogue in order to create and maintain a balance between the national core curriculum, local curricula and school-specific learning plans. Finland does not have educational control systems like a school inspectorate or national achievement tests covering entire age groups. Instead, school self-assessments and sample evaluations inform curriculum enactment and improvement (p. 10).

Here we see many of the features of policy contexts to support teachers advocated in this contribution; there is balance here between responsibility to multiple stakeholders and local teacher autonomy. This provides a positive message and the realisation that it is possible to work towards many of the suggestions here, along with the motivation to do so.

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Inauguration of professors in the University Main Building in Uppsala. Photo: David Naylor.

Appendix 1

Honorary Doctors at the Faculty of Educational Sciences 2004–2017

2017

- Ryder, Jim, FDhc, Professor, United Kingdom

2016

- Corsaro, William, FDhc, Professor Emeritus., Indiana University, IN, USA
- Humphries, Jane, FDhc, Professor, All Souls College, University of Oxford, United Kingdom

2015

- Kress, Gunther, FDhc, Professor, the Institute of Education, University of London, United Kingdom

2014

- Goodwin, Marjorie Harness, FDhc, Professor, University of California, Los Angeles, CA, USA
- Mitch, David, FDhc, Professor, University of Maryland, Baltimore, MD, USA

2013

- Karsten, Lia, FDhc, Dr., University of Amsterdam, Netherlands
- Le Roux, Brigitte, FDhc, Professor, Université Paris 5 René Descartes, Paris, France

2012

- Aasen, Petter, FDhc, Professor, Norway
- Lindberg, Carl, FDhc, State Secretary, Teacher

2011

- Hoikkala, Tommi, FDhc, Professor, Finnish Youth Research Society, Helsinki

2010

- Hargreaves, Andy, FDhc, Professor, Lynch School of Education, Boston College, MA, USA

2009

- Saint Martin, Monique de, FDhc, Professor, École des Hautes Études en Sciences Sociales, Paris, France

2008

- Arnot, Madeleine, FDhc, Professor, University of Cambridge, United Kingdom
- Davies, Bronwyn, FDhc, Professor, University of Western Sydney, Australia
- Smidt, Jon, FDhc, Professor, University College in Sør-Trøndelag, Norway

2007

- Erickson, Gaalen, FDhc, Professor of Curriculum Studies, University of British Columbia, Vancouver, Canada
- Gold, Anne M., FDhc, Senior Lecturer in Education Management, University of London, United Kingdom
- Hopkins, Charles, FDhc, Professor, York University, Toronto, Canada
- Roberts, Douglas, FDhc, Professor, University of Calgary, Canada

2006

- James, Carl E., FDhc, Professor, York University, Toronto, Canada

2005

- Callewaert, Staf, FDhc, Professor Emeritus, Aalborg University, Denmark
- Langer, Judith A., FDhc, University of Albany, NY, USA

2004

- Biesta, Gert J. J., FDhc, Professor, University of Exeter, United Kingdom
- Hertzberg, Frøydis, FDhc, Professor, University of Oslo, Norway
- Hägglund, Sven-Olof, FDhc, Senior Lecturer, Mälardalen University

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