Foreword

We have had so many 'turns' in the social sciences in recent years that one can come to feel quite dizzy. The spatial turn is one of them. And as in all such cases the theoretical movement can be taken up in a variety of ways of differing potential and usefulness. For some, the spatial turn has meant primarily the basic recognition that things vary from place to place. For others, it has meant really integrating an understanding of spatiality into the very processes and practices under investigation. This is a very much more demanding move, but its potential for innovation and for making novel contributions is correspondingly greater. It is into this second category that the present collection falls.

The nature of this contribution is threefold, at least. First, as Jane McGregor argues in her Editorial, thinking spatially means recognising the integral spatiality of things and processes and recognising too the difference that spatiality may make. If space is a product and a precondition of all our practices and engagements, then it is integral to the construction of the relations between us, to the blossoming, or not, of identities and to the potential for new futures that we are constantly laying down. In that sense, I believe, the sphere of the spatial also brings with it responsibilities, and the present collection points importantly to some of these. Second, I have always believed that theory is best developed, tested, moulded, through real practical engagement in the range of situations over which its claims extend. Bringing an approach, a theoretical framework, into a new field should not be a matter simply of application, as though one were laying down a template. It is an occasion for new thinking and enrichment. And third, the particular arena into which this collection takes the recent thinking around spatiality is one of crucial social importance. The intersections here, moreover, between what are called 'theory' and 'practice' could not be more real. The wide diversity of engagements presented in this collection represents a significant addition to thinking about space and I greatly welcome its appearance.

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Editorial

Space and Schools

This special edition of *FORUM* brings together teachers, architects, academics, educationalists and policy advisers with a common interest in issues relating to space and schools. Schools in much of the world are recognisable in the same way as other public/institutional buildings, such as churches or libraries, structured in particular ways and designed for particular purposes. The common physical arrangement of schools, with enclosed or open-plan classrooms, assembly halls, laboratories and playgrounds has such a taken-for-granted quality that we rarely question either the genesis or the effect of such orderings. Indeed, on entering such building we often recognise features, sights and smells at an almost unconscious level, so powerful may be the images and memories, as adults, of our own schooling.

The critical idea behind this special issue is that *space makes a difference.* Exploring the built environment and what it tells us about education and schooling is crucial. This is a relationship viscerally understood by the Heads and Governors of ancient ivy-clad and quadrangled independent schools, of Victorian three-storied inner-city institutions, or those in the flat-roofed and paint-peeling 1970s comprehensives. Thus does the physical architecture of schools reflect and maintain political, technological and social influences from wider society.

The difference between the enclosed space of 'egg-crate' schools (as one ex-teacher said '*nothing so private as a classroom'*) and the open-plan schools which thought they were embodying the more child-centred pedagogy of the 1970s is not simply a physical one relating to walls and doorways. Space is commonly thought of as a physical container for social life, a two-dimensional backcloth that may determine actions, but not *interact* with the social. The notion of social space is also a familiar one and the importance of '*my space'* (particularly amongst teenagers!) is often invoked.

In this issue space is addressed as more than either physical *or* social space, but as an *interaction* between the two. The concept of *spatiality* is introduced, as the social production of space and the meaning made of it. Hence, the spatiality of a year eight modern languages class in a mobile classroom at 3.00pm on Thursday will be different to a year ten maths class in the same room at 9.00am on Monday. If we look more closely we can see that the way space is organised in schools *produces* particular social relations. Rather than being an arena *within which* social relations take place, space is made *through* the social – it is enacted and so continually created and recreated. It is therefore critically important to examine how this occurs, not least because many of our most formative years are spent as part of such spaces, both influencing our behaviours and an awareness of such relationships. Let us begin by discussing the dimensions of physical and social space as they are commonly understood in relation to schools.

Space Understood as the Physical Environment

Considering that it is almost axiomatic that space as the physical environment of a school will affect the teaching and learning within it, there has been surprisingly little research on this in the UK. This mirrors the general neglect of physical environments in education over the last 25 years (Clarke, 2002). There have been various studies focussing on functional issues such as health and safety and more recently ethnographic work providing insights into the different ways boys and girls use space in schools (Gordon, Holland & Lahelma, 2000; Clarke, 2002) but there remains a paucity of evidence on the interaction of people and the built environment of schools. There are now indications of greater interest in the relationship between the physical environment and performance in the classroom, signalled by increased Government funding through initiatives such as 'Schools for the Future'.

Research (mainly in the USA) indicates that student academic achievement improves with improved building condition (Fisher, 2000). For example, the School Design and Planning Laboratory in Georgia detail 29 designs significantly related to student achievement. Desirable patterns include the entrance area as a friendly and age-appropriate space connecting the 'outside and inside world'; supervised private places for students; and public spaces such as media centres and common rooms that foster a sense of community, with attention paid to the influence on behaviour of the paint colour in classrooms. Such behaviourist studies, while useful for certain purposes, fail to explore critically the *interactive* relationship between physical and social space which is expressed as spatiality.

The role of the physical environment in teachers' work has also received little attention despite surveys of workplace conditions suggesting its importance. Studies rarely go beyond suggesting the need for more decent space in order to improve motivation and job satisfaction and to enhance teachers ability to work effectively. However recent empirical work suggests a relationship between architecture and collaboration. The arrangement of space has immediate and far reaching consequences for teachers ability to effectively and efficiently accomplish daily activities, the formation of social and professional relationships, and the sharing of information and knowledge' (Siegel, 1999, p. 4).

While 'the spatial turn' has had a considerable impact in social sciences generally, the significance of space is only recently becoming acknowledged in education. 'The school' as a building has evolved with strong commonalities across different physical locations and societies, reflecting the persistence of certain power relations and ideologies. In schools in the West, social, organisational and cultural architectures share more similarities than differences

through the timetable, structure of the curriculum and 'school rules'. The educational designers of the 19th century industrial elementary schools in Britain (from which the modern template substantially developed) identified the design and use of space to be as important in schooling as the curriculum or timetable. This relationship is explored in my article *Space, power and the classroom.* Yet, as several authors in this volume point out, despite considerable changes in society, the classroom remains peculiarly static.

Power relations are inscribed into the buildings and material practices of the school. In an historical analysis of the role of space in school as social production, Markus (1996) demonstrates how space in those 19th century industrial schools was organised to produce hierarchical relations based on strong ideologies of religion, order, surveillance, discipline, hierarchy and competition. They reflected, in microcosm, the new socio-economic relations, emerging in the rapidly industrialising wider society. Structures which were created in this way have been substantially reproduced without question in our schools over the last two centuries, keeping asymmetric power relations intact. This may be due to organisational and political inertia, notions of what constitutes relationships in schooling and, as Kenn Fisher and Sharon Wright argue, the separation of designer and user. Thus, the physical form of produced spaces (such as classrooms) expresses antecedent social arrangements and also predisposes current practices to emulate them (Jacklin, 2000).

Space Understood as Social Space

Space in schools is perhaps most obviously articulated through time, as displayed by the timetable which distributes bodies, resources and curriculum time. Such (remarkably common) patterns of organisation demonstrate the priorities of the institution, reflecting national requirements such as the National Curriculum, or Literacy Strategy and local pressures. They also illustrate competition for physical space, support staff and pupil time.

Social relations sediment into certain patterns over time, creating spaces in schools that are instantly familiar to most teachers, such as the staffroom. This is generally a distinctive space where professional culture and (gendered) power relations are played out. The importance of the staffroom in facilitating or obstructing different forms of social and professional interaction has begun to be documented and in the article *Power relations and staffroom spaces,* Carrie Paechter suggests relationships between power status and the curriculum as manifested through the *operation* of staffroom space. Spatial practices as obvious as seating arrangements can be 'mapped' to provide an insight into curriculum and staffing hierarchies and gender issues. Work on the relationship between the quality of professional learning communities and student learning also suggests that in 'high achievement' schools staff are more aware of the potential influence of staffroom interactions, for good or for ill.

The Spatiality of Schools

Spatiality is the production of space through the interaction of the physical and the social. This recognises that, while much of our world is constructed through social relationships, these are materially and technologically embedded. Thus, a relational understanding is developed where outcomes are not *determined*, but open to change. Individuals and groups use space to exert or express dominance – teachers over pupils, males over females, older children over younger. Many school rules are constructed around the spatial, determining the use of space by students (for example excluding them from areas such as the staffroom) or enforcing conventions around entry and exit rituals. Teachers draw on space to assert their authority, often through the control of movement, noise and even light in the classroom. This is fascinatingly explored by a drama teacher Duncan Patrick in the article on '*Space, power and the classroom'* as he describes the use of 'The Big Empty Space' to create a potentially more democratic environment than conventional classrooms with rows of desks. Of course, pupils may also use space to construct their own resistances, as in the smoking haunts or girls' toilets.

Spaces tell children a great deal about adult expectations and power structures. For example, in primary classrooms where pupils are often grouped by 'ability' on tables distinguished by names such as 'Hares, Rabbits and Hedgehogs' at KS1 and then 'Archimedes, Euclid and Babbage', at KS2 maths. This is a modern equivalent of place capturing. However, pupils are generally keenly aware of these distinctions, as Annabelle Dixon notes, coming to a '*rapid understanding of the educational hierarchy'* and acknowledgement of their probable future educational trajectories. Thus, the spatial and social reality of the average KS1 class for many is poignantly evoked by a child's statement in '*once a Hedgehog always a Hedgehog'*.

Pedagogies: teachers creating learning spaces

The relationship between teaching and learning and space is directly addressed in this issue by Kate Bagnall, Roger Hancock and Michaela Ross who facilitated a series of workshops '*Small Steps in a Big Space'* designed to develop the confidence and engagement of local people with very young children in Tate Modern. *Pedagogy in a Public Space* explains how the Gallery could be a stressful place if people were unsure of 'how they are expected to respond', or not having the 'right' answers. Rather than a formal transmission model of teaching in a lecture theatre or classroom, children and parents were encouraged to '*develop their own ways of looking'* through evolving a community of enquiry and response over time. This was encouraged by careful facilitation and movement around the gallery spaces. Michaela emphasised the importance of not being the expert with the 'right answer', but setting up situations where people in a group could make their own discoveries. This resonates strongly with the experience of the drama teacher Duncan Patrick in suggesting the potentially emancipatory possibilities of working with space in different ways.

The significance of situated learning and the social construction of knowledge is nowhere more important or apparent as in Early Years Education. Annabelle Dixon discusses the characteristics of different spaces in the school environment of young children which create expectations of, and limitations on, their experiences. In identifying the importance of large outdoor spaces and the indoor school hall she stresses the significance of building up an image of 'the-self-in-space' and 'self-in-relation-to others-space'

as a crucial social skill. While the scope for free and spontaneous movement becomes increasingly restricted with the constriction of the curriculum and tightening of the timetable in KSI, the restructuring of playgrounds may provide a wider variety of opportunities for different kinds of social interaction and learning. Spaces in the school may, however, be designed to meet perceived pedagogical needs for moulding particular outcomes, rather than catering for the developmental and physical needs of younger pupils. In *Space, schools and the younger child,* Dixon suggests that the current emphasis on pre-determined, teacher-led activities reduces children's opportunities to explore and make decisions as a group or as an individual. Hence, it affects the process of learning how to respond in spaces creatively, whether individually or collectively.

School and Society: the politics of space

In '*Breaking down the school walls'* Matthew Horne calls for the disruption of the physical and non-physical boundaries around schools, which, he argues, must become more open and welcoming to address the needs of the 21st century. He highlights the desirability of breaking down of barriers between the 'local' and 'global' community, whether through 'out of hours' education or distance learning through Information Communications Technologies (ICT). This challenge is taken up by Kirsten Hill in two portraits of 'out of school hours learning' taking place in Networked Learning Communities. These are new configurations of school groupings, designed to support collaboration between schools and to actively encourage collective enquiry, dialogue and learning at all levels of the school system.

Arguably it is the view of schools as discrete spatial and temporal islands, isolated from 'the outside world' that contributes to a culture of blame, where wider socio-economic and political problems are able to be recast as school, or even pupil problems (Nespor, 2002). A network, or federation, approach which supports the development of groups of schools is an important way of challenging the geographies of competition which have damaged so many relationships. This is a notion which is now gaining currency in policy circles, for instance, being part of a network is an entitlement for primary schools within the Primary Strategy.

Social space is clearly not neutral and apolitical and in a powerful article on a visit 'back to the future', Jenni Karlsson draws attention to the relationship of the school to the wider society and politics, showing us that school sites and spatial practices are used politically to produce particular situations. In *An Uneasy Future* she describes the privileged schooling of a white South African girl as experienced spatially in the stone buildings and wide corridors of the well-equipped institution, completely isolated from peers of other racialised categories. Today, in the post-apartheid era with notionally open-enrolment, the school in the study has invested in new buildings, sports facilities and improvements to the grounds. These enhance the prospect of attracting those who can pay the admission fees required for such capital-intensive refurbishment, thus contributing to a two-tier, class-based, public education system.

Teachers' Work with Colleagues

Schools are workplaces for adults, and the spatiality of their interactions is of considerable significance in relation to the possibilities for collaborative and collegial relationships and the learning that may 'take place' through them. A recent study of teacher interaction and collaboration in secondary schools identified the department or faculty as the primary location for interactions reported between adults (bearing in mind that around 40% of staff in schools are in crucial support roles) with the department office cited as the most important 'place' for these interactions (McGregor, 2003). Teachers in England and Wales spend an average of 44% of their working time in contact with pupils. What teachers do in that time is significantly affected by their colleagues through the learning that emerges from patterns of interaction, whether encouraging mutuality or individualism.

An in-depth study by practising campus architect Janice Bissell, looked into the deeply rooted images of teaching embedded in most school designs and embodied by cellular classrooms with the teacher's position (with dais and data ports) securely at the front. She found that for all teachers, the 'physical classroom' was the basic component of their daily work activities but those individuals characterised as traditional and non-traditional in their pedagogic orientation used the spaces in different ways. 'Non-traditional teachers' were more likely to modify the classroom to produce what they believed was a more effective working environment (e.g. through displays and alternative furniture arrangements). In this study they were also more likely to collaborate with colleagues in the staffroom. She makes a series of recommendations for investigating the complexity of the teacher's workplace beyond the classroom, concluding that '*architects do not create learning environments, teachers create learning environments'*.

Why is it Important to Understand that Space Makes a Difference?

If we see space as not pre-given, static or completed, then we must acknowledge that it is *relational* and always in the process of becoming. In her influential work Doreen Massey (1999) uses the term *space-time* to emphasise the dynamic interrelations which comprise space. Social relations and processes do sediment into certain patterns, reflected in persistent physical and organisational (and power) structures such as the individual classroom. However, if we take the perspective that schools are particular configurations of *socio-spatial relations,* we see that they are also therefore being continually *remade*. An understanding of this openness is crucial in imagining possibilities of reframing power relationships in the process of education.

Our lack of perception and understanding of how space makes a difference in relation to schools and education is a barrier to understanding and democratic relationships. Space is not a neutral untidy backdrop to adult and pupil interactions, it is (re)created through politics and ideology. However, the familiar and taken-for-granted architectures of schools feeds into our lack of awareness of the workings of spatiality. Seeing space as actively constructed and created through materially-embedded practices provides

the opportunity to play closer attention to relations of power and the openness to challenge them.

So What?

As adults we may have forgotten the delights and mysteries of space and place. Architect Kenn Fisher found 'a deep spatial silence' and sense of disembodiment amongst the teachers and students of the school he studied. He highlights the fundamental importance of spatial literacy, built up in formative years in schools, and influenced by space as a hidden curriculum. In '*Revoicing Classrooms: A spatial manifesto'* he outlines the means by which critical pedagogy suggests the transformative potential of investigating the spatial – with students and teachers collaboratively developing vocabularies to discuss it, thence co-creating learning spaces.

Several articles in this special issue point to the importance of converting existing schools to make more sense in 'the knowledge age' of distributed learning and multiple intelligences. This does not necessarily require 'high tech' solutions, which may indeed inhibit the power of collectivity. We know that the social is a major component of learning and in education it is crucially important to use that knowledge base to inform the development of our schools.

More radical possibilities are shown in the School Works project where the process of *participation* in the redesign and rebuilding of schools has been demonstrated to act as a catalyst for change. This is a not-for-profit company, set up in conjunction with the Architecture Foundation to link the design of secondary school buildings with their impact on school culture and teaching and learning. School Works encourages young people to *actively* participate in the process, thereby *enacting* citizenship, rather than teaching it through transmission. The collaborative rebuilding process offers opportunities to re-engage students with learning and potentially evolve an '*architecture of resistance'* to question existing patterns of schooling and school design. It engages communities in collaborative investigation and making of meaning around what they want from education.

It is chastening to realise that in this special edition the voices of students are largely second-hand, but through a major survey of what school children would prefer their schools to be like, the strength and wisdom of those ideas are suggested by Helen Barrett in a book review of '*The school I'd like… Children and Young People's Reflections on an Education for the 21st century'*.

Investigating space, and the interactions that comprise it, is a generative project for students working with adults but also as researchers in their own right (see Special Issue of *FORUM*) and organisations such as School Works and Learning Through Landscapes are making available the tools to facilitate this. One particularly fertile area being image-based research, where pupils are given cameras and asked to photograph and then discuss the areas of the school they find inviting or threatening or draw 'mental maps' of the meaning that different parts of the school have for them.

Finally, Helena Campion offers cause for optimism in her article on the government sponsored '*Schools for the Future'* project. Her analysis brings together issues of emerging pedagogies and curriculum change and the possible impact of learning technologies. She argues that the Oracle studies illustrated that over a period of 25 years the appearance of change in pedagogy was largely an illusion, perhaps created by constant 'initiatives' which, however, leave the basic spatial architecture of 'the classroom' untouched. Simply changing the furniture, or bringing in Information Communications Technologies does not, however, mean that pedagogies or learning experiences will necessarily change. Significant 'design drivers' were, however, found to be inclusion, teacher collaboration and the application of learning technology.

Conclusion

Schools are important arenas for the study of spatiality as activities are intensely structured by space-time**.** The study of spatiality (as space-time) is also important in relation to schools – in highlighting power relations between groups such as staff and pupils, and the hierarchy of curriculum status reflected in the timetable. A spatial approach to exploring relationships presents the possibility for illuminating the dynamics of class (and staff) room relationships in a form accessible to adults and young people alike, thereby developing a 'spatial literacy' which is alive to the possibilities of different and more democratic relationships. The notion of 'learning spaces' and 'spaces of dialogue' are increasingly employed to identify such possibilities, where (situated) learning has the potential to transform relationships. The term *space* should thus not simply be understood metaphorically, but as a pointer to the materially-embedded social relationships which form the skein of our lives. Such spaces are not pre-given and finished, but dynamic and open to political change. This special issue of *FORUM* brings together some of these concepts and examples to provide new insights into the importance of exploring space and schools.

Jane McGregor

Breaking Down the School Walls

MATTHEW HORNE
Matthew Horne is a Senior Researcher with Demos, a leading independent think tank. This article accompanied the Education Foundation's 2002 Summit: *No More Bored Kids: Real Alternatives for Public Schools*, Melbourne Town Hall, Victoria, Australia.

A school system that was designed in the 19th century and evolved during the 20th century is no longer capable of meeting the demands of modern society. Schools do not fit the world around them and as a result we have too many 'bored kids' who find greater levels of engagement elsewhere. Schools cannot meet the expectations of the modern world unless they tear down the school walls and make better use of the learning opportunities that surround them.

Like most institutions, schools have surrounded themselves with physical and non-physical boundaries. Perimeter fences have long been used to keep the public out. Following the Dunblane shooting, schools all over the UK locked their doors, installed CCTV, invested in entry phones, hired security guards, and put up higher fences. We are all safer now, but we are also counting the cost of this reaction

The strongest imperative for opening up schools lies in the classroom itself. For too long children have been expected to learn in a context divorced from the world in which their knowledge may actually be put to use.

Bringing the outside world into the classroom is essential if we are to motivate stimulate and engage our young people. Also, making school relevant to the experiences of children in the real world is the only way to ensure that they create meaning of the knowledge that they acquire. Schools should strive not just to create knowledgeable young people but people who know how to use and apply their knowledge in a way that is meaningful and valuable to them beyond the formal setting of the examination hall.

The drive towards a more vocational curriculum and more work-related learning are ways of achieving these aims. The Internet, video conferencing and other distance learning technology also provide access to a diverse range of external knowledge sources within the classroom.

Turning schools into fortresses is to deny ourselves the opportunity to influence our wider environment. Creating social cohesion is an enormous challenge in a world where stronger relationships form between people on either side of the world than between next-door neighbours. Developing a sense of connectedness, of commonality, of shared values and beliefs is crucial to creating healthy local communities, but so too is ensuring that those communities are tolerant, welcoming diversity, open and dynamic is an enormous challenge for institutions like schools. Schools can be part of that process and help overcome the trend towards isolation and individualism that permeates everyday life if they are open and welcoming. Parents need to meet other parents and talk about their experiences of bringing up children.

The relationship between parent and teacher is also essential to improving the learning of all children. After all, between the ages of 0 and 16 young people only spend 15% of their waking hours in school. Most of their learning takes place within the family. A truly personalised education system must be founded on the principle of co-production – parents and students must actively participate in the processes of teaching and learning.

In the UK there have been concerted attempts to break down the walls dividing school and community by increasing the level of 'out of hours' education that schools provide. Most of the extra provision has been targeted at schools in deprived areas where parents struggle to provide a range of learning opportunities for their children. Summer literacy schools, Saturday schools, after-school clubs, breakfast clubs, revision days, and catch- up lessons are now a common feature of inner-city schools. Much of this is funded outside of mainstream budgets and is yet to be fully integrated with the rest of the school. Another way to achieve this aim of breaking down the walls is to provide educational opportunities at the school for adults. Family literacy classes have proved an effective way of improving the reading and writing of children and their parents but the scale of this activity is low.

Few schools see their task as educating adults as well as children. One exception is an English school in Sutton-in-Ashfield where there are more adult learners than school age children. Innovative planning and architecture in the 1960s created a school where adult education classes take place next to classrooms full of young children throughout the day and into the evenings. The culture of learning and personal responsibility that exists within the school is rare especially in such challenging circumstances. The school was part of an architectural scheme that located a range of public services on the same site thereby connecting school and community in a unique way. The school site hosts a community sports centre, ice rink, day centre for the disabled and probation service. The architecture was visionary but the test is always making it work in practice. Simply locating different professions in the same building does not mean that they will meet and share knowledge regularly, or develop joint strategies or collaborative working practices.

Despite the difficulties with the practice, throwing open the doors of schools to the outside world is the only way that schools will survive in a world set to change at a faster and faster rate. Embracing the complexities and uncertainties of our changing future and utilising the untapped resources and opportunities that lay beyond the school gates is the first step towards a world-class school system.

Networked Learning Communities and Out of School Hours Learning: two portraits

KIRSTEN HILL
Kirsten Hill is a facilitator for the Networked Learning Group of the National College of School Leadership. Here she describes how networks of schools can create different spaces for learning.

The Networked Learning Communities programme from the National College of School Leadership (NCSL) was launched in Autumn 2001. By March the following year 150 Networked Learning Communities made submissions to the NCSL and 41 networks (from Berwick upon Tweed to Penzance) started in September 2002. Another 44 networks were approved for a January 2003 start.

From the outset it has been clear that the Networked Learning Communities (NLCs) have captured a moment in the tide of educational events. The government (now in its second term) is seeking to develop practice informed policy to stimulate innovation, to foster diversity, to promote informed professional judgement and to utilise practitioner knowledge for school and system transformation. At the same time the profession has become weary of a climate of competition, outside-in change programmes, normative improvement agendas and externally generated accountability systems. NLCs have arrived just at the time when there is a growing synergy between government and practitioner views that what is needed is a way to create space in the system for creativity, lateral learning and accountability, distributed leadership and the sharing of practice.

The Networked Learning Group (NLG) believes that Networks and Networked Learning are the key to this sort of large-scale transformation. Not only are Networks innovative and transformational in themselves, but their unique structure allows them to build capacity for change, raise attainment and improve the status of the teaching profession, and to respond continually to a rapidly changing educational environment. Increasingly, forward-looking institutions are aiming to move away from traditional, hierarchical structures that have become constraining and debilitating. Whereas multilevel hierarchies and strict borders are inefficient, Networks are multifunctional partnerships which are less about control than about harnessing creative forces that are already present within the system.

Each of the NLCs are made up of at least six schools (some contain up to 63!). Many of them are cross phase networks, and others are made up of schools from different LEAs. They are spread across England and constitute nine regional groups: North West, North East, Yorkshire and the Humber, East of England, East Midlands and West Midlands, London, South East and South West. Each region is supported by a team of facilitators, researchers and writers, who are collectively responsible for supporting network collaboration and action research, drawing theory from practice and producing materials based on practitioner enquiry. Beyond this the NLG consults networks of other organisations, such as Demos – a independent think tank which advises policy makers on education and social matters. It is hoped that this partnership will enable NLCs to influence broad, systemic change within the education system.

Penryn Partnership Plus NLC is made up of ten schools, nine primaries and one secondary, set in an area of high social deprivation in Cornwall. Rural poverty, crime and disorder are at a high level. Marie Hunter who is Headteacher at Penryn Community College, a specialist sports college, wanted the schools to embark on a project that would help the community and develop the skills of young people. As part of a programme of Out of School Hours activity, the schools have developed a series of leadership courses for pupils.

The day before the launch of the NLC, Penryn College suspended their normal timetable and assigned pupils to working in their vertical tutor groups for the day. Each of these multi-age groups created a learning artefact which was then presented to, and evaluated by, pupils and teachers from the network primaries. Everybody was energised by this process and on the following day at the NLC launch, all staff met to conduct an audit of the learning areas within and between their schools. Pupil Leadership courses have been designed which linked directly to specific curriculum areas: Music, Maths and PE. Training these young leaders in secondary school enables the NLC to strengthen its focus on leadership and pupil learning. One example is their 'Huff and Puff to Health' leadership course. As part of their GCSE work, young adults work with primary schools to organise healthy playground activity. They give assemblies in the primary schools to raise awareness about the programme, and give up their own breaks and lunchtimes to run it. This scheme enables the NLC to focus also on adult learning by involving a pair of cross phase teachers in the evaluation of the students' progress and resources. Now that there are leadership courses in many

curriculum areas, this has produced rich dialogues about teaching and learning between adult learners.

Marie Hunter is certain that this success could not have been achieved unless their schools had been involved in an NLC. Their joint work is supported both by their shared vision and mutual belief in the importance of the NLC, and by the structure of NLC Co-ordinator half termly meetings. Now leadership is distributed between pupils and adults. Children across the NLC are learning to look after themselves, each other, and their own community by devising and leading networked activities themselves. This year, there has been no incidence of youth crime in Penryn College.

In the East Manchester E-learning Community, students also volunteer to be part of Out of School Hours Learning. Initially run in response to pupil interest, and in partnership with the National Primary Trust, a particularly successful project has been set up whereby pupils attend hugely popular Saturday morning classes to learn about interactive whiteboards and integrated technology systems. The NLC's shared learning focus is transforming teaching and learning with ICT and pupil voice. These Saturday sessions provide an invaluable opportunity for both pupils and adults to engage with their network's shared focus. Year six pupils from schools in the NLC come together for extra training and interactive lessons, and are taught by a range of teachers who cover material beyond the year six curriculum. After the Saturday morning class, the pupils go back into their schools to share it with their fellow students and their teachers. They are not only able to lead special ICT classes in school, but also able to lead innovation teaching their teachers what they have learned.

This model of dissemination and whole school participation also characterises adult learning within the NLC. The sessions are held at a Network school and are run by staff, and ICT Innovators from NLC schools. There is one 'ICT innovator', who is not an ICT Coordinator, in each school who is given 1.5-3 hours per week non contact time and they take it in turns to host a network meeting every two weeks. Like their students, they share the knowledge created during the sessions with their colleagues. They also plan sessions together working in cross phase pairs, helping each other with lesson content, and producing a joint strategy that serves the Network's learning focus.

Jenny Williams from East Manchester EAZ who has co-ordinated the project believes it works because it produces a buzz amongst pupils and promotes dialogue between practitioners. Everyone involved gains confidence, expertise and accreditation, and they are able to make a positive contribution to their learning community. If they hadn't been a NLC, Jenny considers, talented teachers wouldn't have had the confidence to come forward and lead, there would not have been the interest, commitment, or enthusiasm which now enables everyone in the network to support each other and engage in inclusive dialogues about learning.

An Uneasy Future: spatial changes at one school in South Africa

JENNI KARLSSON
Jenni Karlsson is the Executive Director of the Education Policy Unit at the University of KwaZulu, Natal.
A journey 'back to the future' to her old high school illustrates the intense political significance of space, highlighted in South African education in the post-apartheid era.

Introduction

'The high school that I attended was the neighbourhood government school.' As benign as that statement may sound, in the context of South Africa where I grew up, it is pregnant with meaning. During the official years of apartheid (1948-94), government schools in South Africa served only racialised categories of people designated to live in the racially zoned areas where the school was located. Thus, as a daughter of a white family, living in a neighbourhood of only white families, I attended the local neighbourhood school where the principal, teachers and learners were all white. People of other racialised categories were only present in our daily lives as nannies, cleaners and gardeners, and at school in low ranking positions such as general and laboratory assistants. Throughout South Africa during the apartheid era, government schools were characterised by such mono-racial arrangements. This segregation carried through the education bureaucracy so that schools specified for one racialised category of learners were administered separately from others. The multiplicity of education departments organised school curriculums, examinations, and extra-curricular events for the race-specific schools under their discrete authority. The effect of this in the life of a learner was complete insulation from peers of other racialised categories. Throughout my twelve years of schooling in South Africa during the apartheid years I never once had the opportunity in a school setting to encounter any peers who were not white like me.

Fortunately, since 1994 those unjust education policies have been dismantled. By giving an account of the stark apartheid educational arrangements from a personal perspective I hoped to quickly convey the political nature of social space and that a school site, spatial practices and experiences of schooling, and even the space of school administration, are not neutral and apolitical – as we may have once thought. To deepen our understanding of how space can be used politically, an idea extensively argued by spatial theorists such as Henri Lefebvre (1991), in this article I discuss spatial developments that have taken place at my old high school since 1994, to consider how those changes point to the governors' and management's response to the post-apartheid political dispensation. Much of what I cover here comes from my doctoral research on apartheid and post-apartheid discourses in school space. My data are sets of photographs taken by four learners and me in 1999/2000, as well as some interviews and the school yearbook. To start, I offer a brief description of the school, drawn largely from my memory of the school in the late 1960s.

The Past

I will refer to the high school I attended by the fictitious name of Centenary High because it was founded in 1880, a time when the province in which it is located was the British colony of Natal and a centenary bell now proclaims the school's achievement. In the colonial period early settlers, concerned about the education needs of their children, had established several similar schools following their British traditions that included single-sex schooling. Thus, from its outset Centenary High had been exclusively for girls and, although it was a government school, it had offered tuition and educational facilities similar to privately-funded schools for the children of white settlers.

In the late 1960s when I attended the school, the former colonies had long been unified as South Africa, and apartheid policies of racial segregation were being rolled out in every nook and cranny of the Republic. Over 1000 middle and working class white girls from the central and southern suburbs of Durban enjoyed the spacious buildings of Centenary High's fully equipped classrooms, good laboratory and library facilities, a large assembly hall suitable for theatrical performances, a gymnasium, and refectory, surrounded by extensive sports facilities. Stone entrances and retaining walls, with driveways flanked by colonnades of tall palm trees overlooking the city harbour, gave the premises grandeur, while wide corridors, airy stairwells, strict dress codes and restricted access to certain areas of the building added a presence of gravitas within the school walls. Such was the privileged quotidian for white girls at government schools in South Africa at that time.

Since the colonial period, Durban has been a city comprising former English-speaking white settlers and immigrants of European origin, many people of Indian descent, most of whom were brought as indentured labourers to work for white sugar barons on their plantations, and IsiZulu-speaking blacks, the original inhabitants of the region. A comparison of national per capita education expenditure on white, black and Indian learners in 1969/70 shows that government annual spent R461 (about £35) on white learners, while funding for black learners was R25,31 (5% of white expenditure; about

£2) compared to R124,40 (27% of white expenditure; about £10) for Indian learners (South African Institute of Race Relations, 1992:195). The preferential funding of white versus black and Indian learners enabled the employment of more teachers in schools for white learners yielding smaller classes, better educated teachers for quality teaching, and more textbooks, equipment and learning materials for increased learning potential. Thus, the privileged schooling for a white South African girl was experienced spatially in the built environment of the school and in the minutiae of teaching and learning practices in classroom space.

Since I completed my schooling at Centenary High in 1971, many changes have occurred in South Africa, the most significant being the political transformation ushered in following non-racial democratic elections in 1994. Discriminatory apartheid legislation that compelled racially segregated schooling was prohibited by a national Constitution, which introduced democracy and a rights-based egalitarian approach to education. In 2000, almost thirty years after I left Centenary High, I returned to my former high school to examine how the new political dispensation of democracy and equal rights was taking effect within the school premises, and how decision-makers within the school were responding spatially to post-apartheid conditions.

Centenary High in 2000

Racial restrictions were softened in the early 1990s and then abolished in 1994. Thus, by 2000 only 48% of all Centenary High's learners were white girls from nearby middle and working class neighbourhoods. The remaining group comprised a cohort of 24% black, 22% Indian, and 6% coloured learners. They were either new residents in the neighbourhood or learners who commuted from other areas and townships on the periphery of the city.

Significant changes in the built environment had taken place since 1971 so that, as a researcher, I felt disoriented like a stranger entering an unknown school precinct full of unfamiliar faces, while I also experienced a strong sense of *déja vu* as I caught glimpses of long forgotten yet familiar places from my teenage years. Change was evident from the point of entry at the perimeter boundary, right through to the inner sanctum of the head teacher's office and classrooms kitted out with advanced technologies.

Figure 1. Main entrance to street, with camera high among branches.

The colonial wooden gates that graced the entrance when I attended the school had been replaced with automated steel gates in 1997-8, buttressed between heightened stone pillars. A street-side signboard announced the school's name to passers-by and conspicuously advertised the sponsor, a national English language radio station. While visitors at the main gate encountered an instructional notice in English and an intercom, among the trees inside the boundary a closed circuit camera beamed the image of visitors to a monitor in the receptionist's office.

Growth in enrolments in the mid 1970s had necessitated the construction of extra classrooms and these were built in the former driveway as two additional three-storey blocks adjoining the wings erected in 1937. Catwalk bridges and breezeways connected the two 1970s wings.

Figure 2: Classroom wings and catwalks built in the 1970s.

Overlooking the hockey field and in striking contrast to the imposing modernity of the 1970s blocks, the bell tower stood commemorating the centenary in 1982. Stone masonry that matched the main entrance to the school, signalled the school's endurance, and the surrounding paved terrace with benches ensured that this proud representation of history and school identity entered the

Figure 3. Wing and refurbished courtyard with drinking fountain.

real-and-imagined experience of girls sharing lunchtime in these park-like surroundings.

In 1999, a post-modern style three-storey science and counselling wing was opened. That wing adjoined the 1937 building and ran alongside the hall to enclose a paved courtyard with palms and drinking fountain reserved for prefects and grade 12 learners. The new science and counselling wing was named after the principal in tribute to her vision of state-of-the-art science teaching that would fully prepare girls to consider scientific careers in the 21st century. On one level there was a science lecture theatre with tiered seating, teacher's demonstration table and computer projection facilities, and a fully equipped laboratory with extractor fan and teachers' preparation room. The corridor included a large permanent display of scientific paraphernalia and wall niches to store bags during classes. Another level of the wing housed a career guidance and counselling suite. It included a carpeted space for larger casual group sessions, a soundproof counselling room, an office for counsellors and a records storeroom.

The three-storied additions to the school over the years yield a collage of architectural styles with various corridors and stairwells coursing through the buildings, offering learners options for routes to and from their classrooms. The multi-storied buildings, many specialised facilities, and labyrinth of stairways and passages represent a history of financial investment in the education of girls.

Although Centenary High has always been one of Durban's prestigious and sought after public schools, capital projects for building construction and refurbishment ensured that Centenary High retained this reputation in the apartheid era. Despite desegregation that implied an open access policy to enrolment, spatially the school seemed to have retreated inwardly since 1994, behind the façade of its own buildings, security walls and locked gates. Reasons for this might be related to fears about a post-apartheid political dispensation in which the ANC-led government's funding policy radically reduced non-personnel funds to well-resourced schools in middle class areas. This policy aimed to funnel government funds towards previously under-resourced schools serving the poorest communities (Department of Education, 1998). Within this regulatory framework, schools such as Centenary High are expected to mobilise local community-based funds through enrolment fees and donations, and these sources of funding have been utilised for much of the development in Centenary High's built environment since 1994.

The defence appeared to be concerned with securing middle class values and privileged lifestyles that afforded recreation and leisure in park-like grounds, courtyards that were exclusive to certain grades, sports facilities and learning facilities that ensured an offering of diverse career prospects, and classroom conditions that ease the discomfort of the sub-tropical heat. This pointed to continuities and discontinuities at Centenary High as it shifted gear to advance from apartheid into the post-apartheid era. Though apartheid-era racial exclusivity in enrolment had been forfeited, Centenary High's character as a socially classed and prestigious place remained intact – perhaps was even stronger than in the past.

The retention of prestige was also read off the school's capacity to accumulate commodities and consume energy. Although urban schools in South Africa are rarely without power, the inventory of energy-based objects at Centenary High exceeded that of other schools (Karlsson, 2001). Commodities included an elevator, refrigerators, microwaves, computer projection, TV and VCR, laboratory extractor fans, stage spot-lighting, classroom intercoms, a surveillance camera and automated gates. Not only did these technologically-advanced acquisitions indicate high energy consumption, they showed that Centenary High offered learners diverse and complex teaching and learning practices and that there were high expectations of comfort levels in the workplace. The acquisition of expensive commodities and greater consumption of energy at this former white school related directly to the school's financial capacity to meet running, repair and replacement costs. This required income from non-governmental sources such as learner fees, fund-raising events and investments made with donations from middle class parents.

At Centenary High, the tennis shelter was refurbished as a clubhouse in 1997. A local tennis club leased the tennis courts over weekends. Income derived from club fees was banked in a school fund for the sole purpose of court and clubhouse refurbishment. According to the school administrator, Centenary High's governing body regarded these refurbishments as cosmetic and not educationally justifiable. Club funds were used for tiling and an awning in 1999, and in 2000 the school replaced court poles and aluminium netting. The lease of these facilities to a community association enabled Centenary High to mobilise non-school funds for maintaining its six tennis courts and clubhouse. The administrator reported that the school governing body saw sports facilities as assets that added value to the schooling experience offered at Centenary.

In another corner of Centenary High school grounds, paved paths had been laid and fresh plantings beneath mature trees turned that area of the grounds into a garden milieu for meandering walks and conversations at lunch times. The improvement of the area added market value to the school. While this confirmed the attention of the governing body and management to their responsibility to maintain and develop school premises, it was also referenced to a competitive school market where the governing body would be intending to create a favourable impression among parents seeking a secondary school at which to enrol their daughters. In that educational marketplace, schools like Centenary High aspire to especially attract learners of parents who can afford the fee levels at these schools.

These new wings, sports facilities and grounds were peculiar to Centenary High and not standard for government schools. Their architecture carried tropes of the middle class home and middle class identifications, the ethos of privately owned exclusive space, and a lifestyle that includes the pursuit of leisure. The improved built environment enhances the prospect of attracting fee-paying 'clients', but while racially desegregated enrolments point to increased access to the quality of education offered at this government school, its attractive spatial arrangements mask the investment costs that require the setting of fee levels that reduce access to enrolment. Thus, disguised in capital projects that depend on parents who can afford to become fee-paying 'clients', is a social division that excludes the poor from deriving the benefit of enrolling at schools like Centenary High. The obscured effect of such capital-intensive refurbishments and constructions is a two-

tier class-based public education system. Thus some state schools like Centenary High have above-standard facilities that are available to all – on condition of fee payment – while most other state schools have standard to below-standard facilities which are affordable to the working classes and poor.

Conclusion

As Centenary High's built environment has developed over the years and as the post-apartheid political dispensation has brought a new generation of learners commuting from the periphery of the city, spatial practices have been recalibrated in keeping with technological advances and economic dynamics. Yet the gendered schooling for girls and the middle class encoding of quality education remains constant.

The observed spatial developments at my old school showed that an opulent gloss was being applied at this government school, which would cast it as a class-based exclusive school. As worrying as this should be in post-apartheid South Africa, yet there is some solace in the fact that the quality education I received at this school would never again be the exclusive preserve of white girls.

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Space, Power and the Classroom

JANE MCGREGOR

In this article Jane McGregor, *FORUM* Editorial Board member, draws from her recently completed doctoral study 'Spatiality and Teacher Workplace Cultures' to explore how new understandings of space are critical to an understanding of, and a response to, power relations in education.

Introduction

In a world increasingly characterised by change, diversity and complexity, with educational institutions, like others, aspiring to become 'learning organisations' and where the 'knowledge economy' is apparently crucial, schools as workplaces for learning appear to remain peculiarly static. The majority exhibit physical, organisational and social arrangements that have changed relatively little in the last 150 years.

Despite the burgeoning spatial metaphors there is a lack of consideration of space in education (Clarke, 2002). This article however argues that an understanding of the nature of space is critical to an understanding of what goes on in schools. Common conceptions of space as a fixed, physical, container for social interaction are inadequate for this. Indeed, the silences around space allow it to be organised to produce and reproduce practices which maintain persistent and unequal power relations. Understanding space as *socially produced* reveals current social arrangements which maintain and ossify such power relations, but which can then be contested and changed.

Following a brief discussion of the new understandings of space and the relationship with power, the article outlines the significance of space in the organisation of the majority of schools, beginning with a description of the genesis and history of 'the classroom' in England. The spatial relationships of teachers and pupils in the classroom is examined to show how space is used to create and maintain particular forms of relationship, and this is illustrated by a study of the spatiality of two secondary schools.

New Understandings of Space and the Relationship with Power

A theme of this article and one rationale for this special issue of Forum, is that space hides things from us, through our lack of understanding of it as constructed and contestable. This is particularly the case in secondary schools, which are often well away from the gaze of the adult public, yet where space is continually organised to maintain power relations, so deeply embedded that we fail to recognise them.

In the social sciences there has been a clear 'spatial turn' over the last two decades, with a recognition of the significance of new understandings that have been developed, particularly through human geography. Space is taken to be more than merely a backdrop to social interaction, but as *created* through interaction with the social. This is based on a conception of social life as relational but still materially-embedded in the 'physical world'. Human use, organisation and imagination thus creates social space which is simultaneously material and social. This new understanding of space as a product of such interrelations, constituted through processes of interactions, suggests the relationship with power. Spaces in schools may be organised to keep 'others' 'in their place', whether students, subject or support staff (Morgan, 2000). *Spatiality* is a term used to describe this social production and meaning of space.

The work of Doreen Massey and geographers at the Open University extends these understandings of spatiality as the product of intersecting social relations, and develops the idea that space and time are mutually constituted .

> *'…the product of intricacies and the complexities, the interlockings and the non-interlockings, of relations from the unimaginably cosmic to the intimately tiny. And precisely because it is the product of relations, relations which are active practices, material and embedded, practices which have to be carried out, space is always becoming. It is always being made (Massey & collective, 1999, p. 283).*

Space is fundamentally implicated in the creation and maintenance of 'the school'. In this understanding, rather than a pre-determined *place*, schools may be seen as a constellation of ongoing relations and everyday, materially-embedded and enmeshed practices, which extend beyond the school in space-time (Nespor,1997). The architecture of schools and classrooms embodies particular ideologies of education and pedagogy through their physical arrangement and the interaction with social space, employed through timetables, rules and other habitual organisational practices. Space as it is commonly understood has such a taken-for-granted quality that it blinds us to the fundamental ways in which 'the school' is spatially constituted. The almost ubiquitous orderings of classrooms, laboratories, staffrooms and playgrounds in secondary schools thus obscure the way in which the setting is active in sustaining certain power relations.

The 'box-like' structures of individual classrooms are a persistent spatial form, although the concept of spatiality employed here suggests they are actually far more permeable than is at first apparent. Constructing 'the school' as a self-contained and bounded entity with clear boundaries, enables wider socio-economic problems to be re-territorialised as 'school problems' (Nespor, 2002). In the same way that 'the local' is construed as spatially and temporally bounded, school cultures are also generally, and imperfectly, understood as homogeneous, contained

by the physical entity of the school. 'The school' or 'the classroom' is then a reified location which stands for the social, economic and political processes and organisation which actually *constitute* it (Shields, 1997).

Thinking in this way 'outside the box' allows a dynamic and politicised understanding of space, and challenges the view of places such as schools as pre-existing and bounded, replacing it with an open conception of place as hybrid, provisional and porous. Social relations are understood as relations of power, but where power is not a thing to be possessed, rather residing in small, local interactions, power 'with' rather than 'over'.

School buildings are inscribed with educational ideologies and practices, and the fabric is a chronicle of change and use resulting from the network of relations, local and global, which comprise 'the school'. The durability of the classroom is masked by the way in which contemporary interventions such as the National Curriculum have presented the impression of constant change, while obscuring powerful continutities. Exploring the spatiality of schools is a means of highlighting such relations. The physical spaces materialise past practices and social relations and thence '*predispose current practices to emulate past practices*' (Jacklin, 2000, p.4).

Disciplinary institutions (such as schools, prisons or hospitals) organise physical space and time in a particular way, with activities that have been developed over time to change peoples' behaviour along a number of parameters: for example, through organising space, distributing individuals within it and subjecting them to surveillance and classification of various kinds, e.g. the standardising examination (Foucault, 1977). Power relations are inscribed in buildings, with consistent and enduring forms exhibited by the majority of secondary schools in 'the West', indicating the persistence of particular relations. Buildings may thus be seen as 'concretisations of power'(Markus, 1993).

The organisation of school space predominantly '*reflects societal and legal rules which view children as subordinate to adults'* (Shilling, 1991, p.32) and the arrangement of the classroom is the spatial manifestation of this. Space is drawn upon to maintain and reproduce such relations. Teachers determine (or possibly negotiate) rules and routines which control pupil behaviour, movement noise and access to materials and technologies. In creating structures such as furniture layouts, certain behaviours are encouraged or suppressed, which function almost invisibly to display teacher expectations and reinforce adult control of knowledge, teaching and learning (Coffey & Delamont, 2000).

The Genealogy of the Classroom

It is important to trace the emergence of the classroom as it is here that the spatial nature of power relations is particularly revealing of the normalising and socialising functions of the school (Marshall, 1996). This is nowhere clearer than in the explanations of the design of 19th century schools which highlight the significance of space in the relationship between power, knowledge and the body. It is not surprising that during the Industrial Revolution the metaphor of the machine was used to describe education.

The classroom in Britain substantially evolved in the 19th century through the creation of elementary industrial schools, with their origins in Poor Law institutions as well as education (Markus, 1993). Such schools contrasted markedly in architecture and layout with co-existing institutions such as Lancing College, which had a very different kind of social function, more aligned with the Oxbridge colleges to which its scholars might progress (Piem, 2001).

Structures such as classrooms which were created in this way have been substantially reproduced by design in our schools over the last two centuries and Markus argues that ;'*asymmetries of power in society and impediments to the bonds which are so subversive of such relations, were kept intact in such buildings'* (Markus, 1993, p. 317). Joyce et al comment, in relation to the workplace of teachers, that schools have been designed for separate functioning rather than the development of collegial relations. They suggest that the cellular classroom described by sociologists '*describe an environment which would be almost surreal if it were not so sinister. Educators are assigned to instructional duties with almost no provision for collective work'* (Joyce *et al.*, 1999, p.10).

Core features of the present-day school and the classroom developed from a conjunction of elements, primarily the creation of the 'professional teacher', the grouping of pupils and the strongly socially engineered architectural organisation of social spaces, notably the classroom, playground and school hall.

In the early 19th century pre-monitorial schools, held in large single spaces, pupils related directly to the teacher. The monitorial system devised by Bell and Lancaster changed relations by subdividing large numbers of children still in a single space into groups instructed by pupil monitors, often through the activity of repetition. However, competition was introduced through 'place capturing' where pupils position in an hierarchy of achievement was reflected in their physical location in the schoolroom, explicitly spatialising pupil performance (Paechter, *2000*). To further produce compliance, bodies were also disciplined through detailed rules governing behaviour, clothing and posture. The development of the teaching gallery allowed the surveillance and control of a large group through eye-to-eye contact The final step was the separation of the entire school into classes simultaneously taught by teachers in separate rooms, as introduced by Wilderspin.

James Kay-Shuttleworth pioneered the idea of training for pupil teachers and the parallel evolution of the cellular classroom encouraged and emphasised the emergence of the teacher as a figure exercising surveillance and discipline. For the (new) teachers separate classes conferred the status of independence and relative freedom from the surveillance of colleagues, while pupils were more homogenised (Paechter 2000). Teachers thus gained private space while for pupils it was more public, exposed to the gaze of peers and the geometries of competition. The creation of individual class rooms also produced 'the corridor,' an area of movement and unplanned interactions where control was problematic: '*As teachers gained freedom in the classroom, the children gained it in the corridor'* (Markus,1993, p.94). Even today it is in 'the corridor' that much peer interaction, positive and negative takes place.

In contrast to the cellular classroom, the assembly hall was the gathering place of the whole school. Unlike the playground where pupils notionally played 'in freedom', routines and rituals which often derived from religion, were practised to mould the population into a potential

community. Elements such as the school hall and the separate classroom were thus the result of ideological, political and economic change. However, the direct design of school environments *was* substantially driven by educationalists who considered the architecture of the building as important as timetables or systems of reward.

The pattern of the individual fixed-desk formal classroom was codified in regulations which remained largely unchanged until after World War II. In the 1960s alternative designs, notably the 'open plan' school were proposed as a reaction against whole-class teaching. Following the Plowden report they were thought to be more child-centered, with fewer concrete boundaries allowing an with an increase in flexibility facilitating the timetabling and teaching of different activities and notionally increased pupil agency.

It is worth noting that the inhabitants of the classroom today, whether open-plan or cellular, are increasingly subject to less obviously visible forms of surveillance than under the monitorial system, for example through (computerised) recording of assessments and targets, in examinations and 'continual assessment' (Paechter 2000). Hence, our conflation of 'the classroom' with its physical and temporal co-ordinates, which was more *apparent* in the early elementary schools, also blinds us to the less evident operation of power from the centre.

Using the Space of the Classroom

Schools and classrooms which trace their origin back to the late 19th century present universally recognised images across nations and cultures and their familiarity and continuity presents them unproblematically as free from ideological contestation and struggle, somehow pre-existing and even immutable. '*Classroom reality is rarely presented as socially constructed, historically determined and mediated through institutionalised relationships of class, gender, race and power'* (McLaren, 1995, p. 35). I suggest that a brief examination of the construction and operation of spatiality in the classroom provides a productive perspective on this.

The representation of 'the classroom', whether in policy or education writing (or indeed graphical or televisual images) as a simple container for teaching and learning ignores, amongst other things, the way in which pupils and teachers interact within a power-geometry. The designation of the room and time of 'the class', the arrangement of the furniture and the use of space by pupils and staff plus the curriculum and pedagogic strategies employed: all interact as social relations of power in which individuals are differently located.

Much of the work relating to space and the classroom has derived from research into gender construction and inequalities, and the playing out of gendered relations in schools. A spatial analysis of relations may be traced through research into classroom dynamics, where (some) boys have been shown in well-documented studies to dominate the processes of construction and use of space (Paechter 1998). The first day at secondary school often includes a strong emphasis on communicating classroom and school rules, which are mostly inherently spatial, being to do with the control of time, space, movement and noise (Gordon *et al.*, 1999). Thus power is deeply inscribed into certain spaces within the classroom, for instance in the location of 'the teacher's desk' (in science labs the raised bench), which is frequently at the front of class, even if offset. The teacher's desk is both a symbol of authority and a point of surveillance. It is symbolic of the teacher as *transmitting* knowledge rather than it being constructed together. This is generally a space that pupils may not touch, although teachers may move and remove articles that pupils have on *their* desks. Students may be only rarely allowed to use the teacher's desk, unless seated there as a punishment, isolated from their friends.

While formal spatial strategies such as 'place-capturing' are no longer practised, the disciplining of bodies through the regulation of seating is a major strategy employed by teachers in 'classroom management', encouraging particular forms of grouping (as Annabelle Dixon describes), controlling or punishing students. A newspaper report notes that *'Parents complain after daughters are made to sit next to bottom set boys'* when 'an education consultant' recommended boy-girl-boy-girl seating in an effort to reduce the gap between male and female achievement at GCSE. A further article noted a school where the '*teacher directed seating (which) according to senior managers gave boys the isolation they needed to concentrate'*, i.e. isolation by having to sit next to 'the other'- a girl!

Spatiality of the Classroom

In primary school classrooms, which serve multiple functions, the layout of the room is more regionalised than a typical secondary classroom. There is likely to be a sink, an area for science or art equipment, for reading books and mathematics resources and a carpeted area for whole class activities. Despite considerable changes such as the introduction of the National Curriculum and mandatory testing in state schools, the layout of the average primary classroom remains similar to that of 30 years ago. As Helena Campion explores in this issue, until recently there has thus been a limited repertoire of responses to the architectural and organisational challenges of curriculum changes which require, for instance, more whole-class teaching in the form of the literacy and numeracy hours.

It is axiomatic that staff and pupils can be profoundly affected by where they are in the school and the behavioural expectations created by that environment (School Works, 2001, Fisher, 2000), witness the differences in noise and movement in the corridor and the science lab. Of course different teachers and pupils also use the same physical space in different ways. In a study of 'children's geographies' Sean Fielding (2000) uses an example of a school where teachers shared a class (and room) with other 'floating' teachers, to illustrate how in the same physical configuration of room with the same students, lessons with different teachers produce very different patterns of movement, interaction and learning activities-ie spatialities. He contrasts the movement patterns of one particular girl in the lessons of two different teachers. A lesson where the female teacher was described as employing a '*seductive pedagogy'* of persuasion and collaboration, seemed to '*open up classroom space'*, (p.236) encouraging movement.

In contrast, a more '*reductive, masculinist pedagogy'* centred around classroom control and order, which happened to be enacted and embodied by the large, male besuited teacher, reduced the girl's movement, learning activities and interactions. The impact was to; '*close off the*

spaces for learning, restricting the childrens' use of their moral economy as they were required to undertake more formal learning styles' (ibid p.237).This seemed to create a smaller classroom, restricting movement, co-operation and communication, even through the physical space remained the same. Here we may see spatiality as the interactive relationship between physical and social space.

Examples of the Use of Space in Two Schools: the more things change the more they remain the same

The study from which the following illustrations are taken was designed to explore the spatiality of the school as a workplace for adults. Two secondary schools were researched (McGregor, 2003b), chosen on the basis of their avowed working patterns. Kingbourn and Brythnoth (pseudonyms) were similar in age and layout and typical of secondary schools where it is teachers who are allocated teaching rooms and who 'own' the classroom, while the students move around the school. Although there are commonly ongoing negotiations and resistances over the control of space, movement, noise and time in the classroom, Gordon et al. (2000) found that they were seen by students as teachers' spaces: Thus are hierarchical and distancing relationships played out where the teacher is perceived to be the sole authority, transmitting knowledge and in control.

Classrooms embody pedagogic ideologies and relationships resulting from different approaches to practice, as discussed by Janice Bissell in this issue. Teachers commonly place value on maintaining orderly relations, and the control of noise and movement in the classroom can be seen as a measure of teaching success as much as what pupils know or have learned. This was wryly commented upon by Gregor Talmussen, the Head of humanities at Brythnoth in relation to the quiet history lesson he photographed (see figure 1). '*Everybody is working very hard which shows I am a good teacher'* .

Lack of space for the increasing number or size of students was a problem in certain classrooms, particularly at Brythnoth, and could limit the activities that were seen as possible. Gregor Talmussen talked of the difficulties of fitting groups of thiry-four to thirty-seven in the room shown: '*they are in blocks, they cannot pull their chairs back'*. A teacher of English at Brythnoth, though having a much larger room, recalled an all male class who had entered the two year course as boys and left '*as men- physically much bigger and filling the room with their booming voices'* (Ryan Petrie, Head of Year).

One of the continuities in teaching is the location of the teacher, commonly at the front of the class, and their mobility in contrast to the pupils who are usually seated. In controlling the (lack of) movement and subjecting the pupils to obvious surveillance, the teacher is using space as a strategy of power. Particularly in secondary schools, however the contingency of facing different classes every hour or so can accentuate uncertainty and at times, insecurity on the part of teachers (as well as pupils) as to how a group may behave. Tensions in the classroom can then assume a spatial dimension, as described by a teacher in Gordon, Holland & Lahelma's study; '*You feel you're chased to sit behind the teachers' desk. Then you feel that you can't leave that place, that you (are) safe behind the desk'* (Gordon *et al*., 2000, p.19).

Figure 1. Humanities classrooms, Brythnoth.

In addition to the usual classrooms, laboratories and workshops, both schools had dedicated 'computer suites', as shown in figure 2. The location of large numbers of computers in specialist rooms as standard has obvious implications for the integration of ICT into the curriculum and the type of pedagogy and learning that this encourages. 'Computer suites' are generally designed for individual rather than collaborative group interaction. The technology and the layout of the rooms is far from incidental in this. At Kingbourn however, where resource areas housing several computers has been created adjoining department offices, the opportunities for students and staff to interact on projects 'outside' the formal classroom appeared to be enhanced.

Figure 2. Computer suite, Kingbourn.

The Classroom as Big Empty Space

Architect Kenn Fisher highlights in this issue the '*deep spatial silences'* he found in students in a school study. The spatiality of the classroom is generally experienced almost subconsciously, as a 'hidden curriculum' where past practices shape those of the present through materially-embedded relations. However, in the study, where the significance of space was recognised and acted upon, 'within' and 'beyond' the classroom, relationships were in some cases transformed.

In both schools, the Heads of Drama understood and described the crucial importance of spatiality in their work with students. Perhaps unsurprisingly, here the understanding of space as peformed, reciprocally between the physical and the social, was most clearly articulated. At Kingbourn I interviewed Duncan Patrick in the large, black-curtained and wooden-floored drama studio which he described thus, likening it to Peter Brooke's 'Big Empty Space';

> *'It's always in waiting for possibilities is how I see it… and that there is nothing in this room, no pictures on the wall, there's nothing and it's a bit like giving the students a blank page to draw on. You know you wouldn't give students a page with lots of other drawings on and things, it would be, it's a blank white canvas'*

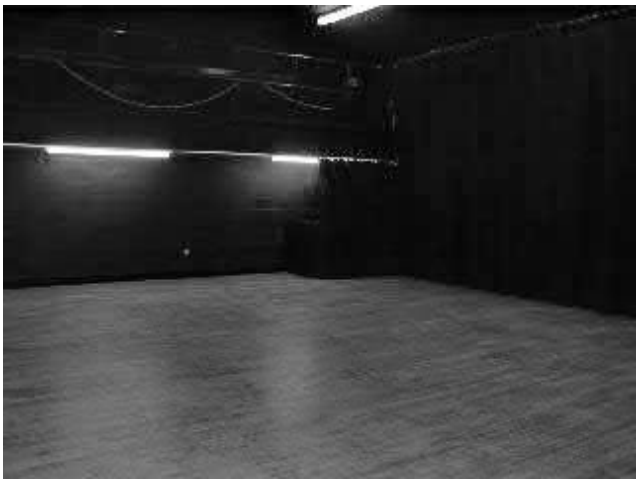

Figure 3. 'The Big Empty Space'.

This was a space that could be constructed into theatre, creating meaning through movement, props, sound and interaction:

The importance of the performativity of the space was central to the way Duncan Patrick worked with the pupils. On the one hand was the safety of exploring new worlds through rehearsing the set lines of a play, a created and ordered world, in contrast to making theatre from a particular stimulus. This could also '*make it a scary place'* for pupils; '*they have to learn that there's no safety, they can't sit behind a desk'*. The sense of exploration and co-construction, rather than learning pre-existing and pre-given knowledge, was very strong. Teacher and pupils were then operating at the 'edge of their comfort zone', where learning is arguably most likely to take place .

He described '*creating a sort of republic'* where he was normally *'in the thick of them'* rather than physically and hierarchically set apart:

> *'When we're rehearsing I'm having to wander round, there's no central place that I can go to and they can see that 'ah now he's doing this or that'. I don't have a desk, I don't have you know even an office really because I don't go in there very easily and because of that the relationship that you have with people is one that has been born out of … we have developed this environment.'*

Duncan was very aware of the relationship between power, space and pedagogy in orthodox classrooms and eloquently described the sense of difference/otherness/ alienation he experienced in such a situation:

> *'I am actually scared of sitting in a classroom. I feel very uncomfortable, I feel as if everyone's looking at me as though I'm going to be dragging them through some sort of learning process and they're just going to sit back on chairs and actually be quite idle. I feel the pressure of the whole status thing because I'm at the front of the room and they're over there as a clump. I feel the division of age, the division of everything. Whereas in here I don't feel that at all and I'm sure it's one of the things that keeps me feeling young actually is working with young people. Well not just working with them, well yes, working with them as opposed to standing in front of them. I'm sure I'd be a very different person now after fifteen years' teaching if I had to wear a suit and be constantly in front of a class being, I don't know being adult-like in the way that we're taught to be adult-like'. (Duncan Patrick, Head of Drama, Kingbourn)*

Conclusion

Many schools maintain structures, architectural and organisational, that derive from 19th century elementary schools, designed to produce the docile bodies required for factory working.. The standard secondary classroom today has a layout that maintains a particular spatiality where power relations operate to support didactic transmission approaches to teaching, with pupils passively receiving information which is controlled by the teacher in a way that Duncan Patrick found uncomfortable. Schools as hierarchical, routinised and highly structured environments contrast with the world 'beyond' school, with which young people interact (increasingly through Information Communication Technologies), which is obviously complex, layered and presenting constantly changing challenges.

It is not only a lack of awareness of the spatiality of schools, political inertia or the hegemony of design professionals which maintains such relations. Teacher practices relating to time, (physical) space and objects (resources) are also taken to be the preserve of school management and largely separated from the transmission and acquisition practices of pedagogy (Jacklin, 2001). In the same way, those notionally responsible for learning and for the construction and maintenance of buildings in Government are separated with too few links between the built school environment and educational policy (School Works, 2001, Fisher, 2000). This is arguably a result

of conceptualising space as simply an inert container for social relations which renders habituated practices effectively invisible.

Schools are filled with experts on teaching and learning and are thence places where staff and pupils can engage through investigations of spatiality as part of their work Education in the classroom is not simply the uncomplicated transmission of knowledge, but involves a complex web of embodied relations of power which have remained remarkably stable over time and are instantiated in the space of the classroom. Schools are also particularly useful vehicles for the study of spatialities as activities are intensley related the space-time-table. As the work of Morgan (2000) and Fisher (2002) suggests schools are therefore an ideal place to begin scrutinising the operation of power through space. Thus developing a 'critical spatial literacy' with which to challenge and transform unequal and undemocratic relations.

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Space, Schools and the Younger Child

ANNABELLE DIXON

Annabelle Dixon, co-editor of *FORUM*, looks at the nature, potential and changing character of the spaces provided for young children in present day schools from the viewpoint of a former Early Years teacher.

That young children need space seems an unsurprising statement. So unsurprising that it scarcely needs further examination, to say nothing of further thought. But what do we really mean by 'space' when considered in the context of young children in school and their developing needs? Various studies have mostly described the actual physical spaces available and organised for children and frequently refer to their relevance in understanding power structures within schools. However, not many seem to have emphasised the actual nature of the different kinds of 'spaces' that children need, inhabit and experience in their school lives.

What does it mean for young children to experience a variety of social and personal spaces within a school context, and is it important enough for us to take into account when planning and providing for an appropriate school environment? Do we, should we, give enough consideration to those spaces required by the developing imagination, for instance?

I would like to argue that if we understood more about the different characteristics and potential of these spaces, not only would we provide more appropriate schooling, it might also help us to interpret children's responses and behaviours in a much more insightful way. As adults we have forgotten, and therefore fail to recognise, what it is to learn how to negotiate the nature of the differing spaces that make up the frequently puzzling and sometimes threatening, social and physical world of school for young children.

The Provision of Physical Space

Children's self-evident need for movement and their physical development have played an influential part in the way we think about 'space' in the context of education for younger children. Thus the provision of large physical spaces has probably had an effect on the way we mostly consider young children in this respect and it is worth examining how schools generally provide for what they see as a predominantly physical need. Exuberance and energy are recognised as being an abiding characteristic of childhood and the images go from young children charging around on their trikes in a nursery playground to older children determinedly caught up trying to play football in a crowded urban playground.

In schools' provision of appropriate space and places for such activities, children are learning the extent to which their needs are being met or otherwise by an adult world. From the time of early educators such as Froebel and Margaret McMillan it was recognised that the younger children needed to experience themselves in a larger, more physical space than that provided by the end stops of four internal walls; a need which the pioneering Forest or Outdoor School movement continues to recognise as one of major importance. To observe young children in such settings is indeed a provocative challenge to those that see playgrounds for young children as being necessarily neat, sanitised and totally predictable. For older children the provision of a simple outdoor tarmac space was long deemed sufficient until, to the credit of many primary schools, its deficiencies became apparent and they began to recognise it as a social as well as a physical space and one that therefore needed restructuring. Often aided by local advisers and various charities with experience and expertise in this field, playgrounds have become the setting for different kinds of physical activity from climbing to running to playing games that need equipment to having painted surface markings like hopscotch or wall targets. Charging about has become less of an option as different opportunities for using the space have been presented to children. The playground has often become physically transformed as well, with walls painted with cheerful murals and benches, 'friendship seats' and small gardens or arbours being established to cater for the perennial need for the quieter children, for which often read girls. ('Miss, girls don't like playing big games; they only like playing little games' (Barnett, 1988)). Even so, while such places undoubtedly offer a physical haven for youngsters who are scared or tired of being pushed about by their more energetic fellows, it would be naïve to see them as places that might diminish the frequency of the more subtle forms of verbal bullying.

Playground space, however designed, is very often the place where social hierarchies are still determined. Children who are asked to indicate on a school map where bullying takes place will frequently mark such places in a playground (besides the predictable toilets) Hampton (2000). Schools, and indeed pupils therefore find themselves in a dilemma: the schools want to, indeed are required to, reduce bullying, which they know happens to a large extent at playtimes and as pupils want to avoid being bullied, so an increasing rejection of the playground is coming about – and consequently the opportunity to experience themselves and others physically in a large space.

Diane Rich (2003) points out that children's lives are increasingly highly timetabled and structured and quotes a seven year old child as saying there wasn't much time for play in his world; at school, even if you managed to get out at morning break there was always the chance you might have to stay in to finish your work and the lunch

break was usually taken up by eating lunch and going to different clubs on different days of the week. So for him and very probably for a great many others, the reality is that this experience of using the large playground space is being increasingly curtailed. The opportunities for learning how you join or even leave a group, knowing how to watch others (and the critical distances involved) to simply walking about without any one telling you what to do and how to do it, become diminished.

All experiences help build up an image of the 'self-in-space' and the 'self-in-relation-to-others-in-space'. Not important? Apart from daily negotiations in work and smaller family groups, millions of people commute daily in and out of cities, frequently in crowds, and equal millions attend sports and community events. Knowing how to behave in such environments is a crucial social skill and school playgrounds represent the space where children learn to cope with unpredictable movement and free flowing group behaviour as well as giving them an opportunity for physical exercise.

The Indoor Space

But children can surely learn these personal and physical skills in the large indoor space provided by the school hall? That these things are indeed there to be learnt is revealed by watching the response of reception class children on the first occasion they come into an empty school hall: some stay by the walls, cluster together and generally seem rather fazed by the experience. Others appear to be instantly stimulated and cannon around the space becoming very over-excited in the process. These responses certainly tell us something about the individuals concerned but it should also remind us that all the children have something to learn about this kind of space. One of the commonest, and most bewildering, instructions a teacher can give a reception age child is to say 'run and find a space'. What is this invisible thing called space that it can be run after and found? It is only too easy to make assumptions about young children's real level of understanding.

How they learn about this kind of space and the maximising of the opportunities presented by it depends on a number of possibilities. With the current emphasis on the acquisition of discrete motor skills, once considered correctly, to be mainly the province of KS2, children now have considerably less chance to genuinely explore and discover space in relation to themselves and others. Far from being just an alternative option, a number of writers, for example Zaichowsky,(1980) have considered that it is only through largely independent movements that children 'learn to employ cognitive strategies and understand themselves in psychological terms and how to interact with other children'. Damasio (2000) maintains that 'the entire construction of knowledge, from simple to complex… depends on the ability to map what happens over time, *inside* our organisms, *around* our organisms (and) *to* and *with* our organisms…' Importantly, it is a place for intellectual discovery and learning as well as the physical and one whose potential is considerably lessened by the current emphasis on predetermined, teacher-led activities and decisions.

Experiencing Space

Far sighted PE educators from the 60's to the 80's recognised the need to build up a child's construct of space before starting on ways in which their knowledge might later be used. The exploration of this particular space was usually carried out by finding out, for instance, what part of your body were you using? Did speed or direction make a difference? How and when and where did you have to take account of others using this same space? The present day KS1 PE curriculum, allows for little of this kind of exciting and worthwhile exploration. Similarly, the Laban dance movement which came in to schools about the same time, also aimed to promote children's awareness of space and their place in it by its unique exploration of the personal dimensions of space surrounding each individual child, before moving on to explore the common space also inhabited by others. Terming it the 'kinesphere', Laban saw it as 'the personal space surrounding a child's body and (secondly) the general space which is beyond personal space and bounded by the particular confines in which any of the children's activity takes place'.

To those who use Laban-based teaching, a whole vocabulary of position in space – behind, in front, beside, below etc. besides different kinds of speeds, direction and quality of movement is gradually built up. If children hop it is because they want to extend another movement to see if they can, or they feel it suits some music they are listening to. They are personally involved in exploring and making decisions and in making an individual response to music. They are not hopping because someone has told the whole class to 'hop like a bunny'. As young children like any kind of movement and also pleasing their teachers, this latter kind of activity is usually carried out with misleading gusto but as Keiran Egan (1988) points out in his book 'Primary Understanding', like much of our contemporary curriculum for young children, it is flawed, shallow and deeply unserious. The potential of this space, even for the physical development of children, is now also considerably diminished.

Designated Spaces

Other kinds of physical spaces also obviously present themselves to young children on entry to school; spaces that are not provided to meet their physical needs or development but by and large designed to meet perceived pedagogical needs. Studies over the years have described the design and use of such spaces in primary schools and for the most part they are spaces that tell children a great deal about adult expectations and power structures. As Eva Alerby (2002) pointed out in a paper presented at the European Conference on Educational Research (Lisbon) school spaces, whatever the age group, can create both expectations and/or limitations and there are particular characteristics to these spaces. We have yet to really understand, on examination, what this might mean in the context of the Foundation stage and KS1. What young children could be learning, for example, from the space and place where the teacher sits, to where the children themselves sit for most of the day, to who is allowed to use the pencil sharpener or collect books. All represent the beginning of a particular kind of social knowledge situated in a particular space. What Jane McGregor (2002) calls 'the relationship between the social and material', the 'network space of relations and objects'.

An example of this came my way when a new child entered my reception class halfway through a school term. He had already been at another school for two terms and

had evidently built up certain expectations. Expectations that at the end of the first morning session clearly were not being met. 'I don't get it', he complained, 'I can't see it'. It transpired that his puzzlement was to do with the absence of what he thought he had learnt was an obligatory feature of all classrooms. The existence (and whereabouts) of 'The Naughty Boys' Table'. I could see only too clearly it was the company he preferred to keep and it took him some time to orient to an alternative reality and overcome his disappointment.

While such a table may not be in many classrooms, other 'tables' most certainly are, and are quickly located by the children. Placing children at particular tables is the way in which many early years and KS1 teachers keep to the obligations of grouping their children by ability (required most particularly by the NLS) 'Apples' 'Bananas' 'Pears' and the inevitable 'Lemons'; 'Foxes' 'Moles' 'Badgers' – and the luckless 'Hedgehogs' are all real examples of such 'tables' which have a spatial and social reality within the geography of the average KS1 class. Your place on what ever table is chosen for you soon brings with it a rapid understanding of the educational hierarchy. As one five year old commented **'**once an Hedgehog *always* an Hedgehog' …. Acknowledgement of educational trajectory is thus added early on to the social-spatial reality and dimensions of their classroom lives.

Other Spaces, Other Realities

Something young children quickly learn nowadays about their classrooms is that it is clearly not the place in which lively or indeed any physical activity is welcomed. Such behaviour is for elsewhere. The more we have turned towards 'playing at schools' as the template for the educational experience of young KS1 and Foundation Stage children, the further away have we moved from observing and supporting young children's real needs. What is it that has made us think there is a special clock inside children that will conveniently turn itself on and off when it comes to this need for movement? The provision of a large outside playground and school hall have already been touched on but these are for very circumscribed times. With an increasing likelihood of shorter playtimes, the statistics show that young children now have less PE than ever before. This is due, we are told, to the increasing pressures of SATs, league tables, Ofsted etc. Even by 1997 though, Armstrong and Welsman were able to state that children in the United Kingdom already received fewer hours of physical education than any other comparable country in Europe. There is also the practical matter that nowadays in most primary schools, owing to the pressure to 'do' the National Literacy and Numeracy Strategies in the mornings, school halls are virtually unused until the afternoons, thus creating a new and unnecessary timetabling bottleneck.

It is not surprising if children then use the only space that is available to them, their classroom, whatever the social sanctions. Social sanctions that, interestingly, they have quickly come to learn, but sometimes even to the children's own bafflement, they find themselves overriding. It seems no coincidence that as opportunities for physical activity go down, so time and expenditure on 'behaviour management' go up. Evidence of restlessness, inattention, boisterousness and irritability are often clues to the experienced early years teacher that her class isn't manifesting anything other than the need, colloquially expressed, 'to let off steam' rather than undesirable personality traits that need expensive 'management'. An inexpensive but spontaneous, ie. untimetabled, additional playground P.E. session, can often work wonders. The reason it isn't resorted to so often at present is due to that crippling word 'timetable' and the influences already mentioned that are making such timetables over-cautious and inflexible.

The Need for Different Spaces

Experienced and perhaps one should say enlightened, Early Years teachers then, know their children's needs. Importantly, not only do they know the kind of spatial and material provision that young children require for their physical development, they also recognise that the hall and playground offer but one kind of space and that there is much blurring of the edges when it comes to making a division between social, intellectual and physical needs, and the kind of spaces that are required to meet them. The Italian early years schools of Reggio Emilia show their profound understanding of these needs by the way they arrange the materials and spaces for their children and remind us of the kinds of spaces that were once found more frequently in Britain in schools and classes for younger children. Fortunately they are still found in a fair number of nursery schools but their provision cannot be taken for granted.

Moving away from the historically large single physical space of the original infants' classroom to the provision inside the classroom of smaller spaces is or was the most notable characteristic of the changes that could be observed as far back as the l940's in Britain. There is one comparatively large space, for example a class book corner or story carpet where children know that together they will be introduced by adults to new skills, new information, new interests and the new worlds contained in books and poetry. There are also, if they are fortunate and the likelihood is rapidly decreasing, smaller spaces where children can be other than themselves, for example engaging with puppets, large bricks, drama corners, story boxes, dressing up etc. Additional spaces where children can muse and observe, for example upon the humble worm as a creature of amazement. Spaces where the material offers intellectual challenge, for instance the provision of mathematical and scientific games and puzzles, and other spaces where something new can be created where nothing was before, e.g. in wood, clay, paint, fabric, etc. All spaces where, to use Eleanor Duckworth's (1974) memorable phrase, can be had the 'having of wonderful ideas'. At the same time such spaces are not usually available to the single child and often have to be shared. The hard work, work that is hard enough for adults, let alone children, of 'working alongside others, sharing, negotiating, tolerating, empathising with and respecting others' (Rich, 2003) has to be undertaken in most of these spaces.

Present Day Changes

The fact that Diane Rich sees the above 'hard work' as characteristics of play, should make us re-consider what we now appear to have jettisoned. Where now are these spaces in most present day KS1 classrooms where children can learn such essentials? Where can they experiment, ponder, and engage at depth intellectually and emotionally with

the world at their own pace and level? An analysis of such classrooms nowadays usually shows us three basic spaces; the larger classroom where children sit around tables and can if necessary see the black/white board and the teacher's space where children can sit together on a carpet facing the teacher with yet another (smaller) version of a black/white board. There may well be other areas around the edge of the room eg. a home corner, modelling and art materials etc but these will now be considered as recreational areas not spaces where intellectual and social learning are paramount. We are fast going back to the educational space of the feeder and the fed facing each other in a pre-ordained and unchanging physical arrangement, but frequently the carpeted floor and the bright modern equipment deceive us only too quickly into judging it as a modern and forward looking space.

A Space Beyond

In either case though, there is a need for one other very important kind of space and one, which by its very invisibility, is only too easy to overlook. It is increasingly recognised and discussed as an adult need but far less frequently as one that children too might share. It is a use of the word 'space' that paradoxically also involves time; 'Give me space', 'I need space', 'my personal space' etc. are phrases that do not necessarily refer to anything with physical dimensions but to a time when the incessant pressures of domestic life and work become overwhelming and withdrawal is felt to be crucial for future mental and emotional well being. A time when one can freewheel, relax, daydream, even mooch about.

Shouldn't we recognise that young children also have this need? The 'play' that Diane Rich describes is hard work. A diet of repetitive formal instruction is hard work in a different sense. In either case children will need or look for their own personal space. In some instances this may manifest itself in the way that comes close to the adult meaning of needing withdrawal. For example, an acquaintance described how one unhappy child in her class used to go into the space behind the radiator whenever he felt stressed and a refugee child in my own class set up her place inside a large cardboard box under a paint table until and when she felt safe enough to come out of it. Other kinds of withdrawal are less obvious to the adult eye but children retreat to these personal and often secret inner spaces when there is a need to; alternative worlds are possible in such spaces and comfort is to be taken by the isolated and frightened and excitement by the bored and fretful.

Poets still remain one of our best links to the worlds and needs of children and lines from Eleanor Farjeon's poem 'The Distance' (written about her childhood) carry with them the essence of this particular need: 'Over the sounding sea/ Off the wandering sea/ I smelt the smell of the distance/ And longed for another existence'

But such spaces are not just necessary for withdrawal: they offer the potential for dreaming, thinking, for sorties into the imagination, for reflecting and simply for being. There is a potential in these spaces that we scarcely acknowledge or provide for at the moment and as a result they frequently wither into being just private domains. And this in itself is where the potential goes unrecognised; young children need the kinds of classrooms where they have the opportunities and time for sharing and extending these inner worlds with each other. Who could deny the social and intellectual engagement and challenge of so doing? Vygotsky for one, understood the essential dynamic between the social and intellectual for mental growth but his insights are yet to be translated into general present day pedagogical practice.

Teachers who want to understand their children, who want to make sense of what the children seem to be learning (or otherwise) can find that access to those imaginary worlds and spaces to be revelatory. In the kind of classrooms where teachers trust children and vice versa, the key is most usually language. This is because where the children feel they are trusted and where they are encouraged to talk, they feel they can share what is concerning or exciting them most. As Mary Jane Drummond (2003) writes, 'Our attempts as teachers to get inside children's heads and understand their understandings, are enriched to the extent that children themselves are prepared to give us, through their talk, access to their thinking'. She also supports Margaret Meek's (l985) argument that children's language is at its most powerful within their imaginative structures.

Expanding these worlds, testing them out with and against each other, exploring their boundaries, being exhilarated by the ideas and imaginative worlds of others are all a necessary part of stitching together what it means to understand the outside world and one's fellow companions. Richmal Crompton (1972) with her unerring insight into the nature of childhood, accurately portrayed William as being perennially attractive to his friends precisely because he was always able to offer them new worlds and new possibilities which his fertile imagination never ceased to dream up. Their good sense may have told them to draw back but they usually fell in with his ideas. When, for instance, Douglas demurs to one of William's suggestions it is met by the riposte that 'If the great men in history had all gone on like you, there wouldn't have *been* any great deeds done'. William is able to think on a large scale; despite his abhorrence of school, certain things have left their mark on his receptive inner space and mind.

And what, as adults and teachers do we now offer children in the way of nurturing and extending their imaginations, their inner spaces? Where is the place and time for dance and drama for instance? Do we still think it important, essential even, to take them to places where, for example they can feel and see the actual stones of castles, the vastness of the sea and the stillness of forests? Spaces that while not being 'school', spaces, nonetheless extend, complement and support the provision of the others. Or do we increasingly provide experiences for children that come pre-digested, pre-packaged and, like the junk food it so closely resembles, have little real nutrition for the growing mind and heart?

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Pedagogy in a Public Space: children and adults learning together at Tate Modern

MICHAELA ROSS, ROGER HANCOCK & KATE BAGNALL
Michaela Ross, artist educator, Tate Modern; Roger Hancock, senior lecturer, the Open University; Kate Bagnall, adult educator, Southwark Adult Education Service. This article describes the pedagogy employed in a series of workshops – 'Small Steps in a Big Space' – designed to develop the confidence and engagement with artworks in the gallery of parents and very young children.

Widening Participation in Gallery Learning

'Tate Tales' is led by storytellers, poets and performers and is aimed to be a playful introduction to the gallery. 'Start' invites adults and children to use a variety of fun games which they do together around the gallery. 'Explorers' involves activity based mini-tours around the gallery in order to select artworks for an imaginary exhibition.

These programmes are devised to attract parents and children to Tate Modern. They aim to facilitate confidence when family visitors explore the gallery spaces and provide support for personal engagement with the artworks. Such programmes are important if Tate is to attract people from its local community and 'function for the benefit of a broad public rather than a privileged few' (Barker, 2000, p. 178). Recent provision for school children, parents, carers and children of all ages – including babies, has required a re-conceptualisation of more formal approaches to imparting knowledge and supporting learning in a public art gallery (see Hancock and Cox, 2002). Formal pedagogies may be appropriate for adults who know about art and artists and who are at ease in the arranged spaces of a gallery. They are, however, unlikely to attract visitors who lack experience of visiting galleries and who may find modern art confusing.

A Programme for Parents and Young Children

In June and July 2003, in conjunction with Southwark Adult Education Service, Tate Modern ran a programme of six two-hour workshops for parents and children aged from birth to three. A local parent was employed as an outreach worker and she made contact with, and successfully recruited, parents from the south London estates close to the gallery. Some had to be given a considerable amount of support in order to come to the workshops which the outreach worker, being a known local parent of a young child, was able to provide.

The workshops, collectively named 'Small Steps in a Big Space' took place in two distinct spaces within Tate Modern. The first was a large art studio which served as a base room. It can be characterised as a private, enclosed, 'sheltered', and intimate space – a place where a workshop group could socialise and 'be itself'. Activities in the art studio were led by Kate Bagnall, an adult educator from Southwark Adult Education Service.

The second workshop space was the designated space of the gallery itself – the exhibiting gallery rooms but also the interconnecting areas, including corridors, lifts and stairways. This space is public, free ranging and sometimes very busy – almost as though one were in a covered shopping mall.

Activities in the gallery were led by Michaela Ross, an artist-educator.

Parents, Children and the Workshops

Many parents came to the workshops with their children with the assumption that the focus would be wholly on the child and that they would take a back seat, this, however, was not the case. For some of the participants it was the first time that they had visited an art gallery, let alone participated in workshop activities, so the experience was as new to them as their children. Just arriving in the gallery space was a new adventure so it was important to keep the arrival friendly, supportive and inclusive.

A music and movement session in the art studio was a way of introducing a workshop theme, engaging parents and children in a pleasurable beginning, and setting the parameters for the morning. There was also a workshop song about behaviour in the gallery which, when put to the memorable tune 'Twinkle, twinkle little star', became a fun way of learning. It was important to use action songs and rhymes that the parents and children recognized. These were related to the chosen theme and linked to the art works when the group went into the gallery.

Having the studio adjacent to the Turbine Hall made some displayed Henry Moore sculptures very accessible and was therefore a perfect starting point each week for inspiration for shape, movement and life size sculptures. The movement gave parents opportunities to interpret ideas in their own way and, in turn, 'translate' them to their children. The adults become considerably less inhibited if they felt they were doing it for their child but, at the same time, were building more confidence in themselves. The workshops gave both child and adult a chance to experience being part of a large group, to work in a smaller group or to just be alone together. In this way there was a raft of possible learning benefits.

Pedagogy in the Gallery

The main aim of this paper is to convey a sense of the pedagogy that was used by one of the workshop leaders, Michaela Ross, an artist-educator. We do this by drawing on a tape recorded discussion which took place shortly after the end of the six workshops. This focussed on a number of selected themes including: workshop leadership and the presentation of self; the effect of space on group and child behaviour; individual and group engagement with artworks, promoting children's independence, and the nature of an artist-educator's pedagogical knowledge.

Roger. How was it working with children from birth to three?

Michaela: For children that young, that was a bit of a first for me. I'd been working on the schools and nursery programmes – so three and a half were my youngest participants. Previously to that I'd worked on adults, seniors and schools programmes. 'Small Steps' was very exciting and slightly intimidating.

Figure 1. Working on 'tablecloth' pictures following a gallery visit to Pierre Bonnard's 'Coffee 1915'.

Roger: Did you find you had to be different in any way or were you still, in essence, the same Michaela who might work with five years olds?

Michaela: In essence, I think I was the same but kind of amplified – turned up a little bit in some ways and much more 'performing'. So, it was me amplified in gesture, voice and eye-contact.

Roger: How would you characterise the way in which you led the group?

Michaela: For me, the question is: How do I get everybody here working together in the gallery space? With adults and children it means you have to work on two levels at the same time which is quite tricky. So I was both trying to gain the support of the parents and maintain the children's attention, which wasn't that easy.

Roger: How about the move from studio space to gallery space?

Michaela: I really appreciated having the Henry Moore display in the Turbine Hall. There is a door leading directly from the studio space, so it offered a kind of half-way point between the studio and the gallery. The Turbine Hall is a huge space and can sometimes feel overwhelming. The statues – many of them public-art scale – 'mediated' the space for the children. They had room to move between them and around them without feeling hemmed in. The Gallery is, by its very nature, a highly curated space. It was interesting to see how the actual, physical spaces of each of the gallery areas had an influence on the group's behaviour. Some rooms have quite a dramatic 'hang', with plenty of space between works. Here you can encourage children to explore the space on their own terms. In other displays, where the works are closely hung and perhaps smaller in scale, more structured activities, where adults and children work as a unit, seem to be more appropriate.

Figure 2. Reclining 'Moore' body shapes in the Turbine Hall.

Roger: What are your feelings about leading the group in the gallery?

Michaela: There is always a tension between giving the children freedom to explore, and making sure they don't touch the art works. This is where the role of parents and other co-leaders is essential – so that you can protect the art but without it being obvious and heavy-handed. I really enjoyed watching the children exploring the galleries with confidence, pointing at things they'd seen the previous week. I know one child in particular was very used to being in Tate, and she seemed to have developed a very natural way of being there. I think she was responding to her mother's confidence and familiarity with the space.

Roger: What are the issues around personal engagement with artworks in a gallery?

Michaela: I think, for many people, the Gallery can be a stressful place because they are not sure how they

are expected to respond. There is a fear of failure, of not knowing the answers, being made to feel 'a fool'. Working with very young children seemed to give us all permission to be less concerned with outcomes. The approach used at Tate is based on the idea that there is no one 'correct' response to an artwork: people bring different things to looking at art. In terms of planning, then, you don't aim for a final 'true' interpretation of the work – you aim to create a kind of conversation with it, where participants test their ideas against those of the others in the group. I relate strongly to the notion of 'a community of enquiry and response'.

Roger: And how did you build in this community conversation?

Michaela: The more space you allow in this process the better – you have to be in a position where you can encourage and build on participants' reactions. Fear of failure can be crippling – both as an educator in the gallery and as an artist doing your own work. Perhaps that's why artists can be effective in this particular context – because they know from experience that there has to be a certain amount of 'give' in the plan. It's always valuable to structure the sessions, so there are moments when you're working as a whole group and others where you're working in pairs or small groups. It's important to have a sense of creating different kinds of energy at different points, of maintaining momentum. This would be impossible without assistance from parents and co-leaders. With young children, things do have a tendency to go a bit straggly round the edges. This is one thing that perhaps made me nervous. With other groups I would tend to regulate the pace much more tightly.

Roger: A number of parents said they and their children had been 'helped to look' at the exhibits. What do you think they meant?

Michaela: I think that you can offer different ways of looking, without prioritising one particular model. Some people are happier using materials and processes as a way in; others feel more comfortable if you use themes as a link, or if you consider the way in which the art functions in a particular space. I think it's about giving people options and connecting with their interests.

Roger: Tell me about the thematic links made between the selected art works and your pedagogy?

Michaela: Artist-educators do research particular artists and movements. It's also part of our own practice to keep up-to-date with current theory and criticism. However, the question of knowledge is important here. I think it's important not to set yourself up as an expert, as someone who has 'the right answer'. I might know something about the way a particular artist works. For example, with the Rebecca Horn piano piece (*Concert for Anarchy*) I know the artist also uses performance, so using movement as a way in to the artwork seems apt. The fact that the grand piano is suspended from the ceiling in such a dramatic way makes a physical response inevitable: it's frightening and exciting at the same time.

Roger: And the link between what the artist intended and what you conveyed within the workshop?

Michaela: The question of the artist's intention is interesting. We can never really know what the artist's intentions were when making a work, but the act of trying to imagine them, to put ourselves in the artist's shoes, is always valid. I think artist-educators need knowledge to set up a situation where people in the group feel they can make their own discoveries. Knowledge also comes into play when you want to reinforce or support someone's response.

Roger: A lot of the time children stayed spatially very close to their parents. This reflected their need for security and your expectation that they would work closely together on activities. Some, however, were able to confidently leave their parents' sides and ventured out to be your workshop helpers.

Michaela: I think this was so delightful. It was one of the real high-points of my experience of the programme

Figure 3. Showing the 'upside down' piano pictures that were made following a gallery visit to Rebecca Horn's 'Concert for Anarchy'.

because I think it demonstrated a confidence in the space and in the experience that they were having. When this happened, I got a sense of them being a person in their own right. I think of this as a kind of metaphor for what we do in the gallery, that idea of kind of 'conquering space for yourself', whether it's sort of physically the space, or whether it's intellectually taking over that space for oneself. I think they're very close and a two-year old can do that and they're doing the same thing that an adult's doing when they say 'This is my place, this is my opinion.'

Roger: Would you change anything if you were to run the workshops again?

Michaela: I would think more carefully about the complexity of working with parents and children together. Intuitively, I just directed everything at the children. I thought that was more respectful of them, but I think perhaps there might be a way of shifting the balance in the relationship, creating more opportunities where the children might be able to direct the activities more. I would perhaps give them more opportunities to play – by choosing materials carefully and very consciously setting up an environment. It would still potentially be a way of responding to works in the gallery. This happened to a certain extent in the art studio when we did activities away from the gallery spaces.

Conclusion

Working with under-threes and their parents in a public gallery is very demanding. This is true for the workshop leaders, the parents and the children themselves. Looking at art is an active process. Tate encourages open readings of modern and contemporary art and educators use a variety of strategies and resources to achieve this end. With under-threes, there is a greater emphasis on matching games, counting, collecting, movement and play but all these can still be categorised as ways of interpreting and responding to the gallery's displays. We noted too, that practical approaches can support parental involvement and adult learning.

We aim to create an environment where people can develop confidence in their own responses, where they feel they can come back to the gallery without the help of a facilitator who leads the way. Over the period of the workshops, we actively recalled what we had seen the previous session and worked across the different suites of the gallery looking at key works in each section. The idea of orientating oneself within the larger space of the gallery is very important, and having a 'foothold' of familiar works in each section helped develop confidence and a sense of ownership.

As the adults and children navigated the often challenging spaces of the gallery, we arrived at a point in the final week where children could express personal and individual responses to the same sculpture. For instance, in Doris Salcedo's 'Untitled' made from a wardrobe filled with concrete we asked children what they would keep in their wardrobe. The children, encouraged by the adults, offered very different suggestions.

The idea of plural readings and responses is a core idea in Tate Modern's approach and it is an integral part of the other programmes run by the Education and Interpretation Department. We hadn't expected to arrive at the above point with children so young. Their reactions provided real evidence of a growing confidence and were a testament to the adults' support and collaboration. Their suggestions about the wardrobe's contents' highlighted for us the importance of providing gallery-based workshops for under threes and gave confirmation that the selected pedagogy had done much to foster engagement with the artworks for children and their parents.

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Teachers' Construction of Space and Place: the method in the madness

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Janice M. Bissell is an experienced educational facility planner who plans, designs and researches schools for Stafford King Wise Architects in Sacramento, California. In this article she explores how school architectural design supports teachers' work in and beyond the classroom.

Embedded in the public mind and school architectural design is a deeply rooted image of teaching. This traditional image, established well over a century ago, persists despite a continued interest and repeated efforts on the part of educators to change the every day experiences of teachers and students. Indeed, examinations of teacher practices and beliefs (Bussis et. al., 1976; Connors, 1978; Duffy, 1977; Marland, 1977) – including the study presented here – demonstrate that teachers' conceptions of their work does not fall into neatly defined categories. Rather, teachers' role conceptions are more varied, and are comprised of several different dimensions within and beyond the classroom. Furthermore, teachers whose role conceptions are more complex (i.e., non-traditional) are often unable to fully realize, experience, or implement all desired aspects of their work due to a number of factors. Clark and Peterson (1986) emphasize this issue in their review of Duffy's (1977) study of teachers' conceptions of teaching reading. They state that his work 'portrays a flexible and complex relationship between teachers' implicit theories and their classroom behavior. The results suggest that constraints on teacher behavior such as mandated curriculum materials, resources, time available, habits, and student abilities may interpose between theory and action and account for observed discrepancies [between teachers' stated role conceptions and their actual classroom practices]' (p. 289). I suggest that school architectural design is another factor to consider.

Educational Intent Versus Architectural Content

The two Northern California high schools that participated in this study provide definitive examples of the rootedness of the traditional image of teaching embedded in most school architectural designs. Both Nathan High School and Williams High School were each conceived of and built in eras when non-traditional images of teaching dominated the educational language and landscape. With some differences, the originating concepts of both schools focus on an image of teaching that is collaborative and interactive for both teachers and students, presenting opportunities for less uniformly and traditionally designed schools. Nevertheless, Williams' and Nathan's traditional school architectural designs reflect an uncertainty or unawareness on the part of school planners of how the school facility can fit with a non-traditional educational program and how teachers will use the facility.

Specifically, the classrooms in both schools are virtually identical and interchangeable. They are within the State of California's square footage standards, provide minimal storage, and are laid out such that the infrastructure (casework, chalkboards, telephone, data ports, etc.) creates an established and bounded front of classroom with minimal opportunity for individuation. However, both schools are fitted with department offices and staff workrooms acknowledging broader expectations for teachers' work. Nonetheless, the location, size, and arrangement of these spaces reflect only the vaguest understanding of these expectations, as well as an unawareness of the complexities of teachers' work, how changing expectations can impact teachers' work, and the importance of the physical classroom in that work.

Given the traditional images of teaching embedded in the architectural designs of these two schools and that most of the seventeen teachers who participated in this study expressed or exhibited non-traditional orientations in at least one, if not more aspects of their work, how does their use of space compare with the images of teachers' work embedded in the school architecture? How does their use of space compare with school planners' expectations about what the teachers' experiences should be? And finally, how does school architectural design support or constrain these teachers' execution of current images of teaching and schooling? This study considers these questions.

Teachers' Use of Classroom Space

Though no one teacher in this study fully embodies the conception of teaching envisioned in current reforms, most of the seventeen teachers – including more than half of those who present predominantly traditional work patterns – exhibit or express non-traditional orientations and priorities in at least one aspect of their work. Nonetheless, fourteen of these teachers (82%) construct and use their classrooms in ways consistent with the traditional image of teaching embedded in the schools' architectural designs. The teachers' desk and work area in the classroom is located at the front of the room as dictated by the infrastructure of the space (location of the built-in cabinet, telephone, writing surfaces, data ports, etc.) with the student desks in orderly rows and columns.

Only two teachers (both exhibiting strong non-traditional work patterns) have deviated from this pattern, either placing the student desks in a circle or eliminating the desks altogether; and a third (also exhibiting strong

non-traditional work patterns) prefers to teach her English classes in the theater where the students can spread out and make noise. Even so, these three teachers also placed their desk and workspace at the front of the room. This suggests that except for the most non-traditionally oriented teachers, teachers' use of the classroom environment is consistent with the traditional image of teaching embedded in classroom design. However, in considering other aspects of how teachers construct and use the classroom, the inconsistencies become more visible, and point to constraints of the physical environment on teachers' ability to create effective workspaces and learning environments.

Figure 1. Mrs Admiral's English students take advantage of the floor space to get comfortable while discussing the reading assignment from Steinbeck's *Grapes of Wrath*.

Teachers' Modification of the Classroom Environment

Teachers whose work patterns are predominantly traditional make few modifications to their classrooms, although most have added shelving and file storage. In contrast, teachers with predominantly non-traditional work patterns made significant changes to their classrooms; some permanent, others that take place as needed. Teachers view these modifications as critical in supporting their conceptions of effective teaching. Furthermore, these modifications at all levels and by all of the teachers point to the complexities of even traditional patterns of teaching that is not evidenced or supported by the traditional classroom designs in these two schools. The often drastic and desperate modifications that teachers make point also to the constraints that the physical environment place on teachers whose work patterns, orientations, and priorities are centrally non-traditional. These teachers spend a significant amount of time and effort in making their classroom an effective and efficient workspace and learning environment.

Figure 2. *And then the way that [the students] store their work in the classroom, it was devised originally because the students weren't remembering to bring things back and forth to class, and I found that it was much easier to just have them leave everything in the classroom in a folder, and have their data disk in there and everything they need.* (Dana Goffman, WHS Business Education)

In their efforts at making effective learning environments, teachers' modifications of their classroom point to other important purposes of this space. Specifically, teachers use the walls and other elements of the classroom to display things as a way of claiming the space as their own, as a reflection of who they are as a teacher, and as a communication devise to make personal connections with the students and to actively engage the students in learning. From these purposes the physical classroom can be understood as a basic component or tool of the process of teachers' daily work activities and interactions; not just an interchangeable space.

A cursory observation of teachers' use of the physical classroom indicates they are using the classroom in ways consistent with the traditional image of teaching embedded in the classroom design. A closer examination reveals that teachers struggle to make their classrooms effective and efficient workspaces and learning environments with varying degrees of success. Indeed, few teachers actually use the classroom as envisioned by school planners, especially those teachers who altered their classroom considerably. Furthermore, a more detailed examination reveals that many teachers use their classrooms in complex and consequential ways that school planners have yet to

Figure 3. *The way I have my room now with the equipment out? That's on racks? I really like that because you can see everything. Kids, when kids come in they know they are going to be doing stuff, because they see the equipment right here, and it's not hidden.* (Adam Bentley, WHS Science Teacher)

comprehend. In broad terms, the traditional classroom is a suitable space for teachers whose orientations and priorities in their work are also traditional; however, for those teachers whose orientations and priorities expand the traditional boundaries of teachers' work, the traditional classroom poses a challenge requiring extensive and frequent modification.

Teachers' use of other Workspaces

The traditional image of teaching around which the classroom has developed is typically limited to the activities and interactions of classroom instruction. But classroom instruction involves much preparation and time on the part of teachers. In addition, teachers' time is also taken up with other tasks such as grading student work, administrative tasks, addressing students' social needs, and increasingly, professional leadership roles in and beyond the school. The school planners for both Nathan and Williams recognized these aspects of teachers' work on an elementary level, having provided designated department workspaces as well as the more common staff workroom in the administration building. However, there are subtle differences in the spaces provided and their locations in each school that indicate differences in the school planners' expectations about how these spaces are to be used by the teachers.

Teacher Workspaces at Williams High School

Although each department office at Williams is slightly different, each consists of a workspace adjacent to a copy room, all centrally located to the classrooms in that building. The impression is that these are auxiliary spaces intended to support the classroom as the teachers' primary workspace by providing a place for storing shared resources, equipment, and supplies easily accessed by all teachers in that building. However, the reality is that in the department workspaces at Williams are absent the equipment and supplies needed to make them a useful resource. Furthermore, for teachers whose classrooms are not located in the same building, the department office is not readily accessible, especially in the language and social arts buildings. Consequently, few teachers make use of these spaces, and usually only to work alone grading papers during their prep period when they need to vacate their classroom. Indeed, most teachers at Williams make

Figure 4. WHS teachers prepping and talking about teaching in the workroom located in the administration building.

greater use of the staff workroom and copy room located in the administration building at the center of campus where all of the equipment and supplies for the school are stored. In addition to the usual tasks of using the copier and checking their mailboxes, many teachers use the staff workroom as a place to gather and talk with teacher colleagues. Much of this conversation is social, but many instances of extended professional engagement were also observed, especially among teachers' whose orientations in their work patterns are non-traditional. Teachers with strong traditional orientations were rarely, if ever, observed in the staff workroom. Most traditionally oriented teachers who visit the administration building do so only briefly, and only for the purpose of completing errands related to their leadership roles.

Teacher Workspaces at Nathan High School

Interpreting the school planners' expectations for how teachers should use the department workspaces at Nathan is much more complex. Each set of workspaces includes a planning room with a kitchenette and an adjacent restroom, a workroom with a copier, and a room divided into small,

individual workspaces with a data port for a computer, a lockable cabinet, file drawer, and shelves above the desktop. Combined with the location of these spaces at the periphery of the classroom wings, one clear expectation is that these spaces are intended to replace the classroom as the teachers' primary workspace. A second expectation is that teachers are to use these spaces for purposes of collaborating with teacher colleagues on planning and implementing curricula, preparing teaching materials, assessing student work, etc.

The teachers at Nathan High School do not use the department workspaces as expected. Those teachers who make use of these facilities do so only as needed to make copies, to heat their lunch, or to use the restroom between classes. Teachers come and go rarely encountering colleagues, never stay long, and always return to their classrooms where they continue to work, planning and prepping alone. Furthermore, the provision of these well-equipped facilities for each department precludes the need for most teachers to make use of similar facilities provided in the administration building – other than to pick up their mail. This is a pattern that is fairly consistent across all orientations, except for teachers who hold leadership roles. These teachers, like those at Williams, make frequent visits to the administration building to complete errands related to those roles.

Regardless of their work patterns, the teachers in both high schools use the workspaces provided in ways that support their individual goals and role conceptions. Except for the staff workroom in the administration building at Williams, teachers' use of available workspaces in both schools is limited and traditional, when used at all. While the provision of equipment, supplies, and other resources is a critical factor in whether teachers use workspaces, location – and hence, accessibility – is another strong variant. Teachers use those workspaces that are first, well equipped and stocked with supplies, and second most accessible from their classroom. On the one hand, the department workspaces at Williams are centrally located such that they can function as an integral part of the classroom; however, the lack of resources in these spaces makes these spaces virtually useless for the purpose intended. On the other hand, the department workspaces at Nathan are not used as expected because they are not an integral part of the classroom. The workrooms were envisioned to provide a contained work environment separate and independent of the classrooms, yet teachers use these spaces in ways that support the classroom as their primary workspace, much as the department offices at Williams were intended to serve.

Implications for School Planning

In addition to providing a more definitive portrayal of the activities and interactions that comprise teachers' daily work and how teachers' orientations and priorities affect or determine the activities and interactions they engage in, this study also indicates the ways in which school architectural design supports and constrains teachers' work in and beyond the classroom by demonstrating how teachers construct and use space in their efforts to create effective and efficient workspaces and learning environments. These observations point to several elements of school planners' thinking and in school architectural design that require greater consideration.

The School as Teachers' Workspace

Student learning does not occur in a vacuum. Teachers are responsible for planning and directing the learning

activities that students engage in. To eliminate or reduce the importance of the teacher's role creates a skewed or unbalanced vision of the types of spaces needed and how teachers and students use those spaces. Throughout the planning and design process, school planners must remain cognizant of the relationship between the physical environment and teachers' work. They must always consider how the spaces and infrastructure they are providing affect teachers and preferred work patterns.

The Complexities of Teachers' Work

School planners must understand that teaching is a complex interconnection of interactions and activities that revolve around improving instructional practices, the classroom environment, and student learning. These interconnections are often made more difficult as a consequence of school architectural design, especially for teachers' whose orientations and priorities expand the traditional boundaries of their work.

The Significance of the Classroom

The classroom is a vital tool that many teachers use in their work, particularly those teachers whose work patterns are non-traditional. Very rarely is the classroom an anonymous, interchangeable space – even for the most traditionally oriented teachers. The significance of the classroom for teachers is an important factor to consider given the current trend toward shared, or universal, classrooms.

Teacher Workspace Beyond the Classroom

School planners' unawareness of the complexities of teachers' work and the increasing expectation that teachers expand the boundaries of their work is nowhere more evident than in the types of teacher workspaces provided outside the classroom. To fully support expanded conceptions of teachers' work, workspaces must be designed with consideration of how to support teachers' activities and interactions in and beyond the classroom, within and across subject boundaries.

Support Spaces Designed for Teachers

In addition to teacher workspaces, the services, equipment and spaces typically accorded teachers (such as teacher mailboxes, copiers, professional libraries, the staff lunchroom, and even restrooms) are generally located where they are most convenient for those individuals who maintain them (cafeteria workers, janitors, librarians, administrative staff), but are least convenient for teachers such that they rarely have the time or opportunity to make full use of them. The school as an organization and a place is provided to support teachers' and students' work and must be designed accordingly. Mailbox areas, lunchrooms and copy rooms as currently designed and located in most schools are lost opportunities to create spaces for teachers to build social and professional relationships with teacher colleagues based on trust and cooperation.

Creating Effective Environments

Finally, architects and others involved in the planning and design of school buildings do not create learning environments. Teachers create learning environments. School planners are responsible for providing a space from which teachers can create effective and efficient workspaces and learning environments.

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Power Relations and Staffroom Spaces

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Have you ever thought about where people sit in your staffroom? Of course, we all know about the people in whose chairs you sit at your peril, but what about the seating arrangements of everyone else? Who sits where in the staffroom can reflect wider power relations within a school, so understanding this can give you clues to other ways in which people and groups will interact (O'Boyle, 2001). In this article I'm going to look at some typical staffroom groupings, where they sit, and how this reflects their positioning in the school pecking-order.

We'll start with the teachers of the 'important' subjects of mathematics and science. Departments like this are big enough to form groups on their own, and often do. The mathematicians seem to be the most likely to use staffroom tables (demonstrating how hard they work and the seriousness of their subject). In staffrooms that have communal work areas, these are often colonised by the mathematicians, who spread their books and graphs all round them. Their ability to do this, given that these departments often have perfectly good offices elsewhere, reflects their official importance as teachers of core subjects and the pre-eminence, for league tables and to success in employment, of the subject itself (Paechter, 2000). They often see their subject as more rigorous than others (Paechter, 1995), and so remain somewhat aloof from the rest of the school, who of course, they think, are not quite as good as *they* are.

In the first school I taught in, the mathematics department (of which I was a member) used space in all sorts of ways to show who mattered and who did not. The four long-serving members of the department, and the three probationary teachers, had their own spaces at the mathematics table, while less popular, junior members were sqeezed out to other parts of the staffroom. One particularly disliked individual had been deliberately forced off the table the year before by the simple means of putting the banda machine (yes, it was a long time ago) on his workspace. I left after a year, and when I came back to visit I found that the staffroom had been transformed into communal work and relaxation spaces – apart from the mathematics department, who had insisted on keeping their table, where they sat, set apart from those lesser beings who taught other subjects. In one of my research schools, the mathematicians had managed to colonise over half of the communal workspace; included in this group was the former head of mathematics, now deputy head, who had gone so far as to move whole filing cabinet drawers into the staffroom rather than use his official office space (Paechter, 2000). This combination made the department and its allies a very powerful grouping in the school.

Science departments may behave in similar ways, though these are often so much of a grouping that they don't actually come into the staffroom at all. Ensconced in their cosy prep rooms, with technicians to make the breaktime coffee, they keep themselves to themselves (McGregor, 2003). The resulting tightly-knit groups mean that they can operate as a powerful block in staffroom discussions, and this again is supported by their status as teachers of what they and others see as an important, and rigorous, subject.

The other groups who often don't come into the staffroom at all are at the opposite end of the pecking order. Design and technology teachers, whether of resistant materials or of food and textiles, also have cosy alternative places in which to sit at breaktimes, and technicians to make and serve coffee. For home economists, in particular, the kitchens provide much better facilities than any staffroom, allowing them to have a proper lunch, served up on the china originally provided for the home economics model flat. At breaktimes in any case they are often dealing with bits of students' cooking that need longer in the oven; these can't be left, so the teachers stay in the warm kitchen to finish them off.

Even further down the pecking order, but very much present in the staffroom, are the supply teachers. They sit where they can, usually the darkest and least hospitable corner of the room, where colleagues have to make a conscious effort to visit them. They have their own friendships and camaraderie (theirs is the worst job in the school, after all) but they are not usually fully accepted into staffroom life, even after years of service in the same school. Their anomalous position as not being attached to a department is partly the reason for this, as is their colleagues' (unfounded) suspicion that they have an easier life than permanent members of staff, and the latter's envy of those supply teachers who have more exciting alternative jobs some of the time (Shilling, 1991).

An interesting grouping in many staffrooms revolves around, but is not confined to, male PE staff. This group consists mainly of young or youngish men who follow and play sports, and who talk about them loudly enough to be heard on the other side of the room. In Western society, sports are an important marker of masculinity (Bryson, 1987; Parker, 1996; Fitzclarence & Hickey, 2001), and

this group is no exception; they use sporting talk to show to themselves and others what fantastic men they are. As a group, they use this masculinity to dominate others, often taking up a lot of space, particularly if they have equipment such as a pool or table football table to congregate around. Talk in this area is likely to be of football, rugby, working out and hangovers, though the PE teachers themselves, being generally more active than the others, are also likely to drink less (though they talk about it just as much).

Of course this domination of non-work space and the loudness of this group in many staffrooms has an interesting inverse relationship to the importance of PE and its teachers in the curriculum hierarchy. PE is a very marginal subject; it is considered non-academic by outsiders, even at GCSE level. Its practitioners may be regarded as ''Thick Jocks', with brawn but very little in the way of brains' (Sikes 1988: 26), and find it difficult to take part in more formal staffroom discussions and manoeverings (Sparkes et al, 1990). This group is therefore physically dominant out of all proportion to their actual power within the school; they are the biggest noises in the staffroom, but only at breaktime, not in staff meetings.

Many staffrooms also have at least one group which is exclusively, or almost exclusively women, and reactions to it by other staffroom groups vary. In one school I researched a group of largely feminist young teachers was referred to sarcastically as the 'knitting circle' (the same staffroom also had a 'top table' at which sat mainly disempowered and disaffected older heads of department). In one of the schools in which I taught, this group consisted almost entirely of staff from a girls' school with which the much larger mixed school had been amalgamated a few years before. Its stability despite integration in the rest of the staffroom seemed to reflect these women's continued precarious position. Such groupings, however, can be a source of power to those without access to its more structural forms through school management systems. In one of my research schools, interpersonal alliances between women in the staffroom allowed them to drive forward interdisciplinary innovations in the teeth of dominant male opposition, effectively sidelining a head of department (Paechter, 2000).

Many schools, particularly if they have a stable staff body, also have one group consisting mainly of old-timers, those who have seen everything before. O'Boyle (2001) in a study of one staffroom in the south of Ireland, described this group as perceiving themselves as

> *the 'political wing' of the staffroom, due to the party political affiliations of four History teachers, union involvement, and their record of 'critical incidents' (Measor, 1985), where they sought to defend and relegitimise school traditions in the face of the Principal's and colleagues' disapproval (Ball, 1987).*

Their history of resistance, however, meant that this group had little influence with senior management. While they saw themselves as activists, committed to the school, they were perceived by others as serious blocks on change, to be manoevered around (O'Boyle, 2001). Although O'Boyle's Oldies group was mixed, staffroom demographics, with women more likely to take career breaks, mean that old-timers groups are often predominantly or exclusively male. Datnow (1998) describes one such group who were known to the rest of the staff as 'the Naysayers' (46), and who resisted any changes that would alter their settled school lives. Male old-timers groups such as these may also use sexist banter and put-downs of women attempting innovation (Datnow, 1998).

Finally, many schools have a separate staffroom or area where it is permitted to smoke. These are interesting spaces, with a role similar to that of the space behind the bike sheds for students. Although many teachers of course do visit this room to service their nicotine habit, many others do not, and are there simply for the company. Smoking rooms in schools tend to be the hotbeds of rebellion, or the places where the action is. They are perceived as the place to have fun, rather than to work, where the cool people hang out. In one school where I researched, while the main staffroom was usually empty, the smaller smoking room was packed, with people crammed two to a chair and on the floor. It was obviously the place to be, though I never quite worked out why – maybe it was something to do with the pool table and associated sporting fraternity that dominated the main room.

School staffrooms are, then, spatially very interesting places. Mapping these rooms, noting who sits where, with whom, and why, can give important insights into the prevailing power relations within a school at any particular time. These are not static, of course, but change over time, and can, indeed, be manipulated by the judicious use of space either by senior managers or by individual teachers. Setting out the staffroom in a particular way can make it into a workspace, a place of relaxation, or (as in the case of one school I worked in, where whatever we did the cleaners put the chairs back into two rows facing each other every morning) a waiting room where no-one stays for very long.

Individuals can also manipulate staffroom space and the groupings within it to Teachers wanting promotion, or to get off the treadmill, can change the management's perception of them by sitting with a different group, or by staying out of the staffroom altogether. As the men who sit with the male PE staff hope that their sporting masculinities will rub off on them, a more junior teacher sitting with the heads of department may hope that this will lead them to be seen as more senior in the eyes of the school management, as well as allowing them to pick up some of the less public information about the school. Moving away from the periphery, such as the space by the door, into the main body of the staffroom, can make a new teacher feel that they have finally arrived, while a permanent member of the supply staff may eventually be allowed to join a mainstream staffroom group.

So next time you are in the staffroom at break or lunchtime with nothing urgent to do, have a look at the spatial arrangements. Draw a map of who habitually sits where, and what advantages and disadvantages this brings them. Consider how you might intervene in these spatialised power arrangements, and maybe even try something out. What you discover could be very interesting.

Carrie Paechter is collecting maps and accounts of staffroom spaces. If you would like to contribute, please send them to her at: Educational Studies, Goldsmiths College, New Cross, London SE14 6NW.

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Revoicing Classrooms: a spatial manifesto

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Multiple Literacies and Multiple Identities

Why is the physical learning environment in schools largely ignored by teachers within pedagogical practice? The cellular classroom has remained seemingly immutable since the Industrial Revolution, with spatiality playing a silent and subconscious role in schooling other than related to concerns around surveillance. Yet school buildings clearly reflect power relations as evidenced by elite sandstone schools set in leafy suburbs, in stark contrast to the incarcerating prison-like egg-crate schools in industrialised mortgage belts generally dominated by single parent families.

These stark differences are striking illustrations that space is neither innocent nor neutral and is an instrument of the political. Space has a performative impact on its occupants in prohibiting and establishing social orders (Pouler, 1994). It commands and locates bodies, incorporates social action and is a fundamental and all-pervasive source of power. Buildings formalise relations and guarantee the performance demanded by authority. Power is structured by architecture and architecture celebrates and monumentalises the structural networks of power. It is in this context that the design of schools emphasises their status in society.

Critical ethnographic research by this writer has examined how an active engagement with space and place within schools can demonstrate resistant and emancipatory possibilities for those who are disadvantaged through gender, class, race or socio-economic position in society. One particular study was grounded in an ethnographic and collaborative 'courtyard project' at the ABC (asphalt, brick and concrete) high school, in which students, teachers and the researcher worked together on such spatially liberative concepts in the classroom (Fisher, 2002b).

The ethnographic phase of the project followed a deep theoretical analysis of critical pedagogy (Giroux, 1996; Shor, 1996), sociology (Soja, 1989), identity formation and the subconscious (Keith, 1996) and how these factors interrelate with a spatiality of learning. It crossed over and attempted to draw together other disciplines including critical psychoanalysis (Jameson, 1996), critical spatial theory (Lefebvre, 1991), critical urban design (Ellin, 2000) and critical human geography (Benko, 1996).

The study also exposed the hegemony of the design professions who excise spatiality from the domain of teachers and students within schools, increasing their sense of spatial helplessness and disembodiment. A deep spatial silence was encountered in students, a silence which is coupled with the apparent societal perception that school should be carceral and egg-crate like, as this is how society has always understood that schooling should be physically represented.

In contrast, within the classroom at a 'grassroots level', students and teachers were able to demonstrate through a collaboratively developed spatial theory and practice related to their everyday lives and lived realities and identities (that is, within the school boundaries) an emancipatory, subversive and insurgent form of placemaking which could demonstrate social justice in schooling through a critical praxis (Schneekloth, 1996). Such a collaborative spatial approach provided a powerful alternative means of experiencing a society that was relevant to their own lived worlds.

This practical demonstration of emerging and critically re-read psycho-socio spatial theories within school architecture strongly suggested that school spaces and places should become part of a 'body-space-society' trialectic (Soja, 1996) in schooling as a way of re-engaging students with learning. In so doing this spatial praxis could also provide a model for an integrated and grass roots 'architecture of resistance'. Furthermore, such an approach might also demonstrate a liberatory teachers' practice by engaging with students in ways that would be both transformative and sustainable (Smyth, 1999). This spatial-pedagogical-social praxis is possible in the classroom or at the whole school level and can be an agent for whole school reform. Following the 'courtyard project', the ABC High School decided to become an 'eco-school', a whole-school transformation which emerged out of action within a single classroom.

The Role of Educational Architecture in Society

This theoretical and ethnographical background needs to be 'activated' across school systems and three key issues bear on this activation process. Firstly, the importance of educational architecture in society, secondly, the relationship between learning and the built environment, and finally the role of teachers in co-creating learning spaces.

The unique role that educational buildings play in society is recognised in a number countries through their Educational Architecture Sub-committees. The RIBA (Royal Institute of British Architects) in the UK and the AIA (the American Institute of Architects) in the United States have both supported such activities for decades. A related body, CEFPI (the Council for Educational Facility

Planners International) also exists in the US but, like the RIBA and the AIA, it does not seem to engage directly with teachers and students, nor with pedagogical practice or the educational curriculum in any significant way.

It is in the formal environment of the classrooms and the informal environment of the campus grounds that architecture is lived, learnt and experienced by teachers and students. It is in these spaces and places that I believe we develop our architectural vocabularies and spatial literacies during these formative educational years. If this is true, then school, college and university architecture sets the spatial benchmark for environmental quality later on in our adult lives. If we have positive experiences in our early learning environments then maybe community expectations regarding high quality public spaces will be enhanced resulting in better architectural outcomes across the whole community. Indeed if these spaces are co-constructed using principles of social justice, then it might just be possible to demonstrate that a more socially just world is not out of reach of our youth.

Yet, as noted above, my research has found that architecture seems to be perceived primarily in the sub-conscious. Despite this, the impact of the physical environment and the rapid changes in information technology and communications on learning has spawned literally hundreds of studies on educational architecture by educational researchers worldwide (Fisher, 2000a). Most of these, however, are quantitative studies which attempt to link student test scores to the condition of school buildings, with little attention paid to qualitative perceptions of students and teachers about their learning environments.

The 'actuality', or phenomenological experience, of the interaction between learning and the physical environment has only really been extensively explored using the natural environment and the school grounds through such empirically-based agencies as Learning Through Landscapes. What educational architectural academies, such as the School Design and Planning Laboratory (at the University of Georgia) and Designshare.com (run by CEFPI) should be exploring is the interactivity between the built environment and learning through action-learning projects which engage students and teachers in architecture in much the same way that Learning Through Landscapes operates. It is only through living, controlling and shaping learning spaces and places that they will become real and not simply experienced as passive containers for learning.

The Role of Teachers in Placemaking

Because of this apparent sub-conscious and passively perceived nature of space and place there has been little change in the concept of the classroom over the last 200 years or so as noted earlier. This period covers the later phase of the Agrarian epoch and the 'ecclesiastic' classroom, the Industrial Revolution with its Taylorist notions of control to produce factory workers and, more recently, the Information Age with its so-called flexible learning spaces. Yet the seeming immutability of school space has prevailed despite the well-meaning attempts of designers and educational authorities and their constant struggle for change. Teachers in all educational sectors will continue to resist change and revert to the time-tested concept of the classroom unless it can be demonstrated that the physical learning environment can influence learning outcomes (not withstanding the emergence of managerialism and the intensification in teacher's work allowing little time for them to seek innovative practises). There has been no sustained attempt at a holistic change to approaches to educational reform that integrates all the forces acting on it and especially including the power of space.

Now, in this so-called fourth epoch of the 'Knowledge Age', proponents of popular forms of education suggest that learning will become interdisciplinary, collaborative, problem- and project-based (Lackney, 1998). They argue schooling will now involve learning in the community and industry, with sustainable personal and social communication being the key to such trans-disciplinary activities. Neither Internet chat rooms nor classrooms alone can achieve this objective.

Pedagogical concepts such as constructivism (negotiated individual curricula), multiple literacies (including spatial), multiple intelligences (Gardner, 1999), distributed learning (facilitated by mobile and wireless communications) and integrated curricula will all require a rethink of the spatiality of learning. However, such innovations as the Australian Science and Mathematics School (Fisher 2002), which attempt to embrace these ideas, are futile unless they become part of the mainstream of schooling. The ideas demonstrated in these prototypes must be 'leveraged' into all schools, colleges and universities for there to be any significant reform in schooling. More particularly, additional resources (a scarce commodity particularly in Government schooling) need to be provided to allow professional development time to make these ideas work sustainably.

Collaborative Placemaking

One way forward is through a campaign which relates space and space directly to changes in pedagogy, curriculum and ICT by placing spatial literacy firmly on the agenda of teacher's own learning. This can be tackled through teacher professional associations, a serious rethink of the BEE (Built Environment Education) program and through such related activities as art in architecture, art in public spaces, artist in residence programs, SchoolWorks and the Learning Through Landscapes Trust. School designers need to engage in these programs directly, together with the teachers and academic staff, for any real reform to classroom design and the overall structure of campus planning to become sustainable. Any sub-committee on educational architecture should work with teachers, not just with other architects and educational authorities. A more radical agenda for such an activist group might include such strategies as:

- Presenting innovative architectural concepts to professional teacher associations and inviting panels of teachers and academics, not just principals and vice chancellors, to meetings of educational architects to discuss issues around rethinking school, college and university spaces and places
- Using art in architecture, art in public places and artist in residence programs on educational campuses to increase interest in architecture, including 'architects in education programs'
- Developing curricula for a one-day teacher professional development program on place and space in education to be run by the RIBA in association with the Community Arts Program

- Developing Built Environment Education programs with a much more ambitious agenda related to spatial literacy and architectural vocabulary
- Using educational architecture as an educational tool
- Sponsoring a demonstration project which shows how a 'school of today' can be economically, environmentally and socially (the so-called triple bottom line) converted to a 'school of tomorrow', rather than focusing only on new schools

Future Action

There are hundreds, if not thousands, of already existing school, college and university classrooms that need to be converted to make more functional sense in the 'Knowledge Age'. Whilst such projects will not result in large fees for architectural practitioners, a collaborative rebuilding process will ensure that teachers and students will become much more fluent in matters architectural. Such small restorative projects are manageable in the time frames and within the curriculum constraints of a term, semester or year and can realistically be achieved within limited refurbishment budgets.

Schools, colleges and universities are ultimately cultural interpretive centres. We should be pursuing the development, the production and the experience of the interpretation of our society through the built learning environment actively with its current and future citizens, rather than simply for them.

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USEFUL LINKS

www.coe.uga.edu/sdpl
The Schools Design and Planning Laboratory at University of Georgia

www.edfacilities.org
USA Ministry of Education Clearinghouse for Educational Facilities:

www.designshare.com
Case studies of school, college and university designs

www.cefpi.com
Council for Educational Facility Planning International

www.school-works.org
School-works participatory project, 2000

www.ltl.org
Learning Through Landscapes Trust.

www.raia.com
BEE (Built Environment Education program of the Royal Australian Institute of Architects)

The Use of Space in 21st Century Education Culture

HELENA CAMPION
Helena Campion is a Tutor in Education in the School of Education and Lifelong Learning at the University of East Anglia. In this article she looks at the current government initiative 'Schools of the Future' and asks how it might influence pedagogy and practise in 21st century schools.

'The prize is great. We must ensure we have a standard of school that our young people deserve, inspirational well-designed schools to motivate teaching and learning, and up-to-date facilities to enable us to compete as a world-class economy in the 21st Century.' *David Miliband, School Standards Minister* [1]

The 'great prize' of 21st century education is that we equip the children of today to become economically and socially valuable members of society and the minister, in this press note, links the winning of this prize with the provision of inspirational and well designed school buildings. The announcement of the 'Schools of the Future' initiative and comes along as the first classrooms under the previous Classrooms of the Future [2] initiative are being brought into use in 30 areas around the country. These projects have allowed schools, Local Education Authorities and other interested parties, such as architects and planners in school building design to explore ideas of what school space will look like in the new schools of the 21st century. Crucially the project also gives us an opportunity to find out how these spaces will enable the development of pedagogies and resources which will facilitate children's development to become the valuable members of the 21st century society to which we aspire.

The prize is indeed great. The Department for Education and Skills produced a video [3] about the Classroom of the Future which promised a new era in education where pupils would have access to materials for self-directed learning, where old and new systems of information would be combined and where the needs of all pupils would be met, regardless of their individual physical and learning needs and where the provision of learning technologies was integral to the pedagogy of the setting. However, before we claim this great prize for the learners in our 21st century schools and our society, we need to examine how these projects might help us move forward. This needs to be a consideration both of the purposes and remits of the projects and of the current educational context and climate.

The Oracle studies in primary classrooms [4] which began in 1976 and which have been reviewed and added to since, found that although aspects of school spaces and their use appear superficially to have developed, the appearance of a change in pedagogy is illusory. One small but illuminating finding is that while pupils are now, on the whole, seated in groups in their classrooms and the teacher is more able to move among the groups than they were, pupils still work on the whole as individuals with limited contact with their teacher. The Department for Education and Skills has recently published its new strategy document for primary schools, Excellence and Enjoyment [5] which calls for teachers to 'make learning vivid and real' through 'enquiry, creativity, e-learning and group problem solving'. Based on what Galton and his fellow researchers found the successful embedding of these pedagogies in the way school spaces are used may still be a long way off. In the secondary sector changes are beginning to take place in order to enable some pupils to pursue more vocational studies in the post-14 phase. The school facilities and spaces needed will be substantially different from those required of the current GCSE and A level led systems of teaching and learning.

This pedagogy which is characterised by what might be called at best, slow progress and at worst inertia, is also born out in the field of Learning Technology, in the British Education and Communications Technology Agency (BECTA) ImpaCT2 study [6] reporting on the effect of learning technology on pupil learning and attainment. Although in the majority of cases the study found that use of learning technology did have a positive impact on pupil attainment, the results also showed that the differences that learning technology made to pupils attainment in national tests were not large or consistent across phase and subject. This is particularly disappointing given the significant funding given since 1996 for the provision of hardware and software in schools, through the National Grid for Learning funding and training provided for teachers through the New Opportunities Fund. There is no lack of vision, however, in both learning technology and in the field of innovative designs for school spaces where learning technology can be effectively used. The difficulty emerges in the practise and implementation.

It may be that in both terms of school pedagogies and learning technology there is still some way to go before the great prize, of creating economically and socially valuable members of society in the 21st century is won. The question of how we design school buildings to bring us closer to this goal is the subject of the Schools of the Future initiative. It is to be hoped that these initiatives will have a positive impact not only on the new spaces built but also on developing effective pedagogies in existing buildings.

When the Classroom of the Future Initiative first came about, the intention was to explore the possibilities for new school buildings and in learning technologies. These buildings were to be designed along environmentally responsible lines. They were to provide access for all learners whether members of the school community with special needs or members of the wider community pursuing learning outside of school hours. In addition they

were to allow for the development of methods of teaching and learning which would be innovative and technological. This vision, and a vision for the pedagogies which such spaces would engender, was set out in a government video.[7] This video suggests that the classroom of the future 'is fast becoming a reality' and that teaching and learning are 'transformed' in this environment by the application of learning technology. It may be that in these environments the pedagogies are being transformed, but the real test of these initiatives will be when they have a substantial effect on the teaching and learning outside these spaces. This transferability of the outcomes of the pilot projects and their ability to influence the use of space and learning technology should be the most important test of success.

In the year 2000 LEAs bid for the money to develop their pilot own projects in the Classrooms of the Future project. As a result 12 LEAs shared £13 million funding for 30 pilot projects. The project was heavily influenced by the 'design drivers' [8] which called for standards to be raised through teacher collaboration and the use of learning technology. Other drivers for the design were issues such as inclusion of pupils with Special Educational Needs in mainstream schools and the need for flexible and adaptable spaces which were also suitable for use by the wider community. This project was to be the forerunner of the current Schools of the Future initiative, which brings together ideas about school space, issues of capital funding and consideration of pedagogical issues.

Under the auspices of Classrooms of the Future, there are a range of projects around the country. Devon County Council [9] have built classrooms at a secondary school and two of its feeder primary schools. These spaces are designed to be used both by the schools and their local communities. The design brief has considered issues of energy use, sustainability of building materials and contemporary educational issues. The designs were also made with the idea that these projects could be replicated in other schools. These buildings are simple, and by the standards of other projects relatively cheap. At the time of writing some of these buildings are largely finished and ready for use. A more complex project is in the Borough of Kensington and Chelsea in London. Their project is described as a 'learning laboratory' which enables children to explore space, cyberspace and outer space, providing a range of learning opportunities for children including a chance to see how the building was made with the use of transparent building materials. This project is ambitious both in terms of its aims for teaching and learning and in the visual impact of its radical design.[10] The diversity of the projects is characterised in these two examples. For £900,000 Devon has added 3 classrooms which are simple in design, yet replicable. At a cost of £750,000, Kensington and Chelsea are producing just one classroom, but with a more complex and ambitious brief. It is hoped that what can be learned from the diversity of projects will be both replicable and grounded in reality while offering opportunities to innovate in terms of design, learning technology and pedagogy.

The Schools of the Future project was launched in 2002, with the publication of the DfES building bulletin number 95. This document brings together the issues of emerging pedagogies and curriculum changes in primary and secondary education, with the possible impact of learning technology and provision for all the learners in the community. It goes on to tackle the design issues of space, the learning environment, and how to plan in a sustainable way. Finally the document considers the building process. The vision is supported by what is identified as 'sharply increased' (DfES 2003, p3)[11] funding in school buildings. This document provides a starting point for progress in school building design and use. All interested parties can afford some optimism given this document as a starting point.

The hope is that Schools of the Future will enable the outcomes of the Classrooms of the Future project to make real differences to newly built school spaces in the 21st century. It is also hoped that where learning technology can be used effectively and pedagogies around this are developed, these will be transferable into all our classrooms. However, looking again at the ORACLE studies in primary classrooms, we must be mindful that simply changing a space or the way furniture and resources are organized out does not in itself lead to pedagogical innovation. We have also learned from ImpaCT2 that providing funding for the provision of learning technology and training teachers in its use does not lead to significant benefits in what the children in our schools achieve.

It would be difficult to argue that the prize identified by David Miliband is not well worth winning. But despite the vision and the funding seeming to be in place, we are far from victory. The challenge is laid down to all who work in this area, pupils, teachers, school managers and administrators, designers of curricula and researchers of pedagogies, architects, designers and builders. We need to take the opportunities we are presented with in these initiatives and bridge the gap between the idea and the reality. Crucially the inertia in pedagogy and the use of learning technology in schools should be tackled, in partnership with the designers of our new spaces for teaching and learning. The competition for the great prize of 21st century learning has now well and truly begun.

Notes

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User Involvement in School Building Design

SHARON WRIGHT
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School Works is a not for profit company which works to link the design of secondary school buildings with their impact on the teaching, learning, culture and management of those schools. Participation and partnership are at the heart of our approach, connecting those who work and learn in schools with those who design and build them. We argue that there is a need not only to ensure school buildings are beautiful and inspirational, but that they are functional, effectively linking design quality with the management and organisation of learning spaces.

At its worst, the built environment can undermine the learning process, inhibit pupil attainment and damage pupil and staff well-being. At its best, good design has the capacity to enhance the educational experience and transform the school as a learning organisation and workplace. The way in which buildings are designed is informed by a complex range of personal and professional ideas and understandings: issues of structures, space, light, materials and technology; the creativity of the architect and their grasp of the client's needs; and a range of educational policies which sit alongside assumptions about what teaching and learning will be like in the future. But as Annesley, Horne & Cottam (2002) identify, 'buildings affect people – the way they feel, experience, learn, work and relate. Buildings support particular organisational forms and operational models. They communicate messages to the people who use them, and the people who look in from the outside.' All these factors combine to influence the effectiveness of the school in terms of pupil behaviour and attainment, teacher performance, recruitment and retention and the relationship between the school and its local community.

We believe that there is a need to take a radically different approach to the *process* of designing schools. In particular, we challenge the idea that you can build a high quality, effective school for the future from a design brief written just by planners, LEA officials or a headteacher. We argue that school design should develop through a process of engagement between the education community (including pupils, parents, and local residents), designers and those who will build the school. Moreover, this process of participation is not just about creating better buildings but should act as a catalyst for change within the school. It can empower people, encourage innovation and collaboration, and ultimately contribute to improved learning for all.

There is a growing recognition that involving stakeholders in designing school buildings has a significant contribution to make to better quality environments and more ownership amongst the client group. Dudek (2002) says that 'design decisions can rarely be made in isolation…… the views of architects are often deemed irrelevant within the framework of a more general education debate.' We need to create real understanding of the expertise each stakeholder brings to the table, and how best to use it.

This growing realisation has seen a move in central government to increase user involvement and DfES, the Commission for Architecture and the Built Environment (CABE), and the Audit Commission have all recently published documents which urge more participation at all levels. The DfES, for example, in their *Building Schools of the Future* document (March 2003) stated clearly that 'every community – parents, teachers, employers and local authorities – should play a full part in agreeing the capital strategy, locality by locality. It is essential that planning should be 'bottom up' not 'top down'.' The extensive participation needed to make this statement a reality is a challenge both for central government, and those at the local level.

Significantly, the stakeholder group outlined by the DfES above does *not* include pupils and potential pupils of schools. Other processes, such as those developed by School Works and the Sorrell Foundation's *Joinedupdesignforschools* initiative, treat children's views as equally important to those of adults. An evaluation of the outcomes of the projects, which treated young people as clients of good design aimed at bettering their learning environment, concluded that they 'increased school pride and belief leading to a stronger sense of motivation, empowerment and autonomy for the individuals and organisations involved' (Bentley, Fairley and Wright, 2001),

So it is recognised that participation in relation to school building design adds enormous value. Clark (2002) sums this up when she says : 'The benefits of authentic participation include the emergence of better decisions and more appropriate solutions through the harnessing of stakeholders' knowledge of their surroundings.'

Despite this, teenagers rarely have a voice, or a choice, in how their education is delivered and it cannot be a surprise that pupils who feel disenfranchised grow into young adults who are apathetic at best – and sceptical at worst – about their ability to influence democratic processes at the local and national level. In 2001 MORI, commissioned by the Carnegie Young Peoples Initiative, surveyed 18-24 year olds and found that 71% of young people wanted to have a greater say in decisions about their community, including their schools. The survey also showed that half the young people asked felt their views were not taken seriously because of their age. This survey was taken a week after the General Election in

2001when MORI estimated that only 39% of 18-24 year olds had voted. A low figure in an election which recorded the lowest turnout since 1918, and the lowest ever under the full democratic franchise, according to the Electoral Commission. If we are to stop young people becoming frustrated and disengaged from the political process, we must show them that their views are important and that they can make a practical difference to their own local area.

There are moves to change the situation. Many organisations, from Central Government's Children and Young People's Unit, to organisations like the Citizenship Foundation and Carnegie, are promoting the new Citizenship agenda in schools. The importance of debating rights and responsibilities is accepted. The growth of School Councils is a realisation that pupils need to be engaged early in issues of decision making and democracy.

At School Works, we see this as a critical step forward – but much still needs to be done. In June 2003, Ofsted looked at the planning and implementation of citizenship within the national curriculum in 25 schools and found that 'In over half of the schools, the management of the introduction of citizenship has been unsatisfactory, mainly because the full implications of citizenship as a National Curriculum subject were not understood or, in a number of schools, because they were not accepted.' The report goes on to say 'In only a minority – one in five schools – is the citizenship curriculum well developed'.

In terms of real involvement, it is not enough to simply consult young people. They must be encouraged to actively participate, set their own indicators of how they will measure success, and monitor to see whether the outcomes they expect are being delivered. This is a challenging agenda, but a rewarding one which promotes ownership and understanding and which underpins School Works' philosophy. And we know our approach makes a difference. Our first partner school, Kingsdale in South London, was awarded £9 million by the Department of Education and Skills to implement our proposals. A large co-educational comprehensive, Kingsdale was in special measures at the start of the process. The classrooms were in disrepair, the corridors were vandalised, the toilets so awful pupils would go home rather than use them. Steve Morrison, the new headteacher, asked us how he could turn the school around.

We ran an architecture competition and selected dRMM, a talented young practice. In partnership with the school, our multi-disciplinary team ran workshops with pupils, staff, parents and the community to understand the direct and indirect effects of the school building on learning and culture. As well as the design issues identified above, the workshops looked at management and behavioural issues. The solutions for Kingsdale focused on the type of school it wanted to be, and how to design a building which supported that vision.

And it was the pupils who gave us some of the most useful insights into what needed to be different. We simply cannot believe that school design will be effective without asking pupils their views. This is a more challenging process, and you need to manage expectations carefully, but pupils at Kingsdale have a sense of ownership about the project that it is hard to imagine otherwise.

So, at Kingsdale, where the major phase of construction is now underway, corridors and timetable have been redesigned. There are clustered flexible spaces for interactive group working in a way that resembles and prepares for the hi-tech workplace. There will be access for the local community to a new auditorium and library. And the school is thriving. It is no longer in special measures and GCSE A-C results in 2002 increased to 41% from 16% the previous year.

Too often we hear that there is not enough money or time to involve users. That the Private Finance Initiative (PFI) does not allow for creative and innovative processes. We are out to prove that this is not the case. Recently we have been working with three schools which will make up the community of a new PFI secondary school in Northampton. As well as taking a large number of pupils and adults on a day long tour of inspirational spaces and buildings, we brought together a talented process team of architects, educationalists, a communications specialist and an educational psychologist to facilitate a two day Design Festival for 140 pupils and adults covering 40 workshops on a range of issues identified as important to the new school. We produced an exhibition and report on the process, and provided the County Council with criteria against which the school and authority can judge the bidders for the PFI contract – all based on the views expressed by users and potential users of the new school.

In order to share what we know works, we have produced a 'Toolkit' on user involvement in school design and have developed a web game 'Tike and the Missing Mutt' aimed at 11-16 year-olds to get them thinking about their learning environments. And we continue to push hard for new schools to be inspirational buildings which show the value we place on education in our society. If you ask a random selection of people 'What is your favourite building and why?' they will all have different answers, and they will all be right. And it's not so much which building people chose that is fascinating, it's why they feel a deep attachment to a certain space. That is what we should be aiming for from our schools. It's not just the 'Wow' factor. It is the ability to be engaged by a space, to feel part of it, and for it to make you feel special. We all have our own favourite buildings for a whole variety of reasons. I wonder how many of them are schools. My guess is relatively few, if any at all.

But if lifelong learning is to be a reality, we need to make young adults want to come back to schools to continue to learn or to teach others. One of the pupils at Kingsdale School has just finished her GCSEs and is moving on. I asked her what she wanted to do next and she told me she plans to be a teacher and would like to come back to Kingsdale to 'put something back into the school'. She has been with the School Works process from the start, and feels huge ownership and pride in how the school is being transformed. She understands that she, and her fellow pupils, have played a critical part in making the new school a reality. She is delighted that her younger brother will benefit from an innovative building which includes the largest inflatable roof of its kind in the world designed to provide a spectacular new social space from a previously tired and under used courtyard.

A school is more than a building – it's a community. It's a place where individuals can learn, feel safe, share a common vision, be respected. And the building, and how it is created, can make an enormous contribution to that. So, if we are to show that education is valued in our society, we should be building schools which embody their status and

which make communities feel proud. If we are to attract the brightest and best into teaching, we need to be giving them fantastic working environments. If we are to build citizens of tomorrow who can engage in democratic decision making, we must offer them the chance to influence what is most important to them now.

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Book Review

The School I'd Like'…Children and Young people's Reflections on an Education for the 21st Century
CATHERINE BURKE & IAN GROSVENOR, 2003
London: Routledge Falmer

To hear pupil voices, you first have to learn to listen …

With over twenty years experience of working within schools, I was initially attracted to this volume by it's relatively simple design and layout, the attractive children's art, its short length, and with a title wholly relevant to all those who work in and with educational establishments. With a degree of professional 'smugness', I was eager to dip into the text to confirm what I truly believed to be 'the pupil voice'.

What I found, however, both contradicted and provocatively challenged a number of personal, and educational 'sacred cows'. In an unintentional, yet rather patronizing way, I had expected to be mildly amused by the pupils' thoughts, ideas and opinions about school improvement. I anticipated the stereotypical kind of 'chips every day', or 'be allowed to take my dog to school' pupil responses. Instead, I was met with an incisive, powerful, and unsettling perspective of school reform, voiced by pupils who clearly (and quite rightly) felt ignored, undervalued, and severely neglected as key educational stakeholders.

Indeed, as the volume states in the preface:

> *No one reading this collection will be left feeling content that the education system in the UK is meeting the needs of children and young people toady.*
>
> *(Preface xiii)*

'The School I'd Like', arises from the essays, stories, poems, pictures and plans presented by the children and young people between the ages of 5 and 18 who took part in 'The School I'd Like' competition launched by the Guardian in 2001.

With a tight focus on 'teaching and learning', the text sets these views alongside the voices of children recorded in 1967 through a similar activity organised by the Observer newspaper.

As opposed to the notions of uniform, food, and pets that may be initially anticipated by some readers, the students' responses are grouped into four, key, themes addressing:

- How children wish to learn
- The identification of sites of 'disease' within today's educational system
- How the built environment is experienced
- Questions about the reconstruction of teaching and learning for the twenty-first century

A most striking feature of this text is the depth of perception, passion and feeling expressed by the young people. Their enormous desire for empowerment and change is only matched at times by the feeling that whilst believing ourselves to be a caring, considerate, and *listening* profession, and despite the vast array of systems, structures and 'pupil voice processes' that we establish, we are failing to learn from the present, as well as the past.

As Blishen states, in response to the initial exercise undertaken in 1967:

> *No-one will read this selection without feeling some shame at what we have done to these children. Who will answer them? Who will explain to them why they should not have what they demand?*

Who indeed?

As co-authors, Burke and Grosvenor starkly remind us of the often-observed characteristic of education in the UK that, in spite of regular overhauling of policy and practice through national legislation, so much of the experience for children and their teachers remains the same. As a profession, we should seriously consider how this relates to the present government's current rhetoric that schools can be 'transformed'.

The evidence of this book suggests that our children and young people certainly have ideas or their own as to how this agenda can be achieved. Surely it the responsibility and moral duty of all those involved in educational policy and practice, to start *listening* in a real, and practical way.

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