



Healthy Environments

EARLY CHILDHOOD IN FOCUS

Series edited by Martin Woodhead and John Oates

Early Childhood in Focus is a series of publications produced by the Child and Youth Studies Group at The Open University, United Kingdom, with the support of the Bernard van Leer Foundation.

The series provides accessible and clear reviews of the best and most recent available research, information and analysis on key policy and practice issues, offering clear messages on core policy topics and questions, spanning all aspects of early childhood care and education, as well as the full age range, from infancy through to the early years of school.

Each publication is developed in consultation with world leaders in research, policy, advocacy and children's rights. Many of these experts have written summaries of key messages from their areas of work especially for the series, and the accuracy of the content has been assured by independent academic assessors, themselves experts in the field of early childhood.

The themes of the series have been chosen to reflect topics of research and knowledge development that address the most significant areas of children's rights, and where a deeper understanding of the issues involved is crucial to the success of policy development programmes and their implementation.

These publications are intended to be of value to advocates for the rights of children and families, to policy makers at all levels, and to anyone working to improve the living conditions, quality of experience and life chances of young children throughout the world.

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Healthy Environments

Editors

Liz Brooker
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EARLY CHILDHOOD IN FOCUS 8

To exercise their rights, young children have particular requirements, including access to quality health and nutrition services and safe and emotionally fulfilling environments where they can play, learn and explore, under the responsive guidance of parents and other primary caregivers.

(United Nations General Assembly, 2010, paragraph 59)

The experience of childhood is increasingly urban. Over half the world's people – including more than a billion children – now live in cities and towns. Many children enjoy the advantages of urban life, including access to educational, medical and recreational facilities. Too many, however, are denied such essentials as electricity, clean water and health care – even though they may live close to these services ... One consequence of this is that children already deprived remain excluded from essential services.

(UNICEF, 2012, p. iv)

The attainment of full inclusion ... is realized when children are given the opportunity, places, and time to play with each other (children with disabilities and no disabilities).

(UN Committee on the Rights of the Child, 2006, p. 19)

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Contents

<i>Preface</i>	ix
I. Physical environments and children's well-being	1
Environments shape children's development	2
The right to a healthy environment	4
Water and sanitation	6
A safe and secure place	8
Disasters and emergencies	10
Anticipating the impact of climate change	12
POLICY QUESTIONS	14
II. The challenges of living in cities	17
Increased opportunities or increased inequalities?	18
Making the home environment safe	20
Improving governance and planning	22
The Child Friendly Cities Initiative	24
Planning urban spaces for children: a research project in Delhi, India	26
Community action case study: providing toilets for children	28
POLICY QUESTIONS	30
III. Making spaces for (and with) children	33
The social production of children's spaces	34
Supporting children's right to play	36
Safe spaces following emergencies: a Ugandan case study	38
Inclusive spaces for early childhood	40
Design for the built and natural environment	42
Democratic spaces for early childhood	44
Designing spaces with children	46
POLICY QUESTIONS	48
<i>References</i>	50
<i>Photography</i>	54

Preface

Young children do not grow up in a vacuum. There are close linkages between the physical world they inhabit, the quality of their lives, and their well-being. The homes they live in, the water they drink, the air they breathe, the traffic on their streets, and the quality of their preschools and neighbourhoods all have impacts on their development. Recognising the effects of children's environment is a core principle of child development research, yet textbooks typically give much less attention to children's physical environment than to their social environment, or to the interconnections between the two. The physical environment isn't just the context in which children develop. It is a precondition for their survival, and intimately linked to the process of growth, and development of skills and identity. For example, the child's right to life, health and development requires that they (and their principal caregivers) live in safe, secure spaces, with adequate nutrition, water and sanitation. The child's right to education requires preschools and schools in places they can safely reach, and classrooms fit for learning. The child's right to play, rest and recreation requires physical, psychological and social spaces that encourage playfulness. Finally, respecting the child's right to express their views starts with understanding their experience of the places they inhabit.

Section 1 of this issue of *Early Childhood in Focus* draws attention to some key global challenges in providing healthy physical environments. We recognise that multisectoral policy responses are needed to ensure adequate housing and improved water and sanitation, as well as recreational spaces. For young children, physical spaces are closely intertwined with emotional security and feelings of well-being.

Section 2 explores the opportunities and challenges of living in urban environments. The conditions in many urban slums violate children's rights, as well as being among the most visible expressions of inequalities and social exclusion. While international agencies and policymakers are tackling the major issues of city life – inadequate housing, water and sanitation; poor nutrition; pollution, crime and violence – we need to recognise the particular impact of these factors on the youngest children. Young children are especially vulnerable to the physical harm that urban environments create from pollution in the air, toxins in the ground, contaminated water and waste dumps, traffic, and unsafe housing. Their homes, as well as their neighbourhoods, may be unhealthy places to grow up in.

Early childhood practitioners have always paid close attention to the design of environments specifically for young children. Section 3 reviews a range of such spaces, including innovative 'democratic spaces', and 'child-friendly spaces' in areas affected by disasters and emergencies. Despite the importance of these specialised child-focused spaces, young children's lives are spent predominantly in their homes and immediate neighbourhoods, which must remain at the forefront of efforts to promote healthy environments for young children.

Liz Brooker
Martin Woodhead
Editors

I.

Physical environments and children's well-being



Children are born into a material world which shapes their health, social relationships, opportunities and identity.

An enabling and supportive material environment is fundamental to realising children's rights, including their rights to survival and development.

The quality of housing, water and sanitation has a direct impact on young children's health. Security of tenure, adequate space and opportunities to play and explore are more indirect influences on well-being.

Children's play and learning, their close relationships and social interactions are dependent on the quality of places and spaces they inhabit.

Children who are already growing up in poverty and other difficult circumstances are the most vulnerable to the environmental impacts of emergencies caused by human activity or nature, including the effects of climate change.

Environments shape children's development

The material environment has a direct impact on children's lives

Children are born into a material world and inevitably this shapes their lives. It makes a difference whether a child grows up in a comfortable house in a well-served town or a mud hut on an isolated mountainside or a crowded shanty in an illegal urban settlement. Physical and spatial factors can affect health, social relationships, opportunities and identity. These material realities, however, are seldom emphasised in child development theory and research (Evans, 2006).

More than three decades ago, Urie Bronfenbrenner (1979) offered the image of nested systems as the 'ecology' within which development occurs. Starting with a child's immediate surroundings (the 'microsystem') and moving out into the larger spheres of action in the world, this ecological theory of development continues to underpin much research and policy development. But even this very comprehensive framework neglected the material dimensions of children's environment. The focus was mainly on children's social context and their interactions within home, school and neighbourhood, as well as the wider impact of social practices and cultural beliefs. Only later did Bronfenbrenner (1999) incorporate the physical dimensions of the child's ecology into his model.

Warm, responsive social relationships and interactions are crucial to any child's development. But places are important too. Home is not just the setting where a child interacts with other family members. It's a powerful presence in its own right, filled with familiar objects and spaces that have meanings attached to them, which can enhance – or restrict – the child's growing sense of self and understanding of the world, as well as their basic health and safety. For example, rich learning can happen when a toddler is free to explore a stimulating environment, while the risks from road traffic can constrain a child's access to play and to friends. In these ways, children's developmental opportunities are expanded by the 'affordances' in their physical surroundings and contracted by lack of them (Heft, 1988). Physical conditions also shape the responses of adults: confined household spaces, for instance, can frustrate children's activity and result in more restrictive approaches to discipline. Parents are crucial gatekeepers, enabling and regulating children's use of their environment.

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- *The physical environment is a constant influence in children's lives, yet it is frequently overlooked in comprehensive child development theories.*
- *The home and nursery aren't just settings in which children live, grow and learn – they are powerful in their own right, filled with personal meaning and significance.*
- *Some environments are enabling, offering children 'affordances' for learning, while others are restrictive and inhibiting.*



The right to a healthy environment

Children's material conditions, with their capacity to undermine health, well-being and opportunities for learning, constitute one of the major expressions of poverty. Hundreds of millions of children live in physical environments that fail to support their health, their optimal development and their well-being. At issue here is the adequacy of housing, the availability and quality of water and sanitation, drainage and waste removal, and the quality of neighbourhood conditions. Unsafe, unsupportive living conditions are the most prevalent violation of children's rights worldwide. Yet the United Nations *Convention on the Rights of the Child* (1989) makes little direct reference to the material conditions that support children's well-being. The Convention does of course assert the child's right to life, survival and development (Article 6) as well as the right to an adequate standard of living (Article 27). Many other rights depend for their realisation on supportive physical conditions. There is no 'right to play' without a place to play, no 'right to health' without clean water, clean air and waste-free environments.

For young children, the experience of poverty is largely defined by the quality of their environments. The scale of the problem was highlighted by a study of child poverty in low- and middle-income countries (Gordon *et al.*, 2003). Deprivation was defined in terms of the circumstances most likely to affect children's health and development. Most of these circumstances were related to their material conditions or their access to services. Half of the children in these countries were found to be seriously deprived on at least one count. Over a third lived in dwellings with more than five people to a room or with mud floors; almost a third lacked access to any toilet facilities at all; while 20 per cent lacked adequate access to safe water. If other important environmental considerations were also taken into account – including the burden of injury imposed by rapidly growing levels of traffic, the mounting problems of toxins and pollutants, the unavailability of play space, and the gradually deteriorating conditions in many parts of the world associated with climate change – then these numbers would be far higher.

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- *Articles of the UN Convention on the Rights of the Child make little direct reference to an enabling and supportive material environment, even though this is fundamental to realising many of the basic rights of children.*
- *Children's material conditions, with their capacity to undermine health, well-being and opportunities for learning, form one of the major expressions of poverty.*
- *Deprivations in material circumstances are still widespread in low- and middle- income countries.*

Poverty creates unhealthy environments for young children



Water and sanitation

Ensuring that all children have access to clean water and sanitation is a fundamental step towards fulfilling their rights. Goal 7 of the Millennium Development Goals (MDGs) is to halve the number of people without access to safe water and sanitation, but progress towards these goals has been extremely uneven (WaterAid, 2011). In sub-Saharan Africa, for instance, only 60 per cent of families have access to improved drinking water, and only 30 per cent have access to sanitation (UNICEF and World Health Organization, 2012). Children confront different problems depending on where they live. Rural children, along with their mothers, may travel long distances to collect water, and are often obliged to defecate in the bush. Urban children may experience more toxic conditions where polluted gulleys run close to where they live and play.

Every day, 4000 of the world's children die from diarrhoeal disease, some of which results from drinking water from contaminated sources. Children with diarrhoea lose a lot of calories, as do children with worms, which can consume a considerable part of a child's daily intake leading to malnutrition. But access to drinking water is not sufficient to guarantee children's safety. Diarrhoeal disease also thrives in environments where sanitation and waste disposal are inadequate, as in the many poor communities where high concentrations of human, household and industrial waste are deposited on the streets or in open sewers. Waste dumps limit the spaces where children can play, making neighbourhood explorations unsafe, and causing many parents to keep their children indoors for protection.

Whatever their circumstances, families also require clean water in sufficient quantities to enable them to keep their children and dwellings clean. Inadequate storage can contaminate water sources with micro-organisms, yet the main cause of illness is families' lack of access to water and sanitation, not their lack of understanding of the causes of disease. Improving access to safe water, sanitation and waste disposal doesn't only reduce disease. The economic position of poor families can be dramatically improved when they gain access to these basic services, which liberate them from daily struggles to keep children safe and well, and enhance the overall quality of their environments.

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- *Improving access to clean water, sanitation and waste disposal is a fundamental step towards a healthier environment for young children.*
- *Improved hygiene practices are important but can be a challenge to realise without adequate water and sanitation services.*
- *The positive benefits of improved water and sanitation extend beyond disease reduction to an enhanced overall quality of life.*

A safe and secure place

Children's sense of security, and feelings of belonging, are basic human needs which may be undermined by their living conditions.

Families cannot adequately support their children if they live in precarious circumstances or under threat of eviction ... Good environments promote social interaction, limit psychological stress and bolster health.

(UNICEF, 2012, p. 60)

Where families lack security of tenure, the stress for adults may impair their ability to provide security to their children. At the same time, research suggests that children who lack 'place-attachment' may struggle to develop a sense of identity related to the place they call home (Evans and Wachs, 2010).

Overcrowding is a significant cause of stress for many families, and is an inevitable consequence of the unplanned growth of cities throughout the majority world. The United Nations Population Fund (UNFPA) reports that half the world's population were living in cities in 2008, with 1 billion people living in urban slums. Crowding occurs as a result of high residential density. Its impacts on children are felt directly, as well as through the additional stress experienced by their parents. Studies of overcrowding suggest that children in higher-density homes are more socially withdrawn (Evans, 2006), and may experience weaker bonds within the family. Parents in higher-density homes are less responsive to their children and experience more conflict and disagreements with their children. Adults in overcrowded homes show higher than average levels of psychological distress. Thus one of the most common consequences of crowded living conditions is paradoxically the experience of less social support among those living under the closest quarters. These studies have mainly been carried out in North American contexts, but they are indicative of the kinds of stress that can impact on children's well-being.

Crowding can also produce physiological stress. Children from higher-density environments have been shown in some research to manifest elevated blood pressure and higher levels of stress hormones such as cortisol. Once in preschool or school, they demonstrate greater distractibility and diminished motivation to persist on challenging tasks. Not surprisingly, children from more crowded households, statistically controlling for SES, do worse in school (Evans, 2006).

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Places as well as people contribute to children's feelings of security



- *Children's attachments to important places, especially home, are an essential part of their feelings of security.*
- *Insecurity of housing tenure creates stress in adults and undermines children's feelings of identity and well-being.*
- *Unplanned urban growth, high housing density and overcrowding all add to the pressures on children and families, and on the services that support their quality of life.*

Disasters and emergencies

Children who are already growing up in poverty and other difficult circumstances are the most vulnerable to the impacts of both naturally occurring emergencies – unpredictable disasters such as earthquakes and flooding – and those caused by human activity such as armed conflicts, including civil war. A study of flood-related mortalities in Nepal, for instance, found that the death rate for children aged 2 to 9 years was more than double that of adults; and preschool girls were five times more likely to die than adult men. (Pradhan *et al.*, 2007).

While emergency aid efforts focus first on providing food, shelter and protection from injury and death to innocent civilians caught up in disasters, longer-term work focuses primarily on rebuilding homes, lives and livelihoods as well as on the psychosocial needs of children and their families. Children are affected directly by disasters and warfare, but many of the most enduring effects are due to the impact on parents and other caregivers. Emergencies of all kinds create additional demands for adults regarding basic necessities: finding or waiting for food, seeking shelter, while coping with tense conditions. Caregivers may have less time available and they may find it more difficult to respond sensitively to their young children. When young children regress developmentally and become more dependent, already traumatised caregivers may become increasingly stressed. The material conditions which follow disasters and emergencies thus have a dual impact on children, removing their own safety and security while intensifying the pressures on the adults on whom they rely. The provision of special 'safe spaces' for young children during emergencies (Kostelny, 2008a) may also provide respite and support for overly stressed caregivers.

The necessity for these emergency measures can be reduced if there is greater disaster preparedness. Currently, sudden and longer-term disasters have by far the greatest impact in the poorest areas of the world, and those lacking the infrastructures that save lives: flood barriers, earthquake-proof dwellings, irrigation systems, and well-developed systems for food distribution, transportation and healthcare. Disasters of every kind serve to exacerbate and intensify the adverse conditions for development which children in these contexts routinely experience.

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- *Disasters have direct effects on children, but children are especially at risk through the negative impacts on their caregivers' capacity to support them.*
- *The poorest families and the least-developed communities are most at risk from sudden and longer-term disasters.*

Disasters have the greatest impact on children living in poverty



Anticipating the impact of climate change

Severe climate events can destroy children's home environments

Changing climatic conditions can also have powerful effects on children's environments (Bartlett, 2008). Organisations working with young children and their families need to anticipate the increasing impact of severe weather events in planning their services. Such events now threaten children's development and well-being, in both the short and the long term (UNICEF, 2011). Heatwaves result in lower crop yields and higher disease risks, as well as increases in air pollution, leaving children more vulnerable to heat stress, respiratory diseases, vector-borne diseases and malnutrition (Bytomski and Squire, 2003). Heavy rains and tropical storms cause soil erosion and crop loss as well as increasing the risk of flooding and landslides: young children become immediately vulnerable not only to the possibility of death or injury but also to malaria, cholera and water-borne diseases, and long-term malnutrition. Drought contributes to further crop losses and livestock deaths, and the loss of family income, which has short-term consequences for children – severe malnutrition and dehydration – and likely long-term consequences, physical and mental stunting. Intense tropical cyclones cause damage to crops, trees and coral reefs, disrupting water supplies and removing many sources of family income. Along with the steady rise of sea levels in many parts of the world, cyclone events can cause further disruption to family life, to parents' work and to children's education. Secondary effects from all such climate events include the degradation of farming land, with reduced crop yields; wildfires which threaten habitats; decreased water quality and quantity; and higher food prices which bring poor families into even greater extremes of poverty (Sheffield and Landigran, 2011).

All these conditions are experienced with far greater frequency and intensity by families living in poverty, whose homes and livelihoods are much more vulnerable to disruption than those of the more affluent. When households are uprooted by climate-related events, whether for the short or long term, and whether because of disaster or gradually worsening conditions, this can add to pressures on young children. They suffer disruption both in their social support networks and in their sense of belonging to a place they recognise as home.

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- *Climatic changes can create a vicious cycle of shocks for poor families, increase health hazards to children, and reduce the sustainability of traditional livelihoods.*
- *Weather events that may have little effect on households in better-served parts of a city can be devastating for those living in hazardous locations or without basic infrastructure.*
- *Policymakers and service providers need to build the increased likelihood of severe weather events into their planning.*



POLICY QUESTIONS

- ◆ What steps can we take to ensure that policy making and provision for young children are informed by an awareness of the role of their material environments?
- ◆ Can policies for children's rights to survival, health and development be re-prioritised towards action on creating the material conditions for these rights – a safe, clean environment with adequate water, sanitation, nutrition and care, as well as space to play?
- ◆ Can children's attachment to places, as well as their attachments to people, be understood as an important contributor to their well-being?
- ◆ What steps are most effective in reducing the impact on children of the effects of overcrowding?
- ◆ How can resilience be built into communities so that they are better able to protect young children in the event of disasters and emergencies?
- ◆ What steps can be taken to ensure that the growing impacts of climate change are recognised and incorporated into planning and provision for young children?



II.

The challenges of living in cities



The move to cities brings both advantages and difficulties. Young children may benefit from the opportunities of urban living. But unplanned urban slums can also be the most adverse places to live.

Young children and their families, especially those living in urban slums, face many environmental risks. In poor areas, children's homes may not be healthy places to grow up in.

The Child Friendly Cities movement is one attempt to improve the situation, by creating environments where children can be safe and healthy in their neighbourhoods and have access to parks and playgrounds.

Child Friendly Cities values children as capable citizens, able to contribute to the community, rather than as passive recipients of services. Such initiatives have often proved hard to sustain.

To be effective for children, environmental decisions need to be made at the level of the local community, incorporating the perspectives of caregivers and children. But good governance at the level of the municipality is also essential.

Increased opportunities or increased inequalities?

Urban living enhances both opportunities and inequalities for young children

Growing up in cities is rapidly becoming the norm. In 2005, 43 per cent of children were experiencing the benefits as well as the risks of urban living (UNICEF, 2012), and it is estimated that 70 per cent of the world's population will live in urban areas by the middle of the century. Urban children are generally considered to be better off than their rural counterparts. On average they are healthier, better educated and more likely to have access to opportunities. But averages can be very misleading. Some of the wealthiest people live in urban areas, but also many of the most severely deprived. In Africa, it is estimated that 60 per cent of the urban population is now living in unserved informal settlements which can be some of the most hazardous environments in the world for young children. Living in close proximity to others can be an asset, but it can also mean increased health threats, and leave children with little space for play.

The inequalities in environment available to rich and poor urban children are evident in stark contrasts in housing quality and density, especially when the sprawl of slums and shanties sits alongside more affluent neighbourhoods. Other, less visible inequalities include levels of malnutrition in urban areas, which can be masked by urban–rural comparisons. For example, research in sub-Saharan Africa reported disparities between rich and poor urban communities that are even greater than those between urban and rural areas (Fotso, 2006; 2007). These striking urban inequalities confirm evidence from an earlier study of childhood stunting across urban populations in 11 countries, which concluded that 'intra-urban differentials are larger than overall urban–rural differences and that the prevalence of stunting among the urban poor is often as high as among the rural poor' (Menon *et al.*, 2000: 282).

The adverse living conditions of poor urban families are very often compounded by barriers to accessing the good-quality maternal and child health services, kindergartens and schools that may be available to their more affluent neighbours. Many of the urban poor are denied access to any government services because of their illegal status.

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- *On average, urban children continue to have greater wealth and opportunities than rural children, but this generalisation masks major inequalities in urban areas.*
- *Urban slums can be among the most challenging and even life-threatening environments in the world for young children.*
- *The disadvantages faced by poor urban families can be made worse where they cannot access quality health and education services available to better-off neighbours.*



Making the home environment safe

Where city environments are evidently unsafe for children, the response of many parents is to keep their children inside the home. Children in notably dangerous neighbourhoods may not be allowed outside to play and explore, or to meet potential playmates, and may be prevented from attending ECD facilities (Perdomo, 2011).

Research shows however that 'home' is not always a safe place for children (World Health Organization, 2011) and young children are vulnerable to a range of indoor risks. A leading cause of morbidity is respiratory disease, which kills over 3 million children under 5 every year. The risk to children is from two to six times higher in smoke-filled homes, where dangerous particulates are emitted from open fires and unvented kerosene stoves. In the worst cases, concentrations of pollutants inside children's homes may be many times higher than the worst outdoor pollution (Smith *et al.*, 2000).

In overcrowded spaces, burns are a further risk: it is hard to prevent toddlers from crawling into open fires, touching hot stoves or exploring unsafe electrical wiring. In flimsy dwellings, fires may develop and spread rapidly, soon engulfing densely settled communities, which also lack basic firefighting equipment. Another hazard in poor housing is poisoning, which results from the difficulty in storing poisons, pesticides or even medicines safely. But the most common cause of injury for young children is falls – from unprotected windows and unsafe stairways, or from rooftops which may be the only place for them to play and sleep.

For parents and other adults, protecting young children from harm in an environment full of such hazards is an additional source of stress. However, adults living in close proximity to children in overcrowded conditions may themselves be a source of harm. Physical punishment for disobeying or displeasing adults is most often meted out to children aged between 5 and 9 (Pinheiro, 2006). Persistent fear of violence, as well as the experience of violence, has long-term effects on children's learning, behaviour and health (Fox and Shonkoff, 2011).

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- *While parents may feel children are protected from harm when they keep them indoors, many home environments can also be hazardous.*
- *Young children are at risk from temporary buildings, unvented stoves, unprotected kerosene and exposure to household chemicals.*
- *Young children can also be at greater risk from violence in overcrowded and stressful home environments.*

Young children growing up in slums or shanties are at risk from multiple hazards



Improving governance and planning

When we consider what children need for their full development – secure and adequate housing, clean water, healthy sanitation, physical safety, community security, opportunities for play and learning, and access to nature – it is very clear that we need to engage a broad range of municipal agencies in thinking about children (Hart, 2011). Very few cities have developed an inter-agency focus on physical environments for children. While the greatest challenges lie in the rapidly growing cities of the developing world, distinct problems are present in high-income countries.

All cities need to improve their governance and planning. Good governance includes citizens and community groups as well as ‘government’, and needs to involve children and their caregivers centrally in the process. The insights of both parents and children are necessary for city officials who plan roads and pedestrian circulation, locate schools, childcare facilities, and health centres, and plan and design play and recreation facilities. Public spaces are best managed and maintained by the community, and this is more likely to happen if the community is involved in the planning and design of these spaces.

Children have both the capacity and interest to play important roles in improving the environment, through participatory research, planning and action (Hart, 1997; Chawla, 2002; Driskell, 2002; Hayward, in press). In some countries, cities and towns have acted on their commitment to children’s rights by trying to involve children in their environmental decisions, but they have usually done this exclusively through the relatively weak medium of ‘councils’ or ‘parliaments’. These are weak because they involve only small and unrepresentative groups of children. But there are dozens of other, more concrete, ways in which children can be involved, and much more frequently and directly. These include regular monitoring of the physical environment of their neighbourhoods, and participation in the planning and design of community play facilities. By means of such local engagements, all children can have opportunities to be involved in making decisions that affect their lives. Furthermore, those cities that have representative democratic structures, such as children’s municipal councils, can link them to these more inclusive forms.

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- *Cities require good governance in order to improve the physical environments which shape children’s experience.*
- *Children can and should be involved in all levels of decision making about their homes, neighbourhoods and school facilities.*
- *Children’s involvement is sustained when they are offered continuing opportunities to participate in the monitoring, assessment and upkeep of the facilities they use.*

Children have a unique perspective on the places they inhabit



The Child Friendly Cities Initiative

The Child Friendly Cities movement began as a joint effort of UNICEF and UN-Habitat to assist municipalities in developing structures and processes for the realisation of children's rights at the local level. In a child-friendly city, children should be able to walk safely in the streets without fear of violence or traffic, live in an unpolluted environment, meet friends and play, and have safe havens to turn to in times of trouble. A child-friendly city should welcome children of all backgrounds and abilities with a range of community resources to support their healthy development. It would value young people as resources and as capable citizens who should be incorporated into the planning process, rather than as passive recipients of services. And it would coordinate its existing assets for children across local agencies and groups to create equitable, inclusive and just places for children.

Currently there are Child Friendly Cities Initiatives around the world, including in Turkey, the Philippines (Racelis and Aguirre, 2005), Brazil and the Dominican Republic. These initiatives have proven effective in several ways:

- increasing awareness of children's rights at a local level
- promoting child-friendly community planning and development
- improving services for children
- creating new governance structures for children's participation.

UNICEF (2012, online) provides practical frameworks to assist cities in becoming 'child-friendly', as well as assessment toolkits for stakeholders to evaluate the child-friendliness of their communities. These assessments can be used as advocacy tools for helping to articulate needs to local authorities, or as guides for direct action by the community. But while the value of intergenerational community assessment and planning is widely recognised, the creation of child-friendly cities requires commitment at the municipal level too. The vision and model of community development that places children at the centre is new for most municipalities and so the necessary structures and processes to follow through on local decisions are lacking. Consequently while community assessment projects can have great value for raising awareness, and for advocacy for change, they sometimes fail to deliver on the promised changes for children (Clements, 2005).

Pamela Wridt, Co-Director, Children's Environments Research Group, The Graduate Center, City University of New York, USA



- *The Child Friendly Cities movement encourages municipalities to realise children's rights at the local level.*
- *Children make up a large proportion of the urban population and they have unique perspectives on the material conditions that affect them.*
- *Child Friendly Cities builds on a comprehensive vision of a well-planned, safe and unpolluted environment, with young people themselves playing a key role in the process.*

Planning urban spaces for children: a research project in Delhi, India

Although the physical environment of cities affects all aspects of children's development, the planners and policymakers who design urban environments may know very little about children's concerns (Bartlett, 1999). Planning, and in particular modernist assumptions of planning, create cities that fail children through lack of engagement with the realities of their everyday lives. To consider a child-friendly city from an environment-behaviour perspective is to conceive of numerous and interlocking places that allow a two-way interaction between children and their environments, allowing for the development of affective bonds or 'friendship with place' (Chatterjee, 2005).

A study on 'place friendship' in Delhi, India, built on research into children's friendships and proposes six essential conditions: mutual affection and personal regard; shared interests and activities; commitment; loyalty; self-disclosure and mutual understanding; and horizontality (Chatterjee, 2006). A typology of child-friendly places within cities would incorporate different dimensions within planning and design, such as:

- places that children care for
- places that children create through action
- places that children learn from
- places that children conceal secrets in.

By promoting such places, cities would be creating developmental advantage for their young citizens, and constructing a city that works for children.

Research in low-income urban neighbourhoods in Delhi led to several broad recommendations for making cities child-friendly by design:

- 1 Develop numerous, diverse and accessible open spaces of different scales in residential areas.
- 2 Create well-cared-for, shared parks which support different activities by different user groups.
- 3 Improve spatial mobility of children by better traffic management.
- 4 Promote mixed uses within neighbourhoods in relation to the scale of the settlement.
- 5 Integrate places of symbolic value with the life of the community.
- 6 Promote streets in front of houses as active living places.
- 7 Preserve informal spaces and provide flexible resources ('loose parts' (Bundy *et al.*, 2009)) in parks and playgrounds to allow children to create play territories.
- 8 Embed play as a priority for local area development (Chatterjee, 2005; 2006).

Sudeshna Chatterjee, CEO, Action for Children's Environments, New Delhi, India

Children become attached to the spaces where they live and play



- *Planning and designing for children involves understanding the impacts of provisions on children's lives, particularly within specific localities.*
- *The concept of 'place friendship' draws attention to children's emotional investment in places, as foci for activities, for learning and for relationships.*
- *Research into children's place friendship has identified practical strategies for city planners to make cities more friendly by design.*

Community action case study: providing toilets for children

SPARC builds toilet blocks especially for children

The young children of slum dwellers experience some of the worst urban environments anywhere. Some of the most effective reforms come through concerted community action, for example via the international network of community-based organisations, Shack/Slum Dwellers International (SDI). SDI promotes 'horizontal learning': sharing knowledge through community-to-community exchanges of ideas and information (Patel *et al.*, 2001).

In Mumbai, one environmental problem was resolved by a number of agencies working together as an 'Alliance'. For children living in this city's slums, the only alternative to defecating in the streets and alleys was joining the long queues for municipal toilet blocks. These are crude latrines where small children have reason to fear falling into the large pits in the dark and smelly interiors, if they even arrive at the head of the queue. Mothers, equally fearful, have discouraged children from using the blocks and in consequence most children's fecal waste has ended up in the street, increasing the risk of disease. The Alliance which has addressed this problem includes an NGO called SPARC (Society for the Promotion of Area Resource Centres) and several grass-roots partners, including the women's savings and loan collective *Mahila Milan* ('Women Together'). Although the Alliance has no special brief to work for children, its efforts to find practical solutions to the problems of urban poverty often involve close attention to children's needs.

One innovation was the provision of special toilets for children. The women of *Mahila Milan* could see that the toilet blocks built for adults, and shared by hundreds of families, did not work well for children. They responded by building special toilet blocks for children next to the adult toilet blocks. These were bright open-air places with half-walls; the toilets had smaller squat plates and handles to hold on to, and opened into a trench which could easily be flushed by a tap at one end. The buildings were located centrally so that children would access them easily, and were bright and clean. Outside were community rooms and play spaces, contributing to a community facility of which both children and adults could be proud (Burra *et al.*, 2003; Patel and Mitlin, 2004).

Liz Brooker, Reader in Early Childhood, Institute of Education, University of London, UK

- *Networks of community groups can be a catalyst for effective practical improvements to urban living conditions.*
- *One alliance in Mumbai constructed toilet blocks especially for children.*



POLICY QUESTIONS



- ◆ What are the implications for planning for early childhood as the world moves to a majority urban population?
- ◆ How can the vast economic resources being invested within cities be harnessed to reduce inequalities in living conditions, promote inclusion, and especially alleviate the acute poverty within many urban slums?
- ◆ What steps can be taken to make homes, as well as streets and neighbourhoods, safer and more secure places for young children?
- ◆ How effective has the Child Friendly Cities movement been in actually improving quality of life for young children? What steps would improve effectiveness of such initiatives?
- ◆ What are the lessons from successful community action projects, in terms of the balance of local action, municipal responsibilities and central government to achieve best outcomes for children?
- ◆ What does a 'child-centred approach' to urban planning mean in practice? How can children be empowered to contribute effectively to the design of their environment?



III.

Making spaces for (and with) children



The right to play is one of the fundamental principles guiding the design of early childhood buildings, spaces and materials.

Design for young children includes not only preschool centres, but also the provision of safe, child-centred spaces following natural disasters and conflicts.

Early childhood spaces must be inclusive, available and accessible to all children, not just in terms of physical access, but also in terms of being 'playable' by all. Designing for inclusion requires active consultation with disabled children.

Environmental design for young children needs to recognise the value of outdoor spaces, and of naturally occurring spaces and materials, which can offer more opportunities than specially designed spaces and resources.

Workers in early childhood centres should recognise the potential of the space, not only for care and education, but for fostering and practising participatory democracy.

As the key stakeholders in any early childhood setting, young children are now recognised as able and entitled to play an active role in the design of spaces for playing and learning.

The social production of children's spaces

Children's spaces reflect adult views of their needs and wishes

We cannot think of space as a neutral, physical surface upon which social action takes place. Children's spaces are produced by many actors, including caregivers at home and teachers in schools, with different explicit or implicit ideas about childhood, what activities children should engage in, how they should relate to one another, and how they should relate to adults (Hart, 2002). Since the mid-nineteenth century, more and more spaces have been planned and 'designed' with children in mind (Woodhead, 2009), notably schools and playgrounds, as well as children's bedrooms and playrooms, at least in homes able to afford to segregate child-specific spaces. Of course, children also have their part to play in these processes.

Schoolyards are a useful example. Until relatively recently, most schoolyards all over the world were simply flat, hard, open surfaces, reflecting a traditional belief that children's learning takes place in the classroom, under the direction of teachers. Outdoor areas were at most spaces for children to burn off excess energy before going inside for the important work of learning. When educators recognise that young children learn through play and social interactions, then outside spaces look more diverse. Play equipment to encourage climbing, swinging, jumping and sliding reflects beliefs in the importance of physically active play. Sand, water, tools and all kinds of loose parts to enable children to engage in other kinds of exploration and construction reflect a broader recognition of the multiple opportunities for learning and development. Incorporation of a garden in school design is yet another extension of the vision.

The contrast between spaces for school-age children and those designed for young children clearly demonstrates the influence of pedagogic philosophy on space. Early childhood spaces typically show greater recognition of children's needs, rights and agency as learners, although with considerable diversity in how this is expressed (Miller *et al.*, 2003). In short, we can read a great deal about how an institution thinks of children and their learning and development by reading the environment.

Roger Hart, Co-Director, Children's Environments Research Group, The Graduate Center, City University of New York, USA

Martin Woodhead, Professor of Childhood Studies, The Open University, UK

- *The spaces which policymakers and providers create for children reflect social and cultural views of children's development, and of goals for children of different ages.*
- *Enlightened providers include all stakeholders, including young children, in designing and planning children's spaces.*
- *The natural environment offers important resources and opportunities for children's development and learning, and should not be excluded in favour of built environments.*



Supporting children's right to play

Play is fundamental for children's development and well-being

Article 31 of the UN *Convention on the Rights of the Child* (recognising 'the right of the child ... to engage in play and recreational activities') is often cited as the 'forgotten' right, a luxury to be considered only when more fundamental rights of protection and provision have been met. One of the reasons is that supporting the 'right to play' is problematic: play cannot be 'provided' and children do not need adults in order to play. So what does supporting a right to play imply?

Increasingly, play is valued for its relatively narrow utilitarian role in supporting learning. From this perspective play becomes a specific activity that is purposeful, supporting the acquisition of skills and competencies that have value in non-play contexts. In this sense, play is an instrument that can be harnessed for learning and a 'right to play' justified as the provision of play activities by adults at specific times, in dedicated spaces, and with playthings designed to progress children (Sutton-Smith, 1997).

This narrow perspective largely fails to appreciate the immediate benefits that arise from the very nature of playing (Lester and Russell, 2010). Here the term 'play', or more accurately 'playfulness', represents a particular disposition to engage with the world. Playing is distinguished by unpredictability, novelty and uncertainty, manifested through 'as if' behaviour in which children maintain control over momentarily being out of control. Such moments disturb the largely adult-derived order of the world, generating positive arousal of mind and body systems in relationship with everyday environments (human, material and symbolic). It marks a period in which children can think, act and feel in non-literal and nonsensical terms, calibrating emotional and bodily responses to the unexpected events that emerge during play (Pellis and Pellis, 2009). Playing may have immediate value in shaping mind/body systems to cope creatively and imaginatively with uncertainty.

The presence of playful moments provides an important commentary on the current well-being of children. It requires adults to be aware of the conditions under which playfulness thrives, primarily by leaving room in the everyday, often mundane and routine spaces and practices of childhood for these chance encounters to occur and being alive to the possibilities they present for children rather than steering these moments towards adult-determined outcomes.

Stuart Lester, Senior Lecturer in Play and Playwork, University of Gloucestershire, UK

- *The UN Convention on the Rights of the Child recognises children's right to play, but interpreting and implementing that right has not been straightforward.*
- *Instrumental views offer a very narrow vision for the value of play, neglecting the inherent novelty and uncertainty in playfulness.*
- *Respecting the right to play requires that adults care for and value the many moments of children's playfulness that emerge in the routines and practices of childhood spaces.*



Safe spaces following emergencies: a Ugandan case study

*Children help to rebuild their lives following disasters
or conflicts*

Following natural disasters or armed conflicts which severely disrupt the lives of young children and their families, agencies seek to create safe and supportive spaces for young children. Experienced ECD personnel can be difficult to find in emergency situations, and rapid training and support are often needed. Some advocate for the use of kits (such as the ECD in Emergencies kit) that include materials and guidance on their use. Others strongly advocate drawing on local materials. If infants and toddlers are served, special set times are advised and caregiver presence for at least a portion of the time is important. Free play for young children is the most common activity when safe spaces are created. This may be because of a lack of trained staff, the perception that free play is the primary need, or because the materials safest for young children lend themselves to free play. The traditions of good early childhood programmes, with their respect for individuality and attention to children's interests, allow for good inclusion of children of differing abilities and experiences. Safe spaces provide rich opportunities for integrating important health, food distribution, and nutrition services and for supporting stressed families.

Child Centered Spaces (CCSs) (Kostelny, 2008b) enable children to recover from traumatic experiences, develop coping strategies, and learn skills essential to their continuing personal safety. In Uganda in 2007, for example, children aged 3 to 6 years at CCSs experienced many fewer serious threats to their lives and development, including rape, accidents such as house fires set by children, and serious injuries.

Children also gained a greater degree of safety in their homes and in the camps, as described by their caregivers. They gained valuable life skills such as hygiene knowledge, and a greater sense of psychosocial well-being such as how to play together, share and communicate. These outcomes were derived by community members and reflected issues of concern to the community and cultural competence. The children also experienced a more personal sense of well-being. They experienced less unhappiness, fought less with other children, and helped other children more. They also were less nervous and clingy and reported fewer worries.

Mary Moran, Acting Director, Infants and Young Children, Senior Programme Specialist in ECD, Child Fund International, USA

- *Providing safe spaces for young children and families is among the first priorities of disaster relief.*
- *In the absence of buildings, materials and trained staff, some agencies offer pre-packaged programmes, while others emphasise the importance of building on local resources.*
- *In conflict zones, child-friendly spaces offer safety, security and normalcy to small children, and some therapeutic support for the traumas experienced.*



Inclusive spaces for early childhood

Inclusive early childhood spaces benefit not just disabled children but the wider community of a setting. Enabling disabled children and their non-disabled siblings and peers to use play spaces together contributes to social inclusion, community building and networking (Dunn and Moore, 2005; Yantzi *et al.*, 2010). Early childhood spaces can support the development of social identity, positive attitudes to others, and a sense of belonging for all children and can go a long way to avoiding the 'othering' that disabled children often experience – the feeling of being different (Brooker and Woodhead, 2008).

There is no single definition of inclusion, which some argue creates an obstacle to effective policy development since the way 'inclusion' is interpreted 'affects the sort of services being provided' (Beresford *et al.*, 2010). There is general agreement that 'active' qualities are necessary to support inclusive spaces: actively identifying and removing barriers to inclusion, actively consulting with disabled children, actively supporting participation, and actively designing and resourcing provision.

In recent years it has been proposed that rather than seeking to provide purely for the physical accessibility of a space (enabling children to enter and move around), inclusive spaces should be 'playable', that is, supportive of children playing in the ways they wish. Rather than focusing on making every element accessible to every child, access to satisfying experiences and, in particular the social experience of play, is key (Dunn *et al.*, 2003). For example, creating centres of interest of fixed or loose resources for open-ended play and activity can support inclusion around a focus, rather than requiring particular physical abilities or emphasising the need to talk, explain or follow rule-based games.

Early childhood spaces that accommodate varying degrees of risk and challenge enable children to gauge and assess for themselves the level of challenge they wish to encounter and, in so doing, help children develop their capacities and explore their limits. These benefits extend to disabled children who have an equal if not greater need to engage with a degree of risk in their activities (Play Safety Forum, 2002).

Theresa Casey, Independent Consultant and President, International Play Association:
Promoting the Child's Right to Play, UK

- *Inclusive spaces require actively building a sense of belonging for all children.*
- *Accessibility goes beyond the physical design of early childhood centres, to making sure each child is able to access a range of play experiences in his or her own way.*
- *Inclusive spaces should enable children to create and encounter varying levels of challenge in their play and activity.*

Inclusive spaces support all children's right to participate equally



Design for the built and natural environment

Child-friendly preschool environments support healthy development

Research and development initiatives which have sought to measure the quality of early childhood provision (see for instance Bredekamp (1986) and Harms *et al.* (1998)) have rarely focused on the 'designed' environments in which children experience preschool. An exception is the Children's Physical Environment Rating Scale (CPERS) designed by a research team at the University of Sydney. Moore *et al.* (2003) argue that:

the quality of the *physical, designed environment* of early childhood centers – size, density, privacy, well-defined activity settings, modified open-plan space, a variety of technical design features and the quality of outdoor play spaces – is related to children's cognitive, social and emotional development.

Earlier studies (Moore, 1986; 1987) indicated that 'architecturally well-defined activity settings' are associated with positive cognitive and social behaviours, and that modified open-plan centres lead to better activities than either open-plan or closed-plan classrooms. In terms of the outdoor environment, differences in design are shown to foster more cognitively challenging, or more social play.

There is also evidence that the quality of the outdoor physical environment influences children's health and development. Children gain in overall well-being as well as in physical health when their early childhood provision includes substantial opportunities for outdoor play and contact with nature (Wells, 2000; Fjortoft, 2001, 2004). In North Carolina, a Task Force on Childhood Obesity Prevention found that less than 10 per cent of preschool settings were rated as 'good' on an Outdoor Learning Environment Rating Scale (Moore and Marcus, 2011) which evaluated the opportunities for interaction with nature. Moore and Cosco (2005) describe the therapeutic value of 'gardens' for children growing up in fast-paced urban societies as 'diverse, constantly changing, multisensory settings (as compared to playgrounds with static, standardized, manufactured equipment)' (page 36). Gardens offer children 'a special boundless way of playing and learning that stimulates the development of mind, body, and spirit'. Such experiences have particular therapeutic value for children with special educational needs or those who have experienced physical or emotional trauma. Similar evidence can be found on the provision of green spaces – trees, grass and other plants – in urban housing projects, and in schools (Taylor *et al.*, 2001a, 2001b; Sharp, 2007).

Liz Brooker, Reader in Early Childhood, Institute of Education, University of London, UK

- *Design for early childhood settings must take account of both the indoor and the outdoor environment, including children's relationship to the natural world.*
- *Well-designed spaces are associated with positive cognitive and social behaviours.*
- *Less than 10 per cent of preschool settings in one US state were rated as offering good opportunities for outdoor learning.*



Democratic spaces for early childhood

New spaces for early childhood have proliferated as societies everywhere have created formal services for young children. What are these spaces for? These are important political questions, which 'require us to make a choice between conflicting alternatives' (Mouffe, 2005: 10). Some, for example, may see them as businesses supplying a product, 'childcare', to parent-consumers; others as enclosures where prescribed programmes are applied to young children to achieve prescribed outcomes. Another alternative is to view them as forums, places of encounter for citizens of all ages, and as collaborative workshops capable of many purposes and projects: in short, as important public spaces.

The potential purposes and projects of early childhood centres so understood are limitless and varied, for example: learning; family support; community solidarity; sustaining cultures and languages; developing local economies; promoting gender and other equalities – and practising democracy, centres as spaces for early childhood where democracy is valued, lived, and constantly renewed. This is not the formal, representative democracy of government, but participatory democracy by all, children and adults alike, in the everyday, democracy as 'a *personal* way of individual life ... [signifying] the possession and continual use of certain attitudes, forming personal character and determining desire and purpose in all the relations of life' (Dewey, 1939: 3, original emphasis). This is democracy understood as an approach to living and relating that should pervade all aspects of everyday life: as such it is 'a fundamental educational value and form of educational activity' (Rinaldi, 2006: 156).

Spaces for early childhood can express democracy as a fundamental value: in management; in decision making and in everyday life; in approaches to learning and evaluation; in a willingness to question established wisdoms; and in a desire to experiment. An understanding of early childhood centres as democratic spaces may seem strange to many. But there are examples enough to show it is viable (Moss, 2009). Democracy, says the Swedish preschool curriculum 'is the foundation of the preschool', reflecting a wider Nordic view of the importance of democracy for a good childhood. It permeates the educational ideas and practices in Reggio Emilia (Rinaldi, 2006); pedagogical documentation and the Mosaic approach to listening to young children (Clark, 2010); and the innovative work of community-based services like the Sheffield Children's Centre (Broadhead *et al.*, 2008).

Peter Moss, Emeritus Professor, Thomas Coram Research Unit, Institute of Education, University of London, UK

Early childhood centres can foster dialogue and collaboration



- *The growth in specially planned early childhood environments raises questions about what is their primary function.*
- *Conventional models emphasise the childcare and educational goals of early childhood centres, as in the label ECEC.*
- *An alternative vision recognises early childhood centres as places of many potential projects – including fostering and practising participatory democracy.*

Designing spaces with children

Pioneers in early childhood education such as Maria Montessori paid careful attention to the physical environment for young children as well as the design of materials. But it is only relatively recently that serious attention has been given to the active role young children can play in the design and review of early childhood spaces.

Initiatives to encourage young children's active participation have frequently met with two obstacles. One challenge from some architects and educationalists is that there is already sufficient adult expertise about what makes a good early childhood environment. This can lead to the opinion that children's views about these spaces are superfluous. A second barrier may come from the suspicion among adults that young children's contributions will always veer towards the fanciful, resulting in 'Disneylike' designs that prove impractical.

Experiences of directly involving young children now offer a way to overcome both obstacles. Rather than starting from a 'wish list' approach that might lead to impossible scenarios, participatory design processes with young children and practitioners can instead begin by listening to and observing how children explore, ignore or adapt existing environments. This type of listening has been called 'narrative communication' (Chiles, 2005: 187–206), and involves the piecing together of stories about what it means to be in a particular place. This was one of the devices adopted in the Living Spaces study, a longitudinal project to involve young children in the design and review of two early childhood environments in the UK (Clark, 2010). Young children, practitioners and parents explored their own feelings about 'what does it mean to be in this place?' through visual, participatory methods (the Mosaic approach: Clark and Moss, 2011). One of the case studies involved an old nursery classroom being rebuilt as part of a primary school: 3 and 4 year olds led the researcher and the architect on walking tours of the site, taking photographs and making maps of their images, supplemented by drawings and texts. These visual narratives became the catalyst for discussion with practitioners, parents, older children and architects to establish key themes to help inform the design process (Clark, 2010).

Alison Clark, Senior Lecturer, Centre for Childhood, Development and Learning, The Open University, UK

- *Young children are now recognised as able and entitled to play an active role in the design of early childhood spaces.*
- *Participatory design processes use visual methods to construct a narrative about the meanings children and adults attach to particular places.*
- *These methods have been effectively applied in projects working with professionals and architects in the design of new settings.*



POLICY QUESTIONS

- ◆ What images of the young child – their needs, rights and personal agency – underpin the design of dedicated early childhood centres?
- ◆ How can children's rights to education, to rest and leisure, to play and recreational activities be fully realised in ways that are open to the young child's inherent playfulness, and caregivers' sensitivity in interpreting these rights in locally appropriate ways?
- ◆ How can early years experts most effectively contribute to the provision of safe spaces for young children and caregivers following disasters and emergencies?
- ◆ How much progress has been made towards ensuring early childhood centres are truly 'inclusive'? What further steps are needed? Who is best able to strengthen inclusiveness?
- ◆ What are the risks of viewing early childhood centres mainly as childcare businesses or as downward extensions of the school system? What are the opportunities strengthening their function as important public spaces, as a focus for fostering and practising participatory democracy?
- ◆ Young children's capacities to participate in the design of early childhood spaces are well proven. How can they be embedded more fully in practice?



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The physical environment has profound impacts on children's development and well-being, yet it is frequently neglected in research and policy. This publication helps to restore the balance, by providing clear summaries on key topics and suggesting strategies to ensure that children's spaces are well planned and that their voices are heard.

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