MIDDLE CHILDHOOD AND THE BUILT ENVIRONMENT

A submission to the NSW Parliamentary Committee on Children and Young People

Inquiry into Children, Young People and the Built Environment

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On behalf of NAPCAN Foundation

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Chris and Margaret worked from 1987 to 2003 on a project that looked at the way that children in middle childhood (ages approximately eight to twelve) used the built and natural environment in their free leisure time.

Cover: A children's 'fort' or 'cubby' on the flood plain of the Susquehanna River Lock Haven, Pennsylvania USA, illustrating the sorts of complex natural environments to which children are attracted in their free play. Such environments are not always seen as either safe or aesthetically attractive by adults, but they could play a significant role in development of the abilities of the growing child.

Photo: Chris Cunningham 2004

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Terms of Reference

For the inquiry into Children, Young People and the Built Environment

1. Trends, changes and issues for children and young people in the development, implementation and coordination of policy, design and planning for the built environment;
2. the mechanisms available for monitoring and reporting on planning processes and decisions concerning the built environment, as they relate to and impact upon children and young people;
3. strategies to ensure that built environment issues affecting children and young people are readily identified and receive coordinated attention across portfolios and different levels of government;
4. the role of the Commission for Children and Young People in giving input to the Government and non-Government sectors on inclusive and integrated planning and policy making for children and young people in the built environment; and
5. any other matter considered relevant to the inquiry by the Committee

EXECUTIVE SUMMARY: CHILDREN AND OUR SOCIETY

This submission is based on findings of a project initiated in 1987 and running until 2003. The aim was to understand the way that children aged between 8 and 12 used their local environment at times when they had independent leisure, defined as leisure time when they were not directly subject to the control and organisation of adults. Most of the 900 children who participated in the many studies which comprised the project were clearly well loved and cared for, and for the most part they came from households without major trauma. Here are some of the things that we found:

- Children's leisure time is increasingly occupied by adult-directed activity such as sport, cultural activities, academic activities, television and electronic games. Without denying that these things are important, children also need to have time for independent outdoor play (and indeed they do seek that time in their activities) and should not have their lives completely filled by adult-dictated activity.

- Children were attracted to diverse environments for their play activities, but environments that were complex and manipulable, such as natural places, were most often chosen. Elements such as trees, bushland and fauna were particularly significant in their play lives, and the claiming of territories through the building of cubbies in bushland or secluded natural spots was common.

- Children's independent games were cooperative rather than competitive. Everyone had a role to play and roles were frequently changed and shared.

- Seeking of solitude in tranquil places was a significant part of children's independent play time, and they reflected a lot in such places.

- Despite the very great difference between children's independently evolved games of free play and more formal adult devised and directed competitive sporting pursuits, both types of play and the environments within which they occurred were important to children.

- Children had short independent play ranges when they played away from home. Boys ranged a median of 400 to 500 metres and girls a median of 150 to 200 metres. So the sorts of environments that children sought to play in had to be reasonably within such distances of most homes.

- This presents a major challenge for communities in urban planning since the sorts of places (such as parks, playgrounds, sporting fields and bushland)

normally dedicated to use by children are typically spaced at much greater distances than this.

- Traffic was a major inhibitor of children's independent play range.

- Children's independent mobility is diminishing, mainly because of the increase in urban traffic and particularly in the tendency of parents to ferry children around the community. This is depriving children of the opportunity to explore their community independently.

- In particular very few children, even urban children, now walk to school or ride bicycles.

- When asked how planners could best meet their needs children mostly requested simple and obvious things like parks, safe paths and streets, places to ride bicycles, skateboards etc..., and places where they could 'hang out'.

- Children of this age are rarely directly consulted about urban planning issues that affect them. Such consultation is indeed possible but requires very different methods from those that might be used for adults or even teenagers.

There are many other detailed findings from the research, some of which are referred to in the body of this report, but these examples give some idea of the way that Australian society, based on the imperatives of adults, is not dealing fairly with the genuine needs of our children for independence and freedom to explore their environment in middle childhood. Furthermore, children are being exploited to a significant extent by that adult society. The communications media, advertising, processed food, fast food, fashion and other industries largely owned and managed by industrial corporations regard children as fair game for high-pressure promotion of their products, and also in turn use children as a means of pressuring their parents. Such promotion also largely determines the ethos that governs our society.

We therefore believe that community building and sense of community are a vital prerequisite for the development of appropriate physical urban environments for children. We believe that these considerations are implicit in terms of reference 1, 3, 4 and 5 of the Inquiry.

1. INTRODUCTION

What is a child? At what age do 'children' become 'young people'? The question of definition is very important in discussion of children's environmental needs and ability to express these through participation in civic life. Those needs, and the ability to participate in community decision making, are very different for different age groups. For many urban planners 'children' covers all people aged from newborn to 18 years – in other words, people who cannot yet exercise adult civic rights and responsibilities. 'Young people' is an even vaguer expression. It usually refers to people between their early teenage years and up to their thirties, but it sometimes also includes people of primary school age. The term is usually implied as a term of respect for those who are in the process of assuming adult responsibility for their lives, but who have not yet attained full adult maturity.

This report is mainly concerned with children in *middle-childhood*, that is from about 8 years to 12 years. Environmental needs of children of these ages have been less well researched than those of infants (2 to 8) or adolescents (13 to 18), though in recent years there has been a growing body of literature on play, civic participation and middle childhood. Wherever the terms 'children' or 'the child' are used in this report, they refer to children between the ages of eight and twelve rather than the spectrum from newborn to eighteen. We recognise that infant children and teenagers also have specific needs in the built environment and that those needs may not be congruent with those of children in middle childhood. However, we leave advocacy of such needs to others more qualified to comment.

The report is based on a research project that has extended over 16 years and worked with over 900 children in many parts of eastern Australia. Appendix A describes the project in more detail and lists all the publications that have resulted from the project. We would be happy to provide copies of any of these publications should the Parliamentary Committee wish to view them. We also acknowledge that, as in any field of academic endeavour, our work has been built on the work of many other researchers in Australia and around the world. The derivation of ideas in our research from the work of others is fully referenced in the publications listed in Appendix A.

What do children need from the built environment? This report makes a case that our current approaches to urban planning and management, in emphasising profitable development, adult lifestyle considerations, and particularly mobility by adults of working age, pays inadequate attention to the needs of children and young people. Furthermore, those needs are often in conflict with the implied needs of adults, and even teenagers, promoted by our consumption-based society where industrial corporations and business interests have a significant

role in the determination of policy. Those interests rely on an ethos of individualism and self interest as the governing principle of society. Such an ethos undermines sense of community unless society itself provides alternative perspectives and thus balance. We believe that strong sense of community is vital within the environment of the growing child, and indeed is a prerequisite for good physical urban design.

In urban planning practice the oil goes to the wheel that squeaks loudest and only adults can directly participate in the political process that constitutes the 'squeak'. Children's needs must necessarily be advocated by adults, and in turn those adults must understand what those needs are. They usually assume that they do, but in that assumption they are more often than not misled. Even parents, teachers and other adults who have particular responsibility, may not fully understand children's environmental needs.

A word of caution is also appropriate here. Many built environment professionals are, consciously or unconsciously, influenced by ideas of *environmental determinism*, where the physical environment is assumed to have a direct impact on social and intellectual behaviour. Human beings are more complex than that. The child's development is a consequence of myriad genetic, biological, social and physical influences of which the natural and built environments are only a part. While the physical environment can undoubtedly influence the development of children, there is no reliable evidence that it can *determine* that development. Children growing up in the most terrible physical circumstances can nevertheless achieve fulfilling and successful lives. Children growing up in what may be considered ideal environments can nevertheless fail to develop their full intellectual and/ or social potential. When we discuss the impact of the built environment on children we are therefore talking about propensities not about absolutes: a good environment for play in middle childhood is likely to enrich the child's development but does not guarantee it. A poor physical environment will likely lead to impoverishment of the child's progress toward adulthood, but such impoverishment is not inevitable.

This is not an excuse, however, for failing to develop policies which provide high quality natural and built environments within which children can grow. Adults are not required to invoke 'developmental benefits' when advocating the sorts of environments they want urban planning provide for them, especially when those environments involve employment, shopping or recreational pursuits or economic opportunity.

Nevertheless, many of the current shortcomings of the built environment for children are also shortcomings for the population in general. The way we currently plan our cities and towns is in many respects inimical to the needs and best interests of children. Car dependence, for example, limits the ability of

children to explore their city and neighbourhood *independently*, reduces their propensity to engage in physical activity, and facilitates a system of marketing and retailing specific food lines that are identified as major influences in the so-called obesity epidemic. But it is not only children who are adversely affected by these things. The footpaths, bicycle tracks, bushland strips, frequent public transport, neighbourhood focal centres and many other urban elements that are foregone in favour of construction of sophisticated road systems to carry the resulting traffic to large, but more distant, shopping centres and places of employment are as valuable to adults as they are to children. Good urban design for children is, by and large, good urban design for the whole community.

Appropriate urban form for children does not require lots of money to be thrown at the problem. Indeed cities and neighbourhoods designed with children in mind are likely to be far more efficient, even in an economic sense, than our current approaches to urban planning which demand large and often wasteful capital investments for relatively poor environmental outcomes. Children have few resources, so a city that enables them to access nature, the neighbourhood, shops, schools, and sporting fields, *independently*, is also a city which enables adults to do the same in a low-cost way. Indeed, the sacrifice of adult 'wants' (largely driven by persuasive and ubiquitous industrial propaganda) to meet the 'needs' of children could provide the whole society with cheaper, saner, friendlier and ecologically sustainable communities.

However, a genuinely child-friendly approach to urban development and management requires something that is probably much more difficult politically than the amassing of large capital investments for public works. This is recognition that the assumption of ever increasing economic growth and production of material goods and services is not serving society well, particularly our children. To put it in the words of Sir Humphrey Appleby of *Yes Minister* fame, politicians willing to support child-friendly cities against the considerable power of business and industrial corporations might well be making 'courageous decisions'.

There is thus no easy answer to ways of providing child-friendly cities and neighbourhoods. There are no glib formulae or rules of thumb of the kind often resorted to in planning regulation. What is required is a less selfish and less materialist society which is genuinely committed to the welfare of children. Such a society would recognise children's needs and provide for them even at the expense of adult imperatives. The whole city should be considered as the child's environment, not just small parts of it set aside for the use of children. There would be recognition that some urban forms, however convenient they may be to adults, are less satisfactory than others for children.

2. ISSUES

2.1 The importance of play

Play is fun. This observation by the philosopher, Huizinga, in his 1970 book, *Homo Ludens*, is the first and most important thing that must be said about play. That it is fun is its justification. While play is believed by many to be important in the child's development, the evidence on this score is not conclusive. If adults do not need to invoke 'development' as justification of their fun places, why should children? The child does not generally see play as a 'useful' activity, although children do seem to understand instinctively how their developmental needs can best be met. Children will play anywhere and everywhere but not all environments provide the same quality of experience. Children especially seek out complex environments where they can interact – alone or with peers – with animals, plants, landforms and artefacts through exploration, challenge and manipulation.

The idea of play as 'the work of childhood' is a theme that constantly recurs in research literature. Through play comes increased self-awareness, realisation of the dynamic nature of relationships with others and with the natural world, and an understanding of the position of the child among peers. Social mores are discovered and either accepted or discarded. While conflicts with parents, siblings and peers are not insignificant, middle childhood is a relatively peaceful time in comparison with infancy past and adolescence to come. Identity is being developed but not seriously contested, while the relationship between the child and the environment also becomes important

There are basically two types of play. The first of these is adult-directed activity such as sporting or cultural activity or the use of manufactured things like bicycles scooters and skateboards. Children, by and large, enjoy these and the physical spaces they require are a legitimate claim on the urban land budget. Even more important are the types of activities that children engage in when they are free of adult supervision. These are the times for exploration, for the children's own social games which are so different from the formal sports devised by adults, and for solitude and quiet reflection.

Both types of play require their own types of physical space. Formal games require sports fields easily accessible to children's homes. Bicycles and other travel implements require safe and adequate pathways, streets or ramps.

Free play requires a multitude of facilities, not all of which are open or green spaces. The classic work on children's games is that of Iona and Peter Opie, *Children's Games in Street and Playground*, first published in 1969. Children's social games can be found in open spaces, in the street or in happenstance or

waste land. These games are fascinating in themselves: they appear to be universal, for many have a history of thousands of years and are played in very different cultures across the globe. They are cooperative rather than competitive: the 'reward' for the winner is usually to be the lowest status player in the next round of the game. Though most of us played these games in our childhood we have mostly forgotten not only the games and their 'rules' but also the reason that we played them.

This natural play is important for children but equally so is the need to explore and socialise in the built environment. This involves access to virtually the whole neighbourhood, and even the whole town and city. The shopping centre; the beach, Lake or river; even wastelands are all localities where children meet and play – whether or not they are permitted to do so by parents or other adults. Children have often told us that they lacked places where people of their age could simply 'hang out'. Thus any effort to account for children's needs in the urban planning process must set its sights higher than the usual concerns about sports fields, playgrounds and skateboard ramps: the whole city is the child's environment just as it is for anyone else.

2.2 The urge to explore and the propensity to roam

Children in middle childhood have an inherent need to explore. This exploratory drive is not just limited to natural areas but involves the whole fabric of the city to the extent that it is available to them. There is therefore a need for *independent* access by children to neighbourhood and urban facilities. They can walk, ride bicycles, scooters, perhaps skateboards, in-line skates or roller skates, or use public transport systems to get themselves to where they want to go. Parents may have fears about letting children ride the bus or train, but children are generally able to use public transport systems with confidence by the time they are ten or eleven years of age. The limiting factors for children may simply be lack of availability or frequency of service or the cost of using it. Just as likely they will be inhibited by the fears of their parents, exacerbated by sensationalist media reporting of crimes committed against children.

Many researchers, and particularly Mayer Hillman in the UK and Paul Tranter in Australia, have demonstrated a decline in the independent mobility of children over the past thirty years or so. This is attributed largely to increase in motor traffic, leading to greater parental restriction on children's independent play range combined with decline of public transport services. Parental fears for children using public transport independently may also play a part, though it is still a common enough practice (though also a declining one) for the journey to school to be made by public transport.

Our research has shown significant gender differences in the propensity of children to play away from home. More boys than girls played away from home in after-school free time, and boys who played away from home ventured further. However the median play range for boys who played away from home was still only 400 to 500 metres (as against about 150 to 200 metres for girls). Some children, of course, ventured much further with a few boys and girls recording journeys of the order of two to three kilometres in independent after-school play. The implications of these data are that if we wish to encourage independent exploration by children then destinations attractive to children need to be close to home, or linked to home by safe and comfortable routes for walking, bicycles and/or public transport. Whether the limitation on the propensity of girls to play away from home is innate or a result of parental restriction (it is a phenomenon that has been observed in many countries and cultures) it is the need of girls for independent mobility that has to be particularly addressed: if the solution works for girls it will also work for boys.

2.3 The significance of manipulable nature in the playspace

Very important in the child's free play time is the ability to access complex manipulable environments. While these are usually patches of natural landscape, they do not necessarily need to be pristine ecologically intact environments. It must be understood that such places are 'used' by children. They build cubbies or huts, they climb trees, they pick flowers, and they catch small animals and reptiles. Children's use of bushland not infrequently looks like vandalism to adults who do not understand this drive in children to manipulate their world.

Children are particularly attracted to natural water bodies, and especially running water. Again, this is not so much to enjoy them passively and aesthetically but to actively manipulate the environment. Activities such as damming creeks, fishing, catching frogs and tadpoles and making mud pies may be messy but it is normal and seemingly instinctive behaviour in middle childhood.

Complexity seems to be the key to the attractiveness of environments for children. This applies to both the natural environments where they play and also to the built environment and its furniture. Free play can be broadly seen as taking place in three different types of environments. *Active play* involves vigorous activity and needs furniture like walls and hard surfaces for impromptu ball games, softer perhaps grassed areas for resting, trees for shade as well as climbing, and play equipment that is challenging for children aged up to early teenage years (children frequently told us that available play equipment in municipal parks was 'too babyish'). *Social* or *adventure play* requires an environment that provides the materials for huts or cubbies as well as props for whatever scenario is being acted out. This essentially means a combination of open and wooded or shrubby areas, though not necessarily 'natural' vegetation.

Quiet play requires places where children can get away from adults and other children. Our research consistently showed that solitude and time for reflection was valued by many children.

These considerations naturally bring up the question of children's safety. There is some degree of risk in allowing children access to bushland, and especially to natural water bodies. This risk is indeed very considerable for younger children but those in middle childhood are for the most part environmentally competent. Indeed one of the reasons children seek complex and manipulable environments is the challenge involved: they like to extend themselves through their play experiences, but for the most part stop well short of letting a challenge become real danger. Nonetheless, children do occasionally fall from trees or otherwise sustain injury in their free play. It is not a reasonable solution to this problem, however to eliminate the opportunity for such play. Unfortunately, risk management policies of local councils – based on considerations of legal liability – can create an impediment to the inclusion of natural play places freely accessible to children.

The idea of well vegetated places for children to play also provokes in many adults the fear of 'stranger danger'. Obviously there is a risk here that requires mitigation, for there are individuals who seek opportunities to molest and even abduct children. Actual incidence of harm to children by strangers is in fact very low, but sensational press reporting of the few cases that do occur exacerbates the perception of risk. Many parents prefer to see their suburb stripped of all vegetation that might permit malefactors to lurk unseen, and forbid their children to play away from home. There are thus very difficult social issues to be resolved before effective planning policies can be implemented. To deprive children of access to the environments that attract them makes their neighbourhood and city that much less interesting and child-friendly.

A genuine safety issue for children in the built environment is created by vehicles. Whereas children are reasonably competent in the natural environment by the time they reach eight or nine years of age, the ability to deal fully with traffic risk is not reached until their early teens. This issue is dealt with in more detail below.

While the provision of natural areas accessible to children within urban areas is usually also congruent with objectives of ecological sustainability, conflicts can arise. Children manipulate the environment in play. They build cubbies and this involves use of saplings and foliage. They collect animals and marine life. In these activities children's use of the environment may appear to be vandalism. A given area of bushland may well have limited 'carrying capacity' for children's activities if conservation objectives are also important for the tract. The size of the bushland area must be related to the population of children it will serve,

though it is neither helpful nor possible to express this as an exact mathematical relationship, as vulnerability of the environment depends upon the specific nature of the bushland and also its terrain.

2.4 Formal and informal education

Children's needs from the built environment involve all aspects of their lives. Up to this stage the report has focussed on children's independent activities in their free time. However, the environment of the home, school, and other places where children necessarily spend most of their time under direct adult supervision is also important.

Much stress is placed on children's formal education and huge public resources are invested to ensure that such education – whether in private or public schools – best develops children's intellectual skills in ways demanded by society at large. We make no comment on formal education and its built environmental needs, for others are much better qualified to speak on these matters. However, we draw attention to what may be called 'informal' education. Children do not stop learning when the school bell rings at the end of the school day. Their free play, as stated above, provides them with learning experiences. They learn from the example of the adults and older siblings around them. Their experience in watching television or surfing of the internet or playing of computer games provides powerful education. The child's education, in a broader sense comprises what is learned from all of these experiences as well as what they get from the classroom.

The role of television and the media is particularly powerful. The community rightly has considerable concern about the amount of time children spend watching television or playing with computers. There is a huge volume of research on this question and we leave it to others to make the necessary judgements. What we can say, however, is that in all of these activities children's time is occupied by adult direction. Time that is spent in such passive pursuits is time not spent in active self-directed occupations. Apart from considerations of the quality of TV programmes or computer materials, there is a question of balance here that needs to be addressed.

Although, as outlined above, the main reason for children to play is the intrinsic fun involved, free play has two other specific educational benefits. Firstly, it provides the child with a set of skills and experiences which arouse curiosity and reinforce formal learning. Research seems to indicate that boys and girls learn in somewhat different ways. Girls are apparently more inclined towards what may be called 'book learning' whereas boys learn through experiment and experience. Girls are more tolerant of the passive environment of the classroom whereas boys are more restless in that environment. These differences are, of course,

statistical and cannot be assumed to apply stereotypically to any individual boy or girl. For either sex, free play provides the opportunity to get 'hands on' experience of qualities such as mass, volume, measurement, scale, light, shade, movement, and life that are subsequently met in a more formal way in the classroom. Secondly, free play involves the child in physical activity. Children can let off steam, burn up energy, shout, scream, joke and even fight in ways that would be considered inappropriate in the classroom. Deprivation of environments and time for free play may impact on the academic development of children and particularly boys.

All of this presupposes, however, that the physical environment within which play takes place is appropriate. If available space is confined, as it is in many school playgrounds, children's activities are limited as the 'carrying capacity' of the space is exceeded. Furthermore, if the space lacks complexity or interest the variety of activities possible is restricted. Much of our understanding of children's play in middle childhood comes from observation of activity in somewhat crowded and mostly paved school playgrounds. These are characteristically dominated by boys in a somewhat aggressive way. Boys and girls play in separate groups and mixed-gender play is rare. Play equipment, if provided, tends to be a girls' domain. Our research on children tends to show that these stereotypical differences are much less obvious where children have the freedom of larger spaces with an abundance of complex natural landscaping. The typical school playground appears to be an impoverished environment for play and learning.

This is particularly poignant as more children are cared for in some form of community day care in after-school hours. Their available free time becomes dominated by adult-directed activity, and as often or not they remain confined to a school playground, or something like a school playground, while they are in such care. Because of legal liability those providing care are unable to give children the same freedom as parents can, which potentially could give children the freedom of the neighbourhood if not the city.

In general, children seem to have declining free time to explore and declining personal mobility to roam in their exploration. While school homework, extra-curricular learning in music dance or the like, and formal sports are important in the child's life as part of the particular culture of families and society, these should not be provided at the expense of the availability of free time for the child's own choice of activity.

2.5 The obesity epidemic

Since 1980, in Australia, there has been a dramatic increase in the incidence of overweight and obesity in children. The trends noted in Australia seem to be

echoed in most western societies and seem also to be likely to occur in most societies around the globe with increasing modernisation and westernisation of their economies. The incidence of overweight and obesity, as determined by measurement of body mass index and other clinical techniques has been growing at an increasing rate. Obesity in childhood can lead to orthopaedic complications, many chronic illnesses and psychosocial dysfunction in children. It also seriously increases risk of illness and premature death in young adults. For example, type 2 diabetes, previously rarely presenting in individuals under the age of 45 is commonly being seen in teenagers. Complications such as limb loss and blindness follow in many such cases and these will increasingly be occurring in young adulthood. Annual direct costs of obesity in Australia are currently in the range of A$680 million to A$1239 million and rising.

While much more needs to be known about why these trends are occurring some general conclusions can be drawn now. While some individuals are predisposed to obesity by genetic factors, genes do not explain the dramatic increase in obesity across society in the past 30 years. Australians, and especially young people, are eating more with a higher proportion of 'high energy density' foods in their diet. Children and adolescents appear to be less physically active than they were two decades ago. Research on this point is urgently required as there is still little tangible information available. Children seem to spend more time in sedentary activity, particularly television watching and computer work, that they did two decades ago. There has been a rising community perception of danger to children, and, as has been stated above, children have become less independently mobile over the past twenty years.

There is thus a clearly defined problem: *our children and young people are getting fatter*. There is, at least in the broadest terms, a clear explanation of the phenomenon: *increasingly high-energy diet combined with decreasing levels of exercise*. There also seems to be a reasonably clear pointer to modern lifestyle as an explanation of the problem but from here on the picture becomes increasingly obscure: dissecting into the detail is both complex and politically volatile. The problem impacts on the built environment and urban planning and management in several ways.

There are two sides of the equation – nutrition and activity. While the nutrition side of the equation is not by any means thoroughly studied or understood, even less research has been done on the activity side.

Urban form affects both sides of the equation. Our newer suburbs are designed primarily to be accessed by private motor vehicles. There is a declining propensity for people to walk or to use public transport. Car dependence reduces opportunities for exercise carried out in the normal day-to-day journeys to work, shops and recreation. Children are increasingly driven to school and other

activities by parents. The car-dependent city also influences the location of retail activities, the way that family shopping is carried out, and in turn the types of food readily accessible. Different urban forms lead to different patterns of diet and exercise, and the car-dependent city and suburb seems to favour declining exercise as well as a particular food distribution system that in turn favours consumption of high energy density foods of low nutritional value.

This impacts particularly on children. High levels of traffic and high levels of parental anxiety about children impede their personal mobility. They become dependent on others to get around. At the same time they are particularly vulnerable to the lure of foods of high energy and low nutritional value which are aggressively marketed to children.

All this places an unfair burden on parents. Increasing levels of alienation within the community lead to increasing suspicion and fear of strangers who in other times and places might be expected to 'keep an eye' on children and ensure they come to no harm in their explorations in the community. Parents thus feel that they must have their children constantly under close supervision, either of themselves or other known and trusted adults. It is parents who are held responsible for their children's diet, television watching and safety, notwithstanding the fact that, in much of what they are expected to control, they are opposed by the most powerful system of propaganda ever known to society. Our system of business and industry can legally promote the very things that are causing the problems while blaming adverse outcomes on poor parenting.

2.6 Consultation with children in middle childhood

Finally, we turn to the issue of consultation with children. We affirm the general principle that children are entitled to be consulted, and to have their voice heard and considered, in matters of government that concern them – and this includes all aspects of social well-being as it does for adults. This is all the more important because children do not have a direct voice in the democratic processes of government. They can only make their voice heard through the medium of adults such as parents, teachers and others in the community concerned for their welfare.

The introduction of youth councils and the like is a forward step in allowing young people to participate in civic affairs. There is in fact a good case for lowering the voting age (say) to 16, and allowing young people direct participation in civic affairs. This is an age where young people are allowed, if not required, to take on many aspects of adult responsibility anyway. They can enter into (heterosexual) sexual relationships, can even marry, and can take out a permit to learn to drive a car on public roads. Many young people are actively interested in politics and are even political party members by this age. People of

16 these days are by and large more sophisticated than 18 year olds were at the time when they were first awarded the vote. There are many in the community who would also argue that at this age young people should be expected to take full and public responsibility for any criminal actions they may commit.

However, none of this would help the case for children in middle-childhood or younger years. They do not have the social experience to understand and respond appropriately to methods of consultation usually used with adults. They do, however, have the ability to respond to appropriate ways of consulting. There is a significant problem with prompting: children of this age often respond to questionnaires or instruments designed for adults with answers that they think the questioner wants to hear (it must be said that many adults do also). Research methods and methods of consultation therefore need to be tempered to the way that children think and act. In our project we have found the following methods to be at least reasonably effective:

- Questionnaires which require a factual (and non-judgemental) rather than a hypothetical answer. For example "Where did you play *yesterday* after school?" rather than, "Where do you *usually* play after school?".
- Small group discussion of issues where the researcher first gains the children's trust. In our research we used such discussions to allow children to explain in more detail the photographs they had taken and their significance.
- Working with maps. Children of this age generally have a good understanding of maps and enjoy using them to identify features of their neighbourhood
- Children's photography. Children take photographs of their activities without prior prompting from the researchers. We pioneered this method for working with the age group and it is now being increasingly used by other researchers around the world.
- Story writing. We used this technique to involve 269 children aged from six to twelve in the consultation process for the City of Blue Mountains Urban Strategy plan. The children wrote a story about their vision for the City in the year 2025. This was organised as a competition. Administration and judging of the competition was organised independently of the research team who were provided with copies of all the entries. A content analysis of these provided a wealth of data that matched that collected in 'butchers paper workshops' for adults and teenagers. This data allowed children's views to be a real voice in the public participation process, notwithstanding the fact that (against the wishes of the research team!) the process was flawed by some degree of prompting in the story competition brief. Indeed, on one particular issue the children reacted strongly *against* the prompting contained within the brief and thus made their voice heard loud and clear.

For effective consultation children need to have some understanding of the way policy is formed and implemented, and to also to understand that they cannot necessarily be expected to get everything they wish out of the process. They are but one of many interest groups wanting to have their voices heard.

More often than not consultation with children is seen as something ‘special’, is driven by the perception that children’s needs deeply conflict with those of adults, and is frequently done in isolation from consideration of the needs of the broader community. It is also, more often than not, limited to aspects of community planning believed to be relevant to children (such as the design and management of recreation space), rather than directed towards overall management and governance of the community, as is done for consultation with adults. This isolation and limitation are, in themselves, likely to deprecate the possibilities inherent in children’s contributions to planning.

Participation in the planning process cannot guarantee any group, even children, priority over the needs of others. There is indeed a subtle conflict between the generations for use of urban space and resources, just as there is conflict for such use between different users of land, between rich and poor, or between men and women. Effective resolution of these conflicts requires that the consultation and participation process with all sections of the community be effectively balanced so that all voices are reasonably equally heard.

3. TOWARDS PRACTICAL POLICY

3.1 Urban form

With the above issues in mind we now look at ways in which urban planning, design and management can assist in making neighbourhoods and cities more child-friendly. The key word is 'assist' as physical design, of itself, is unlikely to change human behaviour: it will not, of itself, create sense of community where the elements of good community do not exist.

As an example of this point we can cite current controversy over the use of what has become known as 'Radburn' planning in outer suburban housing in Sydney. The term itself came from a relatively small 'garden suburb' type development designed in the early 1930s by Clarence Stein for Radburn, New Jersey, a commuting suburb of New York City. The key principle in the Radburn layout was complete separation of pedestrian and vehicular traffic. Houses were oriented towards a system of pedestrian streets and pathways which were themselves lushly landscaped and well furnished. Vehicular access was to the rear of properties, requiring a second entrance oriented to the street. The idea appealed to the middle class residents of Radburn, and indeed has continued to work reasonably well for other places, predominantly wealthy middle class suburbs the new residents of which can easily establish a well developed sense of community. Radburn-style residential layouts, or layouts with at least some of the elements of Radburn planning have been used in the ACT and have mostly been well liked by communities there.

Radburn style urban development , Columbia, Maryland USA. In this relatively wealthy community the system works well because residents can afford to pay for the maintenance of the pathway and garden system. The pathways and parklands provide attractive places for children to play and connect the focal points of the neighbourhood which can be reached without the necessity to cross heavily trafficked streets.

The Radburn idea, however, has not translated well to neighbourhoods where most people are poor and where there are significant proportions of dysfunctional families. The community lacks the resources, the leadership, and indeed the values that are required to make the principle work. In other words, a sense of community is a *prerequisite* for good physical planning not an outcome of it. Merely separating motor traffic from pedestrian means of access, and even providing shady parklands will not appeal greatly to residents if the residents did not consider these things important in the first place. The most significant factor in success is whether residents had any choice in way their environment was designed.

Similar considerations apply to neighbourhoods where the predominant type of housing is in high-rise blocks of apartments. There is a history of singular failure where public housing tenants from low socio-economic backgrounds are housed in these forms of development. The necessity to dynamite half of the blocks in the Pruitt-Igoe neighbourhood in St Louis Missouri in 1976 is cited as proof of physical design determining human behaviour. A large-scale study of public

housing high-rise blocks in the UK by Alice Coleman in 1985 reached similar conclusions. In Sydney and Melbourne the experience of high-rise public housing has been similar if less dramatic.

On the other hand, high rise housing has long been a choice for affluent households in many cities throughout the world, including Australia, and is the most common form of housing across the whole population in Asian cities such as Singapore and Hong Kong. In these cases there is little evidence that the physical design of the housing has had any significant adverse impact on occupants, even children. Whether or not those adverse symptoms appear seems to be less a consequence of physical design than of the nature of the community that comprises the occupants. Where, as in Australia, there is no tradition of high-rise housing, and community support within such housing, as part of the culture of family life there is reason to believe that it does not provide appropriate environments for children to grow and develop. However, *any* approach to physical layout will fail to produce contentment if the families to be housed have little choice in their housing arrangements and there is even a moderate proportion of dysfunctional families within that community. Indeed, the experience of the Northcott estate in Sydney is that significant change in living conditions can be achieved by addressing not so much the physical fabric as the issues of community.

In summary, *physical layout does not of itself create community*, though good and appropriate design might help to reinforce aspects of good sense of community that exist. In Australia, traditional neighbourhood land development patterns where detached houses face the street, and the street is the sole means of access to property, are better understood by most people and therefore more likely to be 'comfortable'. Such a layout supports the familiar house layout with a clear front entrance to the street, a back door to a private and enclosed yard, and an unambiguous address related to the street. For most people these things are more important than the perceived relatively small risk from traffic in residential streets that so called Radburn layouts attempt to minimise.

One feature of the traditional suburban neighbourhood that is valued and used by children and adults alike is the private yard. This point was made in an Adelaide study, *The Quarter Acre Block*, by Halkett in 1976, and also emphasised in the work of historian and social commentator Hugh Stretton. Our own studies, particularly those in Lismore NSW and Ipswich Qld, where we used children's own photographs in analysis, clearly showed that the home yard was important for children. For 70% of girls and 50% of boys this was where they mostly spent their after-school leisure time.

Children can, of course, be accommodated successfully in other forms of housing, but the instinctive choice of most parents for a house with a reasonably

spacious yard appears to be sound. There is currently a concerted push, particularly by architects and design professionals, to promote the virtues of more compact housing forms, such as town houses and apartments, on aesthetic, efficiency and environmental grounds. Undoubtedly a larger proportion of dwellings of these kinds than we currently have is necessary to improve variety of housing choice for prospective residents. However, we believe that this campaign pays inadequate attention to the needs of children in residential environments.

Much can be done to improve the efficiency of land use without eliminating the home yard. Elimination of side yards ('zero lot line'), reduction of the depth of front yards, and use of the English style narrow lot with long back garden are measures that can save considerably on land use while still providing a reasonable private garden for families and children. It is also doubtful that the very large houses currently in vogue in the suburbs are really necessary for good child-rearing. A stock of smaller and more affordable houses for families may be of more overall benefit to children and allow more land to be devoted to the garden.

We now turn to consideration of the street. Mostly streets are designed with priority given to their engineering functions – carrying traffic, parking of vehicles, provision of water, gas electricity and communications technology – with less attention given to the street as a social space, though the importance of presentation of dwellings in the street is recognised for real estate values. In our research we found that streets were used as playspaces at least as much as municipal parks and playgrounds. Streets are vitally important social spaces – for adults as much as children. We therefore believe that the traditional design priorities should be reversed: residential streets should be seen as:

- First, Legitimate places where children play
- Second, social spaces for adults
- Third, access to private property
- Fourth, reservations for the provision of services
- Fifth, reserves for carrying drainage
- Sixth, conduits for the passage of traffic and parking of stationary vehicles

Streets provide the connecting network from the individual dwelling to all other parts of the city and neighbourhood. As set out in the next section, for a better environment not only for children but also for adults, access should not be primarily a matter of designing for circulation of motor vehicles but should give at least equal priority to walking, cycling and public transport use. In doing all this, nevertheless, the street should maintain its urban character. Rather than talking about feeder and collector roads and arterials –engineering terms related

mainly to traffic flow – urban planners should be thinking in terms of streets, promenades, avenues and boulevards – descriptive terms that conjure up visible aspects of the street system in which the community can take pride. Street design can be very important in reducing the speed of traffic and the behaviour of vehicle drivers - a prerequisite for the street to function as a social and play space.

What is the role of the cul-de-sac street? Undoubtedly such streets provide quiet residential environments, are popular for families with children and they therefore have a place in the design of street layouts. However, over-use of the cul-de-sac can create traffic issues. Where such streets predominate in the neighbourhood they direct higher traffic flows onto the limited number of through roads and such flows are a major impediment to the independent mobility of children. In extreme cases a 'walk around the block' can become a journey of several kilometres thus reinforcing car dependence and limiting the propensity of the whole community to walk. A neighbourhood consisting mostly of cul-de-sac and loop roads is also very difficult to service with direct bus routes. Buses must circle around neighbourhoods rather than cutting straight through them and this makes public transport journeys long and uncompetitive with the private car. In summary, neighbourhood design that best supports children's independent mobility will consist mostly of through roads, perhaps on some form of grid, with cul-de-sacs and loop roads used judiciously where they do not significantly impede the ability to access the focal points of the neighbourhood using many different routes. This quality is often referred to by urban designers as *permeability*.

What is the role of open space, parkland and the playground in the child-friendly neighbourhood and city? There are reasonable prescriptions currently used for the provision of sporting ovals in Australian cities, and land developers can be required to provide a certain proportion of land under development for the open space needs of residents who will occupy the development. Less attention is usually paid to integration of open space with other requirements, such as mobility. Parks and gardens are elements of civic pride for all citizens. When well designed and located they also add value to property. Of particular significance for children is so-called 'passive' open space, which is open land not specifically dedicated for sportsfields. For children they are essential playspace. The following general principles in location of passive open space would make the neighbourhood more child-friendly:

- Availability of complex and manipulable bushland areas, within a few hundred metres of homes, thus taking into account the limited play ranges of most children, particularly girls, less than 13 years of age
- Linear parks (possibly following drainage features) which also give access to neighbourhood facilities such as shops, schools and sporting ovals

- Parks landscaped to provide still and running water, habitats for aquatic life, mammals and insects
- Provision of playground equipment suitable for older children
- Parks edged by residential streets with houses facing the parkland and providing 'passive surveillance'
- Avoidance of backyards or high blank fences fronting linear or other parkland
- Regular maintenance and ranger patrols, not to limit children's activity but to ensure the right of children to play undisturbed but in safety.

The child-friendly city, however, is more than just the provision of good streets, parks and playgrounds. What is being stressed here is independent *accessibility* to all the exciting places that children can discover in the city. Most of the city fabric has long been built and occupied, and exploration of this historical fabric can be a source of never-ending fascination for the child. Much of it is already, at least potentially, accessible by established public transport. The inner city lacks the availability of open space and bushland of the suburbs, and its house yards are often, though not always small, but it provides for children much of what is lacking in the fringe. There are footpaths, direct walking routes to shops, schools and other attractions, public transport, and a wealth of places and things to do that can delight the child. Exploring a city can be just as challenging and exciting as exploring the wilderness.

How child-friendly are the streets of the city, its public spaces, main streets and shopping malls? How easily can children access these as well as sporting stadiums, performance places museums and the like independently of adults? It is the answers to these sorts of questions that reveal the deeper problems of children in modern Australian society. Much of the problem is fear. Most likely very few parents indeed would allow their 10 to 12 year old children to visit the inner city without an adult, yet in the past such independent movement to and through the city by children was commonplace. Resolution of the social problem involved here is beyond the scope of urban planners and managers acting within the ambit of their professions. It requires a higher order of understanding that can only come with a genuine sense of community.

3.2 Transport

The above discussion indicates that providing for children's independent mobility within the neighbourhood and city is one of the best ways that city planners, urban designers and other built environment professionals can make cities more child-friendly. The measures required to do this are not exactly rocket science. Nor are they necessarily expensive: achievement of high levels of walking or

cycling for short and medium length daily journeys reduces the need for investment in urban roads by considerably more than the cost of good walking infrastructure. Achievement of high levels of public transport can do the same, though the difference in cost is less dramatic. There are also environmental benefits in less consumption of fossil fuels. Furthermore, such measures are not child-specific but benefit the whole community, particularly the elderly, as well as children.

First, walking should be taken seriously. Medical literature is specific about the benefits of walking, so much so that the current advice is that young people and adults should walk of the order of 10,000 steps per day. If taken as a single journey this would amount to about seven kilometres. If children regularly walked to school, shops, play places and on their neighbourhood visiting this could account for much of the 'walking quantum' required for their health and well being (though they would not see it this way: for them it could be fun, socialising and exploring). Few people in fact achieve this figure but the evidence is that those who do achieve, in general, dramatic health benefits. The reducing propensity of children to exercise is a particular concern of those studying the obesity problem. However, it is difficult to achieve recommended walking distances if the environment is not designed to encourage walking. Large parts of Australian cities, and particularly the newly developing fringe suburbs, positively discriminate against walking and encourage car use. The following general principles are suggested:

- Every urban road (unless it is a specially designed share-way where pedestrian traffic has absolute priority and vehicle speeds are limited to 15 kph or less) should have an all-weather footpath on *both* sides.
- Width of footpaths should be sufficient to account for the fact that children can legally ride bicycles on footpaths, and incapacitated people can legally ride scooters.
- Walking routes from homes to neighbourhood focal points should follow the most direct route.
- Generally footpaths should be in the same reservations as roads.
- Footpaths should be well lit to allow and encourage night time use.
- Where footpaths intended for general neighbourhood journeys use linear parkland they should be constructed to the same standards as those in road reservations, and the parkland concerned should be overlooked by dwellings for 'passive surveillance'.
- Parklands themselves should preferably be edged by roads, and in such cases the main footpath should follow the road alignment on the property frontage side.
- Where footpaths are combined with public cycleways there needs to be Clear indication of the shareway rules.
- Pedestrian access to commercial centres and retail shops should be obvious, attractive, and preferably the principal route to the main

entrance of the centres. Pedestrians should not have to walk across car parks to access the centre.

- Footpaths should generally be landscaped to ensure shade for summer walking.

An example of a simple cycleway/footway in a linear park in Armidale NSW. This path connects Armidale CBD to the University of New England as well as Sandon Public School. It is well used by pedestrians and cyclists of all ages. Armidale City Council has recently landscaped the path with avenue planting to provide future summer shade. The pathway is not lit, so is only useful in daylight hours.

The bicycle is the child's principal means of independent mechanical transport. If cycling is taken seriously and properly provided in urban areas it can achieve similar health and environmental benefits to walking. Cycling greatly extends the range of a child's independent mobility up to a radius of six kilometres or more. This, of course assumes that appropriate infrastructure is built into the design and layout of neighbourhoods, suburbs and cities. Cycling, though, is less 'green' than walking and requires provision for parking at each end of a journey.

There is a general perception that cycling routes are best provided as separate routes from road reservations, usually in parklands. The park cycleway certainly has its place as a recreational facility and as a general transport route. A fine Australian example is the Torrens Linear Park in Adelaide, where cyclists – and pedestrians – can enjoy travelling from the city centre to the urban fringes without crossing a major road. However, the specialist parkland cycleway does

not provide a fine-grained system that allows children cycle access to the whole neighbourhood and beyond. Most cycle paths should therefore be within road reservations and usually this means an appropriately designated and marked part of the road carriageway. Paint may be insufficient for such marking. Suitable studs or kerbs may be necessary to prevent intrusion into cycle space by vehicles. Indeed, *every road is a cycle road*, is a worthy motto for the engineer of urban roadways. There are splendid examples of the sorts of roads that arise from following this principle in Europe, particularly in the Netherlands where bicycle use is widespread by all age groups.

Public transport also has an important role in conferring independent mobility on the child. This connects the child's world to more distant parts of the city, and particularly the central commercial and entertainment focal points. The requirements of the system for children are very much the same as they are for everyone else: It must be frequent, punctual, direct, well patronised and cheap. Children as young as nine or ten can learn to ride the system independently, and to do so is a wonderful way to explore and learn about the wider community. A cheap weekend day fare, available across the system and similar to the current $2.50 ticket for pensioners and seniors on the Sydney system would simplify public transport use for children. Of course provision of public transport at the high level of frequency required (essentially dispensing with the need for timetables during daylight hours) is expensive and would need high levels of public subsidy. There has to be a balancing saving elsewhere.

This would most likely come from reduction of investment in urban roadspace and parking. Generally such roadspace is overprovided, especially in new suburbs. Weaning the community off car dependence is not likely to be easy, but it is possible if urban design discriminates in favour of pedestrians, cyclists and public transport. This is the sort of city that is needed in any case if it is to be truly child-friendly.

There is one measure that could be more or less immediately introduced that would save children from injury and even death. In Australia at present motorists are permitted to pass a stationary school bus with its lights flashing at speeds of up to 40 kilometres per hour. Every year several children are killed or injured when they are struck by vehicles passing their stationary school bus. When school buses are stopped to set down or pick up their young passengers all other traffic on the road carriageway – whether following or approaching the bus – should be required to *stop*. This rule has long been law in the United States and Canada where school buses are painted a distinctive chrome yellow to assist in identification (and no other vehicle can be this colour).

3.3 General social policy

As has been already stated above, achieving a child-friendly urban environment is less a matter of arranging of physical elements as of creating the sort of society that values children for their own sake. Many researchers in the field of children's environments have remarked that modern western society appears to be indifferent to children, and researcher, Cindi Katz of the City University of New York has even gone so far as to label the society of that city as one that hates children. In advanced industrial societies there is a disturbing increase in reporting of crimes against children including violence, sexual abuse and neglect. Though a large part of this could be attributed to more openness in reporting crimes that society previously refused to acknowledge, there is still a probability that incidence of such crimes is increasing. Something in the ethos that drives society deprecates the value of children.

This is not new. The historian Philip Aries believes that most societies in history were not child-friendly and that the very notion of 'childhood' is an invention of the eighteenth and nineteenth centuries of enlightenment and industrialism. In most societies across the globe to this day though children may be loved they are also important as economic assets. Children can assist the family in rural and urban work from an early age and are therefore a source of cheap labour. A large family in a society without social security is a guarantee of support in one's old age. Only wealthy industrial societies such as have emerged in the last century can afford the luxury of childhood – a time when children can be children, and can play as children without having to shoulder adult responsibilities. In our own society we have and raise children for non-economic – even anti-economic – reasons, and society is still trying to adjust to this fact.

The key values driving our society – individualism and industrial materialism – are not such as to encourage the conception and raising of children. It is often pointed out that children are an economic burden on families, costing of the order of several hundreds of thousands of dollars each to raise and educate. In a world that values economically rational decision making the decision to bear and raise children appears increasingly bizarre and irrational. This economic message is a powerful one and fertility is declining in most advanced industrial economies. That many women do indeed still choose to bear children, and both parents choose to raise them at considerable economic sacrifice, testifies to the existence, across society if not in business boardrooms, of a set of values that fall outside the reasoning of economists.

Nevertheless, the messages broadcast (literally) from industry, and even government, enjoin us, as consumers and as voters, to choose and live the materialist lifestyle that industry has prepared for us. In the constant barrage of advertising and propaganda children are targeted not just as consumers in their own right but as voices (figuratively and literally) that will put pressure on parents to yield and accept the messages that industry is sending. In the

processing of packaged foods, the retailing of fast foods, electronic media, music, fashion and clothing, and many other consumer industries a powerful stream of messages is constantly bombarding the child. Furthermore, children are being groomed by the same process to become the consuming adults that business and industry needs for its continued growth in a world approaching (or beyond) the limits of satiety. Even government, it seems, is increasingly powerless to step in on behalf of children, as its role has become less that of governor and more that of economic manager to ensure that conditions are in place to guarantee continuing economic growth and rising gross national product per capita. Government – setting the social goals and expected behaviour of citizens in the context of a democratic community's own values – is increasingly a role accorded to business and industry.

It is in this context that we have to try to understand and develop an approach to a built environment that suits the needs of children. There are, broadly, only two choices:

> On the one hand we could assume that the general social agenda is simply too powerful and impossible to change. In such a case we would work on a 'realistic' children's agenda: a few additional parks and sportsgrounds with skateboard ramps, a few footpaths and bicycle tracks, children's festivals and of course lots of consultation with children and youth councils to advise local and state governments on children's needs. We might also regulate the advertising of certain products to children on children's prime time TV, and 'work with industry' to sponsor children's activity programmes to combat the obesity epidemic. All in all, it would be a pretty thin cosmetic effort, but it would be the best we could manage.
>
> On the other hand we could recognise that the problem does not lie in the physical or built environment at all, but in our overall sense of community (or lack of it). If it is the very source of our material prosperity that is at the core of our problems with children and the built environment, then that is where our challenge lies.

Politics is much more difficult when we have to confront the mightiest holders of political power but it would not be for the first time. The campaign against child labour in Europe, North America, Australia and New Zealand – against the protest of industry that it was uneconomic – was all but won in the nineteenth century, though it continues in most of the newly industrialising economies today (with the same protest!). The campaign for universal education of children was similarly opposed as unrealistic. Elimination of lead additives to motor fuel was essentially achieved – initially over the protest of industry – by the year 2000 in Australia, and atmospheric lead levels in urban areas so damaging to the development of children have fallen by 90% since. We are well on the way to

eliminating smoking from society, despite powerful opposition by a cynical tobacco industry. It is the most important advantage of a democratic society over any other form of governance, that with sufficient will from the people, what is of greater benefit to society as a whole can be achieved by peaceful and civilised means.

We have seen that the sorts of things that make the urban environment more child-friendly also benefit the population as a whole. Alienation and crime affect all of us. The obesity epidemic is not only a problem of children. Degradation of the environment is a universal concern, as are the consequences of global warming. Planning for the child-friendly city addresses all of these issues as it provides a better world for children. Whose priorities then should dominate society?

APPENDIX A

CHILDREN'S ENVIRONMENTS PROJECT

Division of Geography and Planning
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Chris Cunningham and Margaret Jones

The project

Chris Cunningham and Margaret Jones carried out research into issues involved in children's use of the environment from 1987 to 2003. The project has consulted with more than 900 children in Adelaide SA, Sydney, Armidale, and Lismore NSW, and Ipswich QLD. It involved surveying children in their classrooms in the spring months to ascertain how they use the environment for the journeys to and from school, in free play after school and at other times. Parents are also surveyed about their views on making neighbourhoods child-friendly. In Lismore and Ipswich these techniques have been supplemented with the use of direct observers of use of key open space reserves, and of photography by children.

The children studied were in the 8 to 12 age groups commonly referred to as ‘middle childhood’. At the time of initiation of the study these groups were less well studied than rather infants or adolescents.

The purpose of the project was to discover how children used the built and natural environment. It had a particular goal of developing guidelines for urban and regional planners so that children’s needs and preferences were better accounted for in planning decision-making. We chose to look particularly at children’s use of time which would more likely be free of adult involvement. Their behaviour in this time was assumed to be more revealing of children’s inherent play needs and environments than that where children were under close adult supervision (such as when they were at school or engaging in organized sport or cultural activities).

Timing of studies

Research in the project was standardised to spring months, preferably Late October and November for several reasons:
1 Play and environment use are very weather and season sensitive. Spring weather is more likely to be reliable and neither too hot nor cold to discourage outdoor play.
2 Carrying out work in the same season helps to make results comparable from study to study.
3 There are long daylight hours for potential after school play in late October/ early November
4 This is a time when we are most likely to be welcome in schools. The alternative times in late summer (late February and March) are at a particularly busy time of the school year when teachers do not yet fully know the children in their classes. Daylight hours are also less in this time.
5 There are long lead times to obtaining ethical approval for studies (see below), and these make spring fieldwork easier to program than other times of the year.

Ethical considerations

Working with children is a very sensitive area ethically, and it takes a long time to set up a project. Establishing fieldwork in October or November requires planning from the previous April because of the complex protocols that each study involves:

1. Approval of the project from the University of New England Human Research Ethics Committee. This is particularly important for any research involving children as participants.
2. Informal visits to school principals to gauge their interest in research being carried out in their schools. This is a particularly important visit as we need to 'sell' the prospective benefits of the project to the principals before we seek formal approval to enter schools for research purposes.
3. Obtaining approval from education authorities (State Education Department District Offices, Catholic Education Offices, Boards of Governors of private schools etc…)

4. Formal approval of principals and class teachers for involvement of schools and particular classes.
5. Obtaining consent of parents for the involvement of children in research. We usually also survey parents through a questionnaire at this stage.
6. Organising fieldwork visits and ensuring that parental consents are in place for surveying children.
7. Ensuring that the children themselves are able to give free and informed consent to being surveyed.

The children's photography, which has become an important part of the project, also requires long lead times to ensure that parental consents and the consents of each individual photographer are in place. The logistic of ordering cameras and subsequently obtaining the necessary prints is also fairly lengthy.

In Lismore and Ipswich we used trained teenage observers as a measure of triangulation of information from other studies. The process of recruiting and training observers (usually local university students) takes several weeks but the lead time is not as long as for the obtaining of consents.

Outcomes

The outcomes of the project have been a better understanding of the complex needs of children for space in the urban and suburban environment. We have learned much about children's independent play ranges and the factors that constrain children in the independent exploration of their neighbourhood. Important gender differences in the way children use the neighbourhood environment have been discovered.

Publications from the project

The project has resulted in the following research publications up to 2003. The project effectively ceased with the retirement of Associate Professor Cunningham from the University of New England in 2002.

Book

C.J. Cunningham, M.A. Jones, and M. Barlow. 1996. *Town Planning and Children: a case study of Lismore, New South Wales, Australia.* Armidale: University of New England Department of Geography and Planning. 115 pp. ISBN 1 86389 350 4

Book Chapters

C.J. Cunningham & M.A. Jones.1987. 'Play needs of pre adolescent children and their implications for safety at play. In *The child at Play: Safety first?'* Melbourne: Child Accident Prevention Foundation, pp. 83-104.

C.J. Cunningham and M.A .Jones 1997. 'A Pitch and a Swing: an Australian perspective of Urban Planning and the Child', in Ronald Camstra (ed) *Growing Up in a Changing Urban Landscape.* Assen: The Netherlands . Van Gorcum. ISBN 90-232-3263-1

C.J. Cunningham and M.A .Jones 1998. 'Play through the Lens: Children's Photography of After-School Play', in Sheila Scraton (ed) *Leisure Time and Space: Meanings and Values in People's Lives.* University of Brighton (UK): Leisure Studies Association

M.A. Jones and C.J. Cunningham. 1999. 'The Expanding Worlds of middle Childhood'. In E.K. Teather, (ed) *Embodied Geographies: Spaces, Bodies and Rites of Passage.* London : Routledge

Refereed journal Articles

C.J. Cunningham and M.A. Jones. 1991. 'Girls and Boys Come Out to Play: Play, Gender and Urban Planning'. *Landscape Australia*. **4**, 306-311.

C.J. Cunningham, M.A. Jones, and N. Taylor. 1994. 'The Child-friendly Neighbourhood: Some Questions and Tentative Answers from Australian Research'. *International Play Journal*. **2**,2, 79-95

C.J. Cunningham and M.A Jones. 1995 'Child-friendly neighbourhoods: a critique of the Australian suburb as an environment for growing up' .*Loisir et Sociètè,* **17**, 1, 81-104.

C.J. Cunningham and M.A. Jones. 1996. ‘Play through the eyes of children: use of cameras to study after-school use of leisure time and leisure space by pre-adolescent children. *Loisir et Société.* **19**, 2, 341-361

C.J. Cunningham and M.A .Jones 1999 . ‘Playgrounds: a confession of failure? *Built Environment* (invited paper) **25**,1,11-17.

C.J. Cunningham and M.A .Jones. 2000 . 'How a Community Uses its Parks: Case Studies from Ipswich, Queensland, Australia. *Leisure/ Loisir **24*****(3-4):*** 233-253

C.J.Cunningham. 2003. A Fruitful Direction for Research in Children’s Geography: Fat Chance. *Children’s Geographies*. **1**,1,125-128. Viewpoint paper

C.J.Cunningham., M.A. Jones, and R. Dillon. 2003. Children and Urban Region Planning: Participation in the Public Consultation process through Story Writing. *Children’s Geographies*.**1**,2,201-223

Professional journal article

C.J.Cunningham. 1996. PLAY – For Children Only ? *Australian Parks and Recreation.* **32**,4, 23-28

Conference papers

C.J.Cunningham and M.A.Jones. 1988.'Public open space: an adult male chauvinist plot? *Open Spaces, People places*. Royal Australian Institute of Parks and Recreation. Manly ,Oct. paper No. 32.

C.J. Cunningham and M.A.Jones.1992. Playground or playspace: the physical environment and development of competence'. *Proceedings of the Inaugural Joint Conference, New Zealand Geographical Society and the* Australian Institute of Geographers. Auckland N.Z. Jan 1992. pp386-92

.

M.A. Jones and C.J. Cunningham. 1992. 'Action and interaction: gender and the use of school playgrounds' *Proceedings of the Darling Harbour Playspace Seminar*. Royal Australian Institute of Parks and Recreation . June. pp 105-116.

C.J. Cunningham and M.A.Jones.1992. 'Heritage, urban bushland and children' *Heritage Management*. Royal Australian Institute of Parks and Recreation. Hobart Tasmania Oct. pp219-225.

C.J. Cunningham and M.A.Jones.1993 'Child friendly Neighbourhoods: a critique of the Australian suburb as an environment for growing up'.' *World Play Summit.* International Play Association .Volume 1 *Close ups of the Physical Environment: Nature, Architecture and Townscape.* Issues Paper no. 5. Melbourne: Playground and Recreation Association of Victoria. February.

C.J. Cunningham and M.A.Jones.1993. 'Children's leisure: education, the physical environment and television'. *Proceedings of the 7th Canadian Leisure Conference.* University of Manitoba, Winnipeg, May. pp. 169-172.

C.J. Cunningham and M.A Jones. 1993. 'The child-friendly Neighbourhood: some Questions and Tentative Answers from Australian research' .*Proceedings of the 7th Canadian Leisure Conference.* University of Manitoba, Winnipeg, May pp.173-175.

C.J .Cunningham and M.A. Jones. 1994 . 'The child in the suburb'. *Proceedings of the seminar held by the NSW Play Alliance*, Sydney 18 August. 1994. (Invited keynote paper).

C.J. Cunningham and M.A. Jones. 1995. 'A pitch and a swing: An Australian perspective of urban planning and the child'. *Building Identities: gender perspectives of children and urban space.*

University of Amsterdam, The Netherlands. April 11-13 1995. Concluding Report. pp. 111-113.

C.J. Cunningham and M.A. Jones. 1996. 'Children's use of after-school leisure time and leisure space in an Australian provincial city'. *Proceedings of the 8th Canadian Leisure Conference*. University of Ottawa, Faculty of Social Sciences. pp 39-44.

C.J. Cunningham and M.A. Jones. 1997. 'Understanding Playtime and Play Space: Children as Research Assistants in Urban Planning. Paper presented to the conference, *Children in the World: Exploring the Rights of the Child.* Saint Xavier University, Chicago, Illinois, USA. March 20-23.

C.J. Cunningham and M.A. Jones, 1999. 'How a community uses its parks: a case study of Ipswich, Queensland, Australia'. *Ninth Canadian Conference on Leisure Research* (CCLR9), Acadia University, Wolfville Nova Scotia, May 12-15 1999.

C.J.Cunningham and M.A. Jones. 1999. 'Consulting with Children on their Environmental and Recreational Needs'. Keynote Paper. *Facility Planning Management and Development.* Noosa Qld , Department of Tourism Sport and Racing. November.

C.J.Cunningham and M.A.Jones, 1999. 'Children in the City, in the Country….or in Between: Children's Views on Management of their Play Environments in Ipswich Queensland, Australia. Paper presented to the Conference *Geographies of Childhood*, Hope University College, Hope Park, Liverpool UK. November.

Research report

C.J.Cunningham and M.A.Jones, with assistance from children in eight primary schools in Ipswich, Queensland. March. 1999. 'Ipswich Playspace. A study of children's leisure'. Ipswich City Council, Queensland, Australia. 138 pp

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