

# CHANGING DEVELOPMENTAL TRAJECTORIES: CONDITIONS AND RESOURCES FOR YOUNG CHILDREN AND FAMILIES

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Paper presented at The R.E. Ross Trust / Centre for Community Child Health seminar on *How do neighbourhoods matter for children and youth?*

Carlton, 3<sup>rd</sup> July 2007

## Introduction

My first contact with the work of the keynote speaker at this seminar, Jeanne Brooks-Gunn, was a 1979 book she co-authored entitled *Social Cognition and the Acquisition of Self* that summarised work on the development of self-awareness in young children.

I want to begin this presentation by focusing on an issue raised by Jeanne Brooks-Gunn's fellow author of that book, Michael Lewis. Over the past 20 years or more, Lewis has been arguing that children's development is shaped more by current environment than by past experiences (eg. Lewis, 1997). Although Lewis's recent writings (eg. Lewis, 2005) suggest that he is not keeping up with the literature (and is therefore attacking a position that no one nowadays holds), his general point continues to be an important one that must be taken into account.

What, then, do we understand about child development, and the factors that produce change in children's developmental trajectories over time? And what is the relative contribution of early and later experiences?

## Outline of paper

- Developmental plasticity - the relative contribution of early and later experiences
- Changing children's developmental trajectories
- Contribution of neighbourhood and community factors
- CCCH Platforms service redevelopment framework and resources
- Summary and conclusions

## Developmental plasticity

What are the relative contributions of early and later experiences? There are two contrasting perspectives:

- ***The early years are critical for development and lay down patterns of behaviour and functioning that can have lifelong consequences***
- ***Behaviour and functioning at any point in time are more strongly influenced by the immediate social and physical environment than by past experience***

The first of these positions – that the early years are critical for development and lay down patterns of behaviour and functioning that can have lifelong consequences - is the prevailing wisdom regarding the early years of development. It is behind the push to invest and intervene during the early years in order to lay down a secure foundation for later development and prevent the development of maladaptive patterns of behaviour.

Hertzman (2004) puts the case for the importance of the early years thus:

'The early years last a lifetime. Although this statement can be dismissed as a truism, it is profoundly significant. There is now an impressive body of evidence, from a wide range of sources, demonstrating that early child development affects health, well-being and competence across the balance of the life course. (p. 6)

Our current understanding of early child development includes a number of key features or processes that appear to confirm the formative nature of early experiences. The following six features illustrate this interpretation of the early years.

- ***Young children develop through their relationships with others*** (National Scientific Council on the Developing Child, 2004a; Shonkoff and Phillips, 2000). Those that are created in the earliest years are believed to differ from later relationships in that they are formative and constitute a basic structure within which all meaningful development unfolds. Because babies depend for their survival on the care of adults, it is difficult, if not impossible, to consider their problems independent from their relationships with their primary caregivers.

Early development is determined by the quality of their attachment experiences. Attachment is an inborn biological instinct that motivates an infant to seek closeness to caregivers and to establish communication with them. Attachment involves a relationship with a caregiver in which the immature brain uses the mature functions of the mature brain to organise its own processes. It is based on collaborative communication: secure attachment results when the caregiver consistently perceives and responds to the child's mental states. Attachment relationships form the foundation for the development of the mind and the brain: human connections create neuronal connections.

- ***Brains are built over time*** (National Scientific Council on the Developing Child, 2007). Both brain architecture and developing abilities are built 'from the bottom up'. Simple neurological circuits and skills providing the scaffolding for more advanced circuits and skills over time. Through this process, early experiences create a foundation for lifelong learning, behavior, and both physical and mental health. A strong foundation in the early years increases the probability of positive outcomes and a weak foundation increases the odds of later difficulties.
- ***Early experiences can influence later health and developmental outcomes through a process of biological embedding*** (Keating and Hertzman, 1999; Shonkoff and Phillips, 2000). This is a process whereby experiences are programmed into the structure and functioning of biological and behavioral systems, and set the child on a developmental trajectory that becomes

increasingly difficult to modify. Susceptibility to many adult diseases, including reproductive diseases and dysfunctions, is set in utero or neonatally as a result of the influences of nutrition and exposures to environmental stressors / toxicants (National Scientific Council on the Developing Child (2006)).

- ***Children's emotional development is built into the architecture of their brains*** (National Scientific Council on the Developing Child, 2004b). Emotional development begins early in life, is a critical aspect of the development of overall brain architecture, and has enormous consequences over the course of a lifetime. The foundations of social competence that are developed in the first five years are linked to emotional well-being and affect a child's later ability to functionally adapt in school and to form successful relationships throughout life.

'There are many well-trodden pathways to misery. People may choose to eat too much or too little, drink too much alcohol, react to other people without thinking, fail to have empathy for others, fall ill, make unreasonable emotional demands, become depressed, attack others physically, and so on, largely because their capacity to manage their own feelings has been impaired by their poorly developed emotional systems.' (Gerhardt, 2004)

The core features of emotional development (or 'emotional intelligence') are the ability to identify and understand one's own feelings, to accurately read and comprehend emotional states in others, to manage strong emotions and their expression in a constructive manner, to regulate one's own behaviour, to develop empathy for others, and to establish and sustain relationships.

- ***The growth of self-regulation is a cornerstone of early childhood development*** that cuts across all domains of development (Shonkoff and Phillips, 2000). It underpins the subsequent development of emotional and social competences, as well as the mastery of academic tasks and general life skills.
- ***Excessive stress disrupts the architecture of the developing brain*** (National Scientific Council on the Developing Child, 2005). Toxic stress in early childhood is associated with persistent effects on the nervous system and stress hormone systems that can damage developing brain architecture and lead to lifelong problems in learning, behaviour, and both physical and mental health. Children whose relationships are insecure or disorganized have higher stress hormone levels which may alter the development of brain circuits and make them less capable of coping effectively with stress as they grow up.

A history of chronic and severe trauma in early childhood can result in alterations in fear-stress physiology and in brain development. Threat activates the brain's stress-response neurobiology, which then affects the development of the brain by altering the development and migration of neurons, the development of synaptic connections between neurons, and neurochemical differentiation. The result is children whose brains are smaller in volume, have larger lateral ventricles (ie. the fluid-filled cavities of the brain), and smaller areas of connection between the right and left sides of the brain (ie. the corpus callosum)

'Society reaps what it sows in the way it nurtures its children. Stress sculpts the brain to exhibit various antisocial, though adaptive, behaviours. Whether it comes in the form of physical, emotional or sexual trauma or through exposure to warfare, famine or pestilence, stress can set off a ripple of hormonal changes that permanently wire a child's brain to cope with a malevolent world. Through this chain of events, violence and abuse pass from generation to generation as well as from one society to the next.' (Teicher, 2002)

However, there is also evidence that growing up in adverse conditions does not inevitably damage individuals or thwart development (Rutter, 2000), and that resilience is a normal adaptive feature of development (Masten, 2001):

'The great threats to human development are those that jeopardize the systems underlying these adaptive processes, including brain development and cognition, caregiver-child relationships, regulation of emotion and behavior, and the motivation for learning and engaging in the environment.' (Masten, 2001, p. 234)

All of these features of child development speak to the importance of the early years and the potential long-term consequences of adverse or impoverished environments during this period.

The second major perspective on the relative contribution of early and later experiences is the one championed by Michael Lewis (1997, 2005) - ***behaviour and functioning at any point in time are more strongly influenced by the immediate social and physical environment than by past experience***. Lewis challenges the prevailing idea that developmental change is gradual and continuous, that it has a direction and an end point (maturity), that earlier events are precursors of later events, and that the earliest events are the most influential of all. Instead, he suggests that behaviour is more a product of people's responses to the current environment than of past experiences:

'How people act is determined by their attempt to adapt to situations and problems as they find them' (Lewis, 1997, p. 203)

Real life environments are rarely stable over time, our lives are 'more characterized by zigs and zags than by some predetermined, connected, and linear pattern' (p. 11).

What evidence is there to support this position? Support for Lewis's argument comes from studies by Macmillan, McMorris and Kruttschnitt (2004), Feinstein and Bynner (2004), van IJzendoorn and Juffer (2006) and Sameroff, Seifer, Baldwin and Baldwin (1993).

Macmillan, McMorris and Kruttschnitt (2004) contrast two approaches used by researchers in seeking to understand children's development (in this case, the development of antisocial behaviour). The first focuses on the development of problem behaviours in children and is based on the idea that problem behaviour appears early in life and persists over time. This work primarily focuses on the characteristics of parents and families at one point in time and the ways in which these enhance or undermine subsequent child development. The second approach

focuses on the dynamics of offending behaviour in adolescence and adulthood. Emphasising change in behaviour over time, this line of research examines changes in individual life circumstances and the impact these may have on offending behaviour in later life.

Macmillan, McMorris and Kruttschnitt (2004) integrate these two lines of inquiry by developing the concept of 'linked lives'. This term refers to the idea that an individual's life chances are shaped by the life circumstances and fortunes of others to whom they are intimately connected. For instance, using a linked lives perspective, we would expect that changes in a mother's life have important consequences for her children's development. Specifically, such changes may either limit or intensify the development of behaviour problems in her children.

To test this idea, Macmillan and colleagues examined the effects of stability and change in maternal circumstance on the developmental trajectories of antisocial behaviour in children from 4 to 7 years of age, using data from a national sample of young mothers. They found that early maternal circumstances influenced early antisocial behaviour, and that stability and change in these circumstances either exacerbated or ameliorated behaviour problems. Meaningful escape from poverty reduced antisocial behavior whereas persistence in poverty or long-term movement into poverty intensified such problems.

Further evidence to support Lewis's argument comes from a study by Feinstein and Bynner (2004) that examined the extent to which continuities and discontinuities in children's cognitive performances between the ages of 5 and 10 predicted adult outcomes (such as income, educational success, household worklessness, criminality, teen parenthood, smoking, and depression). They measured children's cognitive performance at age 5, then assessed the degree of change during the middle childhood years, the influence of socioeconomic status on this change, and the extent to which this change influenced adult outcomes. They found that cognitive scores at age 5 had considerable predictive power, indicating the importance of development up to that point. However, they also found substantial discontinuities during middle childhood, with strong socioeconomic status influences. Thus, children with low scores at both age 5 and age 10 were twice as likely to come from a low-SES background, showing the improved scores were much more likely in children from high-SES backgrounds. Conversely, those with high scores at both ages were more than twice as likely to come from a high-SES background, and deterioration in cognitive performance over the time span was much more common in children from low-SES background. These changes strongly affected adult outcomes, often outweighing the effects of cognitive development before the age of 5.

The conclusion to be drawn is that cognitive abilities, far from being set at age 5, may change substantially and that these changes are likely to have long-term effects on outcomes in adult life. This challenges theoretical positions based on the principle of relatively fixed stages of cognitive growth underpinned by linear development processes.

Other evidence supporting developmental plasticity comes from adoption studies. The development of adopted children is often compromised by their past experiences in maltreating families or neglecting orphanages, or by genetic or pre- and perinatal

problems. To explore how effective adoption is at compensating for such adverse early experiences, van IJzendoorn and Juffer (2006) conducted a series of meta-analyses on more than 270 studies that include more than 230,000 adopted and non-adopted children and their parents. They concluded that adoption is an effective intervention leading to massive developmental catch-up, and that adoption demonstrates the plasticity of child development.

Other evidence regarding the importance of the immediate social environment for current behaviour and functioning comes from studies of the neurobiology of interpersonal relationships and the central role played by relationships in changing people's behaviour (National Scientific Council on the Developing Child, 2004a; Cozolino, 2002, 2006; Goleman, 2006; Siegel, 1999, 2001).

If behaviour and functioning are more a function of current social and physical environments, how are we to explain the finding that early experiences are predictive later development and functioning? What role do early experiences play? The evidence suggests that **early behaviour and functioning are predictive of later behaviour and functioning to the extent that children's social and physical environments remain unchanged**. The link between early experience and later behaviour occurs because children's environments tend not to change. We should be looking not only at the correlations between early and later behaviour / functioning, but also between early and later environments.

Evidence of this comes from a study by Sameroff, Seifer, Baldwin and Baldwin (1993) that looked at the stability of intelligence from preschool to adolescence, and the influence of social and family risk factors. Intelligence scores of children in a longitudinal study were assessed at 4 and 13 years of age and related to a number of social and family risk factors (mother's behaviour, mother's developmental beliefs, mother's anxiety, mother's mental health, mother's educational attainment, family social support, family size, major stressful life events, occupation of head of household, and disadvantaged minority status). Multiple risk scores explained one third to one half of IQ variance at 4 and 13 years. The stability between 4- and 13-year environmental risk scores ( $r=.77$ ) was much the same as the stability between 4- and 13-year IQ scores ( $r=.72$ ). Homel (2005) sees this study as important because it took the unusual step of measuring for the presence of the same risk conditions at age 4 and 13. The correlations between the two sets of risk conditions were quite high and taking that into account effectively halved the correlation between the IQ scores at the two ages. In effect, what might appear to be some disposition carried forward within the individual could well reflect continuity in the conditions that are being encountered. Elder (1998) has pointed out that a general weakness in the design of longitudinal studies is that they rarely measure the stability and nature of children's social environments over time. As a result, they underestimate the impact of changing environments on behavioural outcomes.

This being the case, we need to consider not only what factors serve to either maintain or change children's behaviour and functioning over time, but also what factors serve to maintain or change their environments. Why do both behaviour and environments tend to be stable over time?

The explanation is that ***children's environments tend to remain unchanged because of feedback and feedforward loops that maintain established patterns of interactions between the child, family and community.*** What this means is that it is difficult for children and families to extricate themselves from adverse circumstances – particularly when there are multiple risk or adverse factors in their lives.

How do these feedback and feedforward processes work? One aspect involves the role that children themselves play in shaping their environments. Children affect their environment as well as being affected by it, therefore playing an active part in their own development. The child plays a part in shaping the experiences to which the child's mind must adapt. Through their behaviour and characteristics, they selectively reinforce (and thereby alter) the behaviour of their caregivers towards them. In this way, behaviour itself alters genetic expression, which then creates behaviour.

To conclude, how should we understand the relationship between early and later experiences and environments? Perhaps we can take a lead from how the old nature versus nurture debate has been resolved. The question of how much development can be attributed to genetic inheritance ('nature') or environmental experiences ('nurture') is no longer a matter of debate: it is understood as a process of nature via nurture rather than nature versus nurture (Ridley, 2003; Rutter, 2006). Genes always have their effect in interaction with the environment - even if attributes are heritable, they can develop very differently in different environments.

In the same vein, we should see current behaviour and functioning as a product of an interaction between past and present: ***Current behaviour and functioning are the result of an interaction between learnings and patterns of behaviour arising from earlier environments and experiences, and the child's adaptation to the current environment.*** Children do adapt to new environments and changed circumstances, but their capacity to do so successfully is shaped by what they have learned and experienced in the past. Successful adaptation to new environments and relationships will occur if the children's development has not been too compromised or distorted by earlier experiences, or if key people in the new environment are able to devote considerable time to developing close and positive relationships through which their brains can be 'reprogrammed' and significant new learning can occur.

One important implication of this way of understanding development is that we must continue to invest in children's development, as Heckman and others have argued (Cunha, Heckman, Lochner and Masterov, 2005). Without such ongoing compensatory efforts, the early benefits tend to 'wash out'. How does this occur? The environmental factors that contributed to the child being vulnerable and low functioning in the first place (and which therefore led to the need to intervene and provide stimulating early childhood experiences) continue unchanged in the background when the child reaches school. These home environments tend not to be able to support and consolidate children's ongoing learning, and without further compensatory efforts at school, the earlier gains made by the children steadily erode.

Evidence to support this argument comes from the study by Feinstein and Bynner (2004) cited earlier. This study showed that experiences in middle childhood have the possibility of substantially altering the development trajectories of children into

adulthood. Social class effects on middle childhood development are large and interventions during middle childhood may have to reproduce or substitute for the protective resources that accompany high SES. These include features such as resource-rich and low-stress households, high parental interest in education, motivated and able peers, and beneficial school and out-of-school contexts. As Feinstein and Bynner (2004) note,

'Negotiating school and its tasks is not easy even for those with good signs of early cognitive promise. To protect against entry to negative pathways and reverse those that have already begun, continued investment in educational interventions is needed across all of middle childhood.' (p.1338)

So far, we have seen that the both early and later experiences are important, and that they interact in shaping children's adaptation to current experiences and environments. What do we know about children's developmental trajectories and how they can be changed?

### Changing children's developmental trajectories

What follows is a list of some of our key understandings about how children develop and change.

- ***Human development is shaped by the ongoing interplay among sources of vulnerability or risk and sources of resilience or protection.*** Exposure to adverse conditions does not inevitably lead to poor outcomes, but does significantly increase the risk. Children who are exposed to risk factors at an early age are more likely to experience problems in later life, while those exposed to protective factors are better equipped to deal with subsequent adverse experiences. The earlier in life risk factors occur and the longer they are sustained the greater the risk of poor outcomes

Rutter (2002) has stressed the importance of distinguishing between risk indicators and risk mechanisms. He suggests that remarkably little is known about psychosocial risk processes; and even less is known about the effects of such risk processes on the organism (and, therefore, why and how effects persist when they do). In addition, little is known about individual differences in response to psychosocial stress and adversity; and there is almost total ignorance with regard to the environmental factors that are responsible for the major secular trends that have been evident over the course of the 20th century.

- ***Development is 'weakly' determined – individual causal factors, whether genetic or environmental, rarely have a significant impact on development on their own.*** No single risk factor makes a significant difference to children's development – it is the cumulative impact of multiple risk factors that does the damage. Risk and protective factors are multiplicative rather than additive in their effects.
- ***Development is multiply determined, with both direct and indirect factors within and outside the child contributing to particular outcomes.*** Thus, many different risk or protective factors can lead to any particular developmental

outcome, and particular risk or protective factors can lead to many different developmental outcomes.

- ***No single form of intervention makes a significant difference to child development or family functioning*** – it is the cumulative impact of a comprehensive range of interventions that leads to positive change. The earlier these are provided the better – the younger the child, the easier it is to make a difference, and the more cost effective the intervention.

This is the corollary to the previous two points: just as significant developmental change depends upon the cumulative effect of multiple risk and/or protective factors, effective efforts to promote more positive outcomes in children and families depend upon the cumulative impact of multiple interventions at child, family, neighbourhood and societal levels.

The importance of relationships for early childhood development has already been mentioned (National Scientific Council on the Developing Child, 2004a). However, relationships continue to play a critical role in ongoing development and are the principal medium through which change occurs. The evidence can be summed up thus:

- ***Relationships matter*** (Moore, 2006a, 2007). There is strong evidence that the relationships of all types have a significant impact on the development and well-being of those involved. This applies to the relationships between parents and children, caregivers and children, parents and caregivers with children who have disabilities, teachers and children, professionals and parents, managers and staff, staff and colleagues, and trainers and trainees.
- ***Relationships affect other relationships*** (Moore, 2006a, 2007). Parallel processes operate at all levels of the chain of relationships and services, so that our capacity to relate to others is supported or undermined by the quality of our own support relationships.
- ***Relationships change brains*** (Cozolino, 2002, 2006; Goleman, 2006; Moore, 2006a, 2007; Siegel, 1999, 2001). We are changed neurologically and neurochemically by relationships, and these changes may be for the better or for the worse. Later development continues to be determined by the nature of relationships – the brain can be reprogrammed through positive relationships. These programming and reprogramming processes involve two complementary aspects of brain functioning: *hormonal and neurochemical reactions* and *mirror neurons*.

*Hormonal / neurochemical reactions* are involved in all aspects of brain development and functioning. When we are babies, the positive looks and smiles we see in our parents trigger the release of pleasurable neurochemicals (opioids) that actually help the brain to grow. *Mirror neurons* are found in various parts of the brain and function to link motor action to perception: they fire if you watch someone else doing something intentionally, and will also fire if you do the same action. Mirror neurons enable the brain to detect the intention of another person, that is, to 'read' other people's minds and emotional states.

All of these features of child development illustrate aspects of the process of change in children's developmental trajectories. In addition, community and neighbourhood environments also affect children's developmental trajectories and family functioning.

Before we look at the particular features of such environments that are important for child and family functioning, we need to understand the differential effects of ***distal*** and ***proximal factors***.

According to Bronfenbrenner (1979, 1986), environmental influences may be divided into proximal and distal contexts – the proximal influences are embedded in the distal influences. Rutter (2002) gives examples of how proximal and distal risk processes operate:

- Although parental loss carries with it little direct (or proximal) psychopathological risk, it is important because, in certain circumstances, it predisposes to other psychosocial risks and makes adaptive parenting more difficult. Poor parenting does predispose to mental disorder, whether or not it is associated with parental loss; whereas parental loss does not predispose to disorder, if poor parenting does not follow.
- In the same way, poverty has a quite limited role as a proximal risk factor, but is rather more important as a distal risk factor that makes cohesive and harmonious family functioning more difficult.
- The same seems to apply to inner city life: It is statistically associated with increased rates of child psychiatric disorder, but these risks are mediated, not by the effects of city life directly on children, but rather through their effects on family functioning and their associations with less positive schooling.

In the case of young children, the proximal factors affecting child development and functioning are family environments and relationships. The distal factors include most community and neighbourhood effects. As a result, neighborhood influences generally account for much less variance than family influences (Fauth and Brooks-Gunn, in press). In typical regression designs, family-level characteristics such as parental education, marital status, income, and occupation trump neighborhood-level characteristics such as percent of residents who have high or low income, who are professionals, who are unemployed, who have moved in the past five years, and who are single mothers. An estimate of this disparity in variance is about three or four to one, i.e., family characteristics account for about three to four times as much variance as do neighborhood characteristics.

This is not to say that neighbourhood or community effects are less important or less significant than family effects. It depends whether we look at the individual or the population level. At an individual level, proximal factors affect particular aspects of development or functioning while distal factors affect overall well-being (Rutter, 2002). Thus, meningitis or diet have specific strong effects, while poverty or social isolation have more diffuse weaker effects and can affect a wide range of developmental outcomes. At a population level, neighbourhood effects may be relatively small but, because they influence outcomes across a large number of children and families, they are cumulatively powerful.

It should be noted that some health indicators may exhibit larger associations with neighborhood residence than others. These include asthma (directly influenced by air quality) and fitness (directly influenced by features of the urban environment such as walking and cycling paths, parks etc.). Most other indicators are more strongly influenced by family factors. This is true of those aspects of development and functioning - such as emotional development and self-regulation, social development, language and cognitive development – that are most critical for school readiness.

With this in mind, we will now look briefly at the affect that neighbourhoods and communities have upon children's developmental trajectories and family functioning.

## **Neighbourhood and community effects**

Neighbourhood and community environments have both social and physical features. Both contribute to the effects that neighbourhoods and communities have on child and family functioning and well-being (Moore, 2006b).

### **The contribution of the social environment**

There are two related concepts that are relevant here. One is the notion of **social support** or **personal support networks** (Cochran and Niego, 2002; Crnic and Stormshak, 1997; Dunst, Trivette and Jodry, 1997; Roehlkepartain, Scales, Roehlkepartain, Gallo and Rude, 2002; Thompson and Ontai, 2000). These refer to the people in our lives, usually our family and friends, who are the most immediate sources of emotional and practical support. The strength of people's personal support networks varies according how many people they have in their social network, what sort of tangible support they provide, and how often they see them.

The other is the notion of **social connectedness** or **social capital** (Bush and Baum, 2001; Cooper, Arber, Fee and Ginn, 1999; Cox, 1995; OECD, 2001; Productivity Commission, 2003; Putnam, 1995, 2000; Stone, 2001; Stone and Hughes, 2000; Winter, 2000; World Bank, 1998). These refer to the nature of the linkages within communities, which can vary according to the general level of trust and reciprocity in the relationships between members of the community.

Both social support and social capital affect the functioning of individuals, families and communities.

**Social support and personal support networks** benefit people in two ways (Thompson and Ontai, 2000):

- On one hand, social support surrounds individuals with emotional and practical help that promotes their well-being
- On one hand, social support surrounds individuals with emotional and practical help that promotes their well-being

Among adults, social support has a significant impact on health and well-being (Stansfield, 1999). There is also considerable evidence for the importance of social support for children and families: 'Numerous studies of children and families both at risk and not have shown that social support directly influences the well-being of

children and families' (Crnic and Stormshak, 1997, p. 210). Social support has been found to be linked to a number of child and family outcomes, including low birthweight (Oakley, 1992), child abuse (Gracia and Musitu, 2003; Korbin, 2003; Thorpe, 1994; and Tomison, 1996), child neglect (Connell-Carrick, 2003), maternal adjustment (Barakat and Linney, 1992), mental health (Cooper, Arber, Fee and Ginn, 1999), and physical health (Cooper, Arber, Fee and Ginn, 1999).

**Social capital and social connectedness** also have direct benefits for individuals and communities, although the evidence is not as strong. For example, the OECD (2001) links social capital, and access to such capital, with a number of factors, including improved health, greater well-being according to self-reported survey measures, better care for children, lower crime rates, and improved government - regions or states with higher levels of trust and engagement tend to have better-quality government.

When social capital is high and communities are well-connected, children and families benefit in a number of direct and indirect ways (Fegan and Bowes, 1999): 'All families ... need access to information that helps them gain a realistic understanding of their child's development and of the possible impact of developmental changes on family life.' (p. 122). In well-connected communities, families have many opportunities for 'incidental encounters with other children and other parents within the local neighbourhood, encounters that can provide such information, reduce the intensity of uncertainty and alleviate parental anxiety.' (Fegan and Bowes, 1999, p. 122)

However, not all families have equal access to such opportunities:

'There is now good evidence that the network resources available to parents vary substantially depending upon parents' educational experience, income, occupation, the number of parents in the household, race, and even in the culture in which they live.' (Cochran and Niego, 2002, p. 137).

### **The contribution of the built environment**

Several aspects of the built environment have implications for young children and their families:

- **Safety** – this includes physical safety (of roads, public spaces and facilities) and social safety (protection from violence or predation)
- **Health** – this includes environmental health (exposure to environmental toxins) and physical health (opportunities for physical exercise and play)
- **Social** – this includes opportunities for contact with a wide range of other children and families
- **Services and facilities** – this includes ease of access to services and facilities, and availability of transport

Other aspects of the built environment's impact on young children and their families include public spaces as environments for play and learning (eg. Dudeck, 2005; Kapasi, 2006), and children's contributions to urban design and planning (eg. Baraldi, 2005).

What contribution does the built environment make to creating conditions that families with young children need to raise their children as they (and we) would wish? Three contributions are particularly noteworthy.

- ***Easily navigable urban environments.*** Families of young children need urban environments that are safe and easy to navigate (preferably on foot) and that provide lots of opportunities for random encounters between people in the community. This means plenty of footpaths (regrettably, these are not always included in some of the new growth corridor housing estates in major Australian cities), and access to key services and facilities on roads or paths with limited motor traffic.
- ***Public places that encourage social contact.*** Public spaces include 'green' spaces such as parks, 'hard' spaces such as streets and plazas, and service spaces such as markets and shopping malls. There have been some recent studies in the UK that throw light on the function of such public spaces in promoting social contact and community cohesion, and the conditions under which this can happen (Dines and Cattell, 2006; Mean and Tims, 2005; Watson and Studdert, 2006). These studies suggest that the features of public spaces that best promote social contact and community cohesion include the following:
  - they allow for local involvement in planning, and are 'co-produced' rather than being planned top-down
  - they are accessible at most hours
  - they are available for a range of activities
  - they include places to sit down and places to eat or have coffee

Most importantly, these studies suggest that these features are likely to be more important than the formal design aspects.

- ***Services and facilities whose location, form and function are shaped by what families prefer and where families go.*** Services and facilities have typically been designed and located by professional and planners, with minimal input from users, with the result that they are sometimes not well used or liked. Australian studies suggest that universal health and early childhood services are not as accessible or inclusive as they need to be, and that a small but significant minority of families underuse some or all of these services (eg. Carbone, Fraser, Ramburuth and Nelms, 2004). This is most apparent in disadvantaged neighbourhoods and in vulnerable families. These families can be easily intimidated and alienated by services and buildings designed and run by middle class professionals, and often do not return after an initial visit. Many such families have multiple needs and problems that become increasingly difficult (and expensive) to rectify the longer they remain unaddressed.

Our difficulties in meeting the needs of these families presents a challenge to the way we plan, design and locate services and facilities. One of the key questions we need to ask is where families with young children can go where they can see and meet other families of young children. Families who make good use of formal and informal services (such as playgroups) and facilities (such as libraries) meet other families with young children there, and often build strong support networks

with them. But families who do not feel comfortable in such settings may not have alternative places where they can meet and connect with other families.

If some families do not make good use of the services we provide, we should be rethinking where such services are located and what form they take. To increase the chances that they will make use of the services and facilities we provide, we need to allow families to have a meaningful say in their design and location. In doing so, we need to accept that families may prefer settings and places that are less formal and scruffier than the pristine environments that designers and professionals prefer.

When people don't use our services, we focus on how to encourage or even force them to do so, rather than looking at redesigning what we offer to suit their needs and preferences better.

Overall, it is clear that built environments have an impact on the conditions under which families are raising young children. They influence the level of social contact between families with young children, and therefore the ease with which they develop social networks with other families. This in turn supports them in their parenting role and helps them manage this more successfully. Built environments also affect the ease with which families can access the formal, informal and recreational services and facilities that they need to ensure their children's health, well-being and social development

### **Conclusions re neighbourhood / community effects:**

- Changes to neighbourhoods and communities can be expected to have diffuse effects across the whole of the local population, making a small contribution to average well-being.
- There are some aspects of the physical and built environment that can have a direct effect on children's health and development – eg. air quality, parks etc.
- However, many of the key aspects of development are more directly affected by proximal factors, especially their relationships with family, caregivers etc.
- Whether or not changing neighbourhoods or strengthening communities produces significant change in individual children depends upon the extent to which those changes alter the quality and range of their relationships

So far in this paper, we have focussed on what we know about the factors that affect children's development and family functioning, and that can change developmental trajectories over time. We now

### **CCCH Platforms service redevelopment framework**

We at the Centre for Community Child Health believe there are pressing reasons to reconfigure the services we provide to young children and families in order to achieve better outcomes for young children, families and society.

What form should this change take? We believe that there are three main ways in which change is needed: we need better integrated communities, better integrated services, and improved forms of dialogue between communities and services.

- **More supportive communities.** As a result of the pervasive economic, social and demographic changes that have occurred over the past few decades, there has been a partial erosion of traditional family and neighbourhood support networks. This has left a greater proportion of parents of young children with relatively poor social support networks and therefore more vulnerable. The evidence we have already considered about the importance of social support and social connectedness strongly suggests that one way in which we could address this problem is by providing families of young children with multiple opportunities to meet other families of young children. Complexity theory suggests that there is value in random encounters as well.
- **Better integrated services.** In the light of the difficulties that services have in meeting all the needs of all families effectively, the service system needs to become better integrated, so as to be able to meet the multiple needs of services in a more seamless way. We need to turn the system around so that it puts the customer first, tailoring our services to the needs and circumstances of families rather than the needs of professional and bureaucracies.
- **Improved forms of dialogue between communities and services.** For the service system to become more responsive to the emerging needs of young children and families, we need better ways of communicating, more constant feedback. This needs to occur at all levels, involving service providers in their dealings with individual families, agencies with their client groups, and service systems with whole communities. For individual professionals, this means using a service philosophy such as family-centred practice as well as needs-assessment procedures and tools that regard parent input as being as important as professional input. For service systems, it means developing skills in talking to communities of families – in other words, community-centred practice.

As a general strategy for achieving these goals, we believe that there needs to be a shift from treatment and targeted services to universal prevention approaches (Centre for Community Child Health, 2006). The argument for the adoption of a universal prevention approach to service delivery has been most clearly stated by Richardson and Prior (2005):

‘Targeted policies and services to meet the special needs of children with chronic problems, or who face difficult circumstances, will always be required. However, such services will continue to consume an ever increasing proportion of public expenditure on social and other human services unless there is a substantial repositioning of policy from its current focus on remedial and treatment services towards increased investment in universal prevention for all children -- particularly in the early years. Without such investment, we are likely to see a continuation of the present trends of increasing inequality and localised concentration of an adverse outcomes for children and youth, including vulnerability to emotional and behavioural problems, substance use

and abuse, alienation from school, and disengagement from or rejection of civic and social values and hopes for the future.’ (p. 318)

To address this challenge, we need to develop an integrated, tiered system of universal, targeted and specialist services. The evidence suggests that existing service systems may be too dependent upon scarce specialist expertise. To counteract this tendency, the capacity of universal services to cater for the needs of a broad range of children and families will have to be strengthened by creating a more tiered system of universal, targeted and treatment services, and to deploy the expertise of specialists more broadly. All three would have a prevention: universal services directed to whole populations aim to strengthen capacity and reduce the incidence of developmental and other problems; targeted services directed to individuals or groups identified as being at risk aim to reduce the numbers who develop problems; and treatment services directed to those who have identified problems aim to reduce the sequelae or complications of the condition.

Over the past six or seven years, a major focus of the work of the Centre for Community Child Health has been to develop a framework for reconfiguring early childhood and family support services so as to achieve better outcomes for children and families. We have also been developing a set of resources to enable communities to achieve this all-important task. This service redevelopment framework is a work in progress. Further elaborations of the framework and further resources will be developed as our thinking and experience evolve.

### **CCCH Platforms Service Redevelopment Framework**

The current version of the framework looks at five phases

- Raising awareness of early child development issues
- Engaging communities
- Planning
- Implementing
- Monitoring and evaluating

For each of these phases, CCCH has developed a series of tools and resources.

<b>PHASE 1: RAISING AWARENESS OF EARLY CHILD DEVELOPMENT</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ <b>Disseminating research related to early childhood development</b></li> <li>■ <b>Analysing implications for policy, service delivery and professional practice</b></li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>■ <b>CCCH Policy Briefs.</b> These summarizes current research that is related to early childhood development and makes recommendations on how improvements in policy can impact ECD</li> <li>■ <b>Seminars, workshops and media.</b> Various seminars and workshops are held in the community promoting the importance of ECD and appropriate media coverage of ECD is supported</li> </ul>

<b>PHASE 2: ENGAGING THE COMMUNITY</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ Identifying key government and non-government stakeholders</li> <li>■ Identifying key policies, programs and initiatives</li> <li>■ Profiling community demographics and major community issues</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>■ <b>CCCH Community Audit Tool.</b> A set of guidelines for conducting a systemic audit of policies, initiatives, funding and key community issues in a particular locality</li> </ul>

<b>PHASE 3. PLANNING</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ Identifying and building local resources and leadership</li> <li>■ Mapping community resources and needs</li> <li>■ Setting priorities and developing a detailed action plan</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>■ <b>CCCH Community Planning Toolkit.</b> Guidelines and resources designed to assist communities in planning and refocusing services to emphasize prevention and early intervention to improve ECD outcomes. This involves linkages and improved coordination between different service types (e.g. child health and child care services).</li> <li>■ <b>CCCH Outcomes Framework.</b> A guide to planning community-based services and service systems to optimize outcomes for ECD</li> </ul>

<b>PHASE 3. IMPLEMENTING THE ACTION PLAN</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ Training providers and managers in key concepts related to ECD</li> <li>■ Early identification of child health and developmental issues</li> <li>■ Early identification of parenting and family issues</li> <li>■ Provision of evidence-based interventions</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>■ <b>CCCH Training Modules.</b> A set of training modules on core knowledge and skills needed by professionals working with young children and their families</li> <li>■ <b>Parent Evaluation of Developmental Status (PEDS) – Australian version.</b> A brief questionnaire to assist those working with young children to elicit parent concerns about their child's development or behaviour</li> <li>■ <b>CCCH Parent Engagement Resource.</b> A resource to assist those working with families of young children to identify and address psychosocial issues that may adversely effect child development and family functioning</li> </ul>

	<ul style="list-style-type: none"> <li>■ <b>CCCH Practice Resources.</b> A set of web-based resources detailing evidence-based practices in selected clinical areas such as language, behaviour, breastfeeding, literacy, and so on</li> <li>■ <b>Let's Read.</b> A comprehensive universal program that aims to promote literacy in young children aged 4 months to 5 years, especially those living in disadvantaged communities</li> <li>■ <b>Universal Language Promotion Resources.</b> A universal language promotion strategy delivered to parents by Maternal and Child Health (MCH) nurses. The strategy aims to assist parents to improve the language and communication skills of their young children</li> <li>■ <b>Toddlers Without Tears.</b> This parenting program aims to prevent mental health problems developing during early childhood</li> </ul>
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<b>PHASE 5. MONITORING AND EVALUATING</b>	
<b>Objectives</b>	<ul style="list-style-type: none"> <li>■ <b>Measuring progress</b></li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>■ <b>CCCH Monitoring and Evaluation Toolkit.</b> A set of resources to enable community-based services and service systems to monitor and evaluate the delivery and impact of their programs</li> <li>■ <b>Australian Early Developmental Index (AEDI).</b> An instrument used to assess key domains of a child's functioning that are considered important for 'school readiness.' The AEDI is completed by teachers in the first year of a child's formal schooling and is used to help communities in planning ECD services so as to improve school readiness in children.</li> </ul>

As noted above, the changes that are needed to achieve better outcomes for young children, families and society take three main forms. The framework and resources outlined below address two of these – the need for better integrated services, and the need for improved forms of dialogue between communities and services.

The third form of change – the need for more supportive communities – has increasingly become a focus of governments and policy makers. Wiseman (2006) has analysed some of these efforts in Victoria and concludes that engaging and linking local communities can make a useful contribution to local social, environmental and economic outcomes. Key factors underpinning successful community strengthening programs include strong local ownership and leadership, backed by sustained government investment in the social and physical infrastructure priorities identified as important by local communities. However, there are limits to what such initiatives can achieve. As Wiseman points out, 'while local community strengthening strategies can lead to real improvements in community networks, infrastructure and capacity, they are no substitute for the inclusive and redistributive taxation, income security, service delivery and labour market policies needed to create the conditions for sustainable reductions in poverty, inequality and social exclusion.'

## Summary and conclusions

- Early experiences and environments do not irrevocably determine children's subsequent development, but do lay down neurological and behavioural patterns that become increasingly difficult to modify. Nevertheless, they continue to be modifiable throughout life.
- Early compensatory experiences and programs for children from disadvantaged backgrounds are not sufficient to ensure positive long-term outcomes, especially if their home environments remain largely unchanged – compensatory support for such children needs to be maintained throughout the school years.
- The principal medium through which children are changed is their relationships with others – parents, other family members, friends, neighbours, caregivers, teachers, and service providers.
- Current behaviour and functioning are the result of an interaction between learnings and patterns of behaviour arising from earlier environments and experiences, and the child's adaptation to the current environment.
- In seeking to promote children's positive adaptation to current environments, a two-pronged approach is required: direct work with children to give them the skills they need to adapt to the current environment, and support to those involved in the current environment to ensure that they adapt to the child's needs.
- To achieve better outcomes for young children and families, we need better integrated communities, better integrated services, and improved forms of dialogue between communities and services.
- There are now a variety of strategies and resources available to help community-based services make these changes.

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