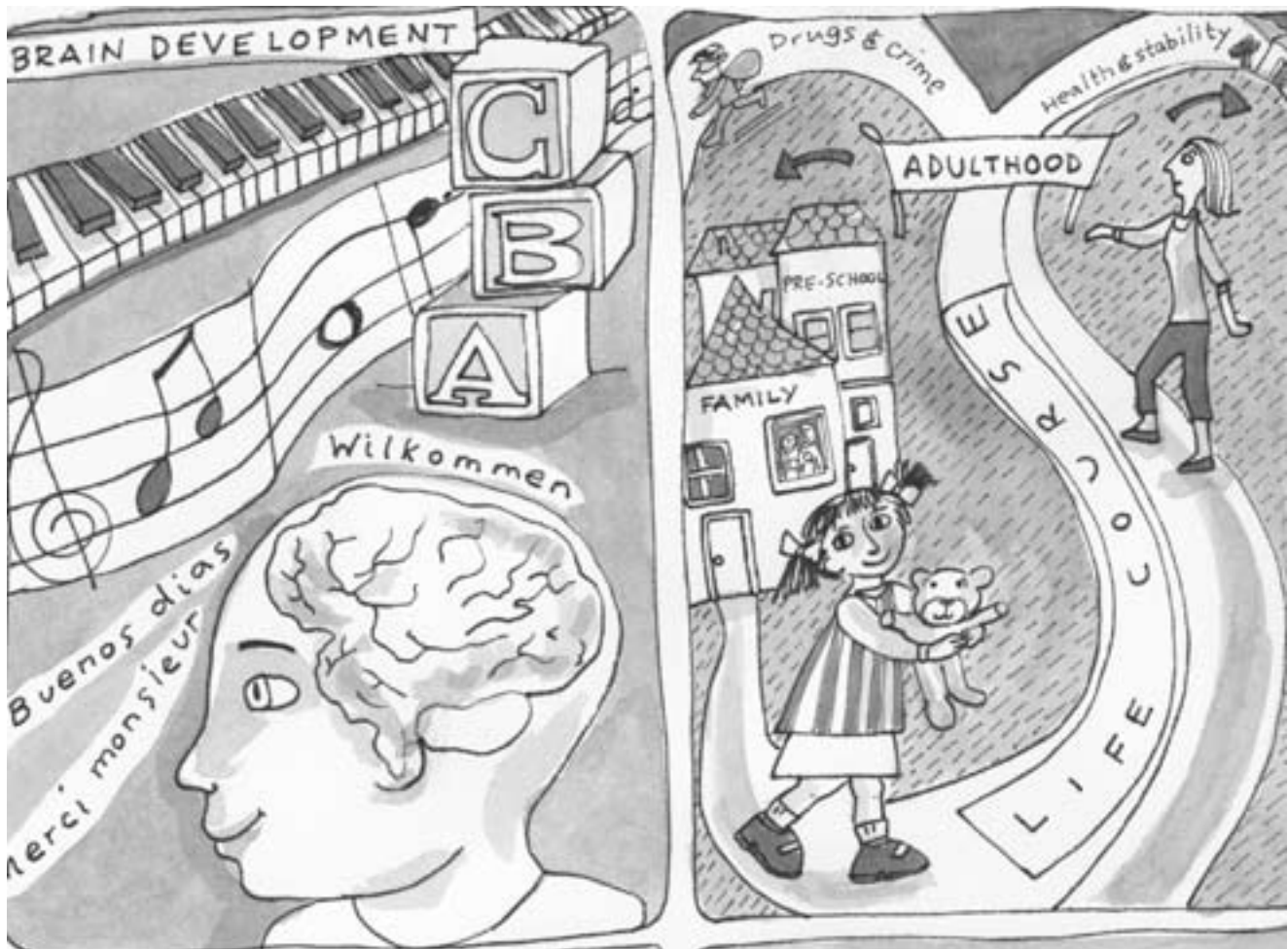


Early childhood is everybody's business

Frank Oberklaid and Tim Moore



While early childhood development has not usually been a concern of the business world, articles on this subject are appearing in the financial pages of newspapers and business-related journals. There is a growing awareness of the importance of early childhood development across a wide range of policy areas from child care and education through to building social capital and economic prosperity.

There are a number of reasons why we should be concerned about what happens in the early years. Over the past two or three decades, there have been significant socio-demographic and socio-cultural changes in the circumstances in which families are raising young children. Many of these changes have made the task of parenting more stressful for many families. They have also contributed to an increase in the

number of families with multiple and complex problems.

Although the risk factors that lead to such problems are well understood, the traditional service system is not sufficiently integrated or well-enough resourced to address them effectively. The changes have also been accompanied by evidence of worsening outcomes for young people across a wide range of areas: health, mental health, social and academic. These outcomes have occurred despite unparalleled increases in general prosperity. They appear to be unintended by-products of economic policies and practices that have otherwise been highly successful. Such poor outcomes all have high flow-on costs in the form of direct treatment services as well as reduced economic participation, and they effectively undermine our national productivity and prosperity.

Similar trends can be found in all developed nations. In regions such as North America, business leaders and economists are coming together in new partnerships to promote investment in early childhood.¹ In Australia, a National Agenda for Early Childhood was formulated several years ago following intense and sustained advocacy by academics in several disciplines. Since then, there have been a number of national funding initiatives designed to help local communities promote early childhood development and improve outcomes for children. These efforts have been supported in every Australian state by a range of early childhood policy initiatives.²

While increasing attention is being paid to this area by academics, managers of community-based

services, and the health, education and child care sectors, and also growing interest among parents and the media, for the most part, business leaders in Australia have not been part of the debate. It is unclear whether they are unaware of the strong research evidence or whether (unlike their colleagues in other countries) they do not yet see early childhood as a national priority.

Focus on early childhood — the scientific rationale

In recent years there has been a synthesis of numerous studies by researchers from various professional and disciplinary backgrounds, including neuroscientists, developmental psychologists and economists. This research is extraordinarily powerful and challenges many long-held assumptions about public policies, funding priorities and the way

considerable expenditure in areas of child health and development, family support and education, and makes a strong case for increased investment in these areas.

The research can be divided into four predominant themes:

- *brain development research*, which suggests that the environment to which a young child is exposed in the early years of life influences the anatomy and physiology of the immature brain and helps program the development of neural circuits;
- *life course research*, which shows that what happens in the early years can have a long-term impact — either positive or negative — throughout the life course;
- *intervention research*, which indicates that the provision of high-quality early childhood and

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family support programs can do much to offset the effects of adverse early experiences and environments; and

- *research into the economics of human capital formation*, which demonstrates that increased investment in the early years makes sound economic sense.

The neuroscience of brain development

The human brain organises itself through the interaction between biology and experience; genes program biology and provide the substrate for development but the way this unfolds is influenced significantly by the young child's environment. Brains are designed to adapt to their environments. In the early years of life, this occurs through the building of neural circuits — connections between individual nerve cells to create functional pathways — and the integration of neural networks. These circuits and networks create the basis for the functioning of the human brain and the foundations for language, cognition, self-regulation, social skills and compassion. The development of optimal high-order and more sophisticated skills in these areas largely depends on the quality of the lower level and more basic circuits that are established in the early years.

This is a dynamic period of growth and development, with the brain constantly establishing and adapting new neural circuits and pathways and pruning others. This process relies generally on environmental stimuli. For example, the areas of the brain that are responsible for language are dependent on receiving appropriate input during a particular window of time. If the stimuli that the brain expects are not forthcoming — for example, in the case of deafness — the language areas remain undifferentiated and undeveloped. Over time, the plasticity of the brain decreases and brain circuits begin to stabilise, so they are much harder to alter subsequently. This explains

why younger children generally learn new skills, such as the ability to speak a second language or play the piano, more easily than adults. This also provides a rationale for the early detection and treatment of problems, before the neural circuits are stabilised and become much more difficult to change. Interventions when problems are entrenched are less effective and more costly. It is biologically and economically more efficient to get things right the first time than to try to fix them later on.

The development of a healthy brain architecture that provides a strong foundation for future learning, health and behaviour depends upon the presence of nurturing and responsible relationships between young children and their caregivers. When these

sorts of protective relationships are not provided, levels of stress hormones increase. These hormones impair cell growth, interfere with the formation of healthy neural circuits and disrupt brain architecture. Some young children experience prolonged high levels of stress hormones by virtue of inappropriate, difficult and stressful relationships they have with their caregivers. This is often in the context of extreme poverty, physical or emotional abuse, chronic neglect, severe and prolonged maternal depression, substance abuse and family violence. In these situations, the early development of a child's brain is compromised, establishing pathways early in life which put the child at major risk of problems throughout the life cycle.



Research on the biology of stress in early childhood helps explain differences in learning, behaviour and physical and mental health that we see in children and in adults. Any adversity or external source of stress may affect the parents' relationship with their young child, and thus potentially exert a negative impact on brain development.

Life course research

There is evidence from the life course research that early experiences can significantly influence later health and development. This occurs through a process known as 'biological embedding', whereby experiences are programmed into the structure and functioning of biological and behavioural systems, and set the child on a developmental trajectory that over time becomes increasingly difficult to modify. Susceptibility to many adult conditions can begin in the early years of life as a result of exposure to environmental stressors.

Many conditions in adult life have their origins in pathways that begin much earlier in the life cycle, often in early childhood. These include:



mental health problems; family violence and anti-social behaviour; participation in crime; poor literacy, early school leaving and subsequent poor skill levels; welfare dependency; substance abuse; and obesity and its associations. The science of brain development points to the need for

resource allocation early in the life course, well before these problems become entrenched and so much more difficult (and expensive) to deal with.

Intervention research

There is now plenty of evidence that the provision of high-quality early childhood and family support programs can do much to offset the effects of adverse early experiences and environments. These interventions include early childhood education and intervention programs as well as parenting and family support programs. Such programs have been shown to improve cognitive and especially socio-emotional functioning, improve academic achievement, and reduce a range of problem behaviours. They have also been shown to be cost-effective, particularly with children from disadvantaged backgrounds.

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The economics of human capital formation

Data analysis by a number of prominent economists indicates that early childhood investment yields both social and economic benefits. James Heckman, a Nobel Prize winning economist, and Arthur Rolnick, Senior Vice President of the Federal Reserve Bank in Minneapolis, argue that the best investment in economic development that government and the private sector can make is in the healthy development of children. This is due to the significant benefits arising from the prevention of problems associated with poverty and the consequent reduction in the burden of social costs (welfare dependency, crime, and violence and skills shortages) and medical costs (obesity and mental health). International agencies such as UNICEF and the World Bank have identified early childhood development as an important strategy to build economic capacity in developing and resource-poor countries.³

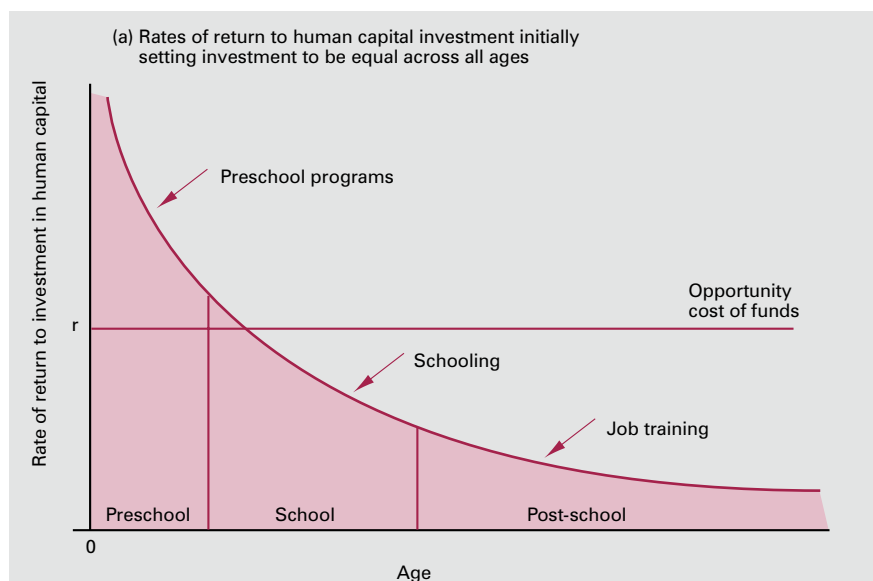
Policy implications

Research into the importance of early childhood development challenges public policy in many different domains: in the allocation of resources to support children and families; and in the way services are organised and funded at a community level. It also poses challenges to professional practice in health, education and social welfare, and provides important insights into the content and styles of parenting likely to promote good outcomes. Central to all of this is our understanding of the construction of the human brain in the early years of life and how it is affected by environmental factors, especially the quality of the relationships between young child and their caregivers. We now

know which factors increase the chances of poor outcomes, as well as the environments that provide the best chance for children to achieve their full potential. Policies based on this evidence will seek to support parents and families, especially those disadvantaged financially or in other ways, and to promote high-quality, nurturing, responsive and stimulating environments that enhance development.

The key policy implications are the need to: ensure access to high-quality, early child care and education; promote children's readiness for schools and schools' readiness for children; and address the risk factors affecting young children and their families.

Figure 1: Rates of Return on Human Capital Investment



Note: This Figure (Heckman & Masterov, 2004) shows the strong rates of return on human capital investments at early ages, and the rapidly diminishing returns as children get older. Early investment in cognitive and non-cognitive skills produces a higher return partly because it lowers the cost of later investment by making learning at later ages more efficient. The early years offer a window of opportunity that is already beginning to close by the time children reach school age.

The ongoing debate about whether child care might be harmful to children is simplistic and tends to be based on beliefs and ideology rather than valid research findings. There is no strong research which shows that high-quality child care is associated with later problems in children. Indeed, the reverse is true — many studies document the benefits, both short and long-term, of child care for children from disadvantaged backgrounds.

(i) Ensuring access to high-quality, early child care and education

In Australia there has been an historical separation between child care and early education. The kindergarten movement was established in the late 19th century with a focus on early learning and preparation for school. Subsidised child care came into being during the Second World War to encourage women's participation in the workforce. In many respects, little has changed since that time, despite the explosive growth in child care and the new knowledge of the importance of the relationships that young children have with caregivers in the early years. This separation has been reinforced by the traditional view, still widely held, that responsibility for young children should rest with the family until they are old enough to begin school.

Policy and practice in early education and care lack focus and integration, and are often the subject of feuding between different levels of government. There is a stark division between preschool education and child care in relation to qualifications and supply of staff. Child care staff generally have lower qualifications, poorer pay and conditions, and no

real career structure. Many parents perceive the main function of child care as providing a safe place where they can leave their young children while both parents go to work, with a commonly held assumption that learning only begins once the child starts kindergarten. Public concern and media attention are focused on the availability of child care places and their cost, rather than how these settings can promote the development of young children.

The ongoing debate about whether child care might be harmful to children is simplistic and tends to be based on beliefs and ideology rather than valid research findings. There is no strong research which shows that high-quality child care is associated with later problems in children. Indeed, the reverse is true — many studies document the benefits, both short and long-term, of child care for children from disadvantaged backgrounds. It is often assumed, quite incorrectly, that home care in the early years is better than out-of-home care. The real issue that needs to be addressed in a policy context is how to provide the best caretaking environment for young children, wherever that happens to be.

Research suggests the need for a major reconceptualisation of the years before the child begins formal schooling. We need to ensure high-quality learning as well as caring environments for young children. This calls for policies that seek to: break down the artificial separation between child care and early learning; raise the education levels and qualifications required of early childhood professionals; narrow the large differences in pay and conditions that now exist between the two professional groups — child care workers and preschool teachers; and reduce group sizes and child/professional ratios.

(ii) Promoting children's readiness for school and schools' readiness for children

The ongoing debate about educational standards focuses on school-based strategies for improving literacy and educational achievement, such as changed curricula, reduced class sizes, better ways to teach reading, and merit pay and bonuses for good teachers. However, there is little debate about how we can ensure that all children establish a strong foundation before they go to school. Large numbers of Australian children, especially those from disadvantaged environments, begin school vulnerable in one or more developmental areas and already on a developmental trajectory which places them at risk of academic failure.⁴ Children who start off with these deficits when they enter school are often left behind, as their trajectory becomes increasingly difficult to shift with each passing year.

Heckman and Masterov (2004) found that:

Ability gaps between advantaged and other children open up early before schooling begins. Conventional school-based policies start too late to completely remedy early deficits, although they can do some good. Children who start ahead keep accelerating past their peers, widening the gap. ... Early advantages accumulate, so do early disadvantages. ... The best way to improve the schools is to improve the early environments of the children sent to them.⁵

If reading skills and learning motivation are not established in the early years, there is a significant risk of subsequent poor educational and behavioural outcomes. These are likely to include early school leavers with poor literacy levels and life skills, and those over-represented in adult populations who are on welfare and participate in crime.

Notwithstanding the policy implications for child care discussed above, one way to improve school readiness and educational attainment is to ensure that all children have a quality preschool experience. Attendance at preschool or kindergarten in Australia is patchy, with evidence that many children from disadvantaged environments, who would benefit most, do not attend for financial, logistical or cultural reasons. A number of research studies have confirmed that attendance at preschool is associated with improved educational performance in the school years.

There needs to be increased policy focus and resource allocation to

provide quality early learning environments in the years before children enter formal schooling. In addition, more effort and resources need to be targeted to the early grades of school. It is important to identify those children exhibiting early signs of academic or behavioural problems and to provide

intensive assistance and remediation. The longer we wait, the more difficult and expensive intervention is likely to be, and the lower the chances that it will be successful. The research is very clear on this — waiting until problems become entrenched and then trying to fix them is a recipe for failure.

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(iii) Addressing the risk factors affecting young children and their families

There are many families who are exposed to multiple risk factors, which cumulatively undermine their capacity to raise children as they (and wider society) would wish. The existing system of services for young children and their families is struggling to support them, and needs to be restructured and strengthened in a number of ways.

To address the multiple risk factors facing many families, early childhood and family support services need to be better integrated and more easily accessible. This should take the form of a tiered system of services, with a strong universal service system backed up by high-quality secondary and tertiary specialist services. The capacity of services to respond promptly and appropriately to the emerging needs of children and families (rather than waiting until their problems are entrenched and difficult to address) also needs to be strengthened. To do this, services need to have ongoing contact with young children through the early years, which does not occur at present, and professionals need to

be trained to identify emerging child and family problems. Some of these changes may be achieved through a reorganisation of existing services but others will require additional funding and support. The evidence strongly suggests that such investments will more than pay for themselves in the long run.

Role of business

We believe that early childhood should be a vital area of interest for business. Indeed, business support for increased investment in the early years will be critical to developing the policy changes necessary to improve outcomes for children and throughout the life cycle. Increased investment in early education and in supporting vulnerable children and families will lead to a more highly skilled

rather than the start-up cost of new initiatives. Investment in early childhood is a demonstrably sound economic investment. It is analogous to building a country's physical infrastructure, except that it involves investment in human capital. But it is nevertheless an investment in the long-term well-being and prosperity of our nation. ■

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Business leaders can have a major impact on policy because their focus tends to be return on investment rather than the start-up cost of new initiatives. Investment in early childhood is a demonstrably sound economic investment. It is analogous to building a country's physical infrastructure, except that it involves investment in human capital. But it is nevertheless an investment in the long-term well-being and prosperity of our nation.

workforce and reduced expenditure on welfare and on the management of many resource-costly adult conditions and problems. There is also an ethical and moral imperative in creating structures to protect children and allow them to reach their full potential.

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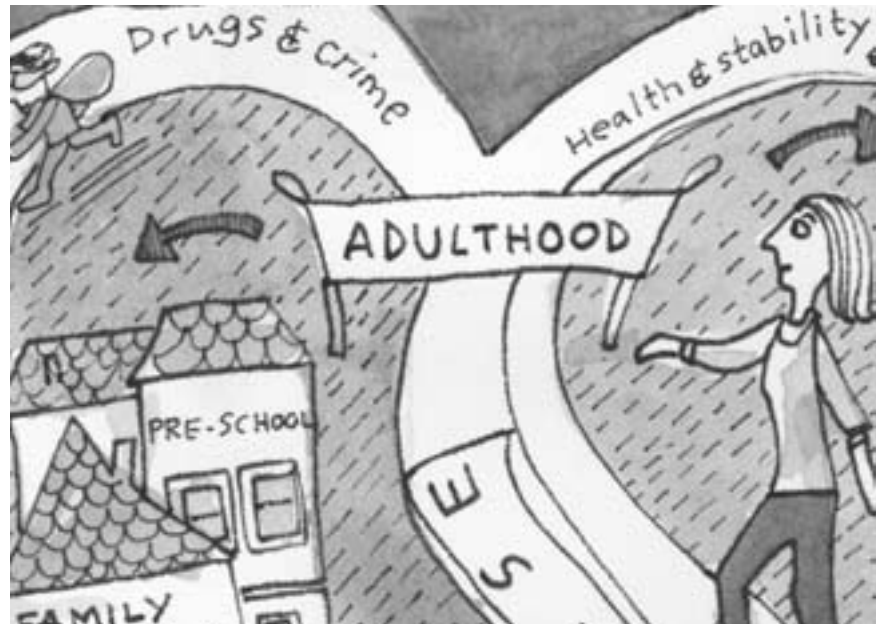
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ENDNOTES

- ¹ See for example, 'partnerships for America's Economic success' —www.partnershipforsuccess.org
- ² National Agenda for Children (www.facs.gov.au/internet/facsinternet.nsf/family/early_childhood.htm); Communities for Children (http://www.facs.gov.au/internet/facsinternet.nsf/aboutfacs/programs/sfsc-communities_for_children.htm); Best Start (www.beststart.vic.gov.au); Families First (www.familiesfirst.nsw.gov.au).
- ³ See for example, the Buffet Early Childhood fund (www.buffettearlychildhoodfund.org); Pew Charitable Trusts (www.pewtrusts.org); A. Rolnik and R. Grunewald 2003, 'Early childhood development: economic development with a high public return', *Federal Gazette*, December, pp. 6–12.

⁴ The Australian Early Developmental Index – www.australianedi.org.au

⁵ J.L. Heckman and D.V. Masterov 2004, 'The Productivity Argument for Investing in Young Children', Invest in Kids Working Group, Working Paper no. 5, September, Washington, DC: Committee for Economic Development. http://www.ced.org/docs/report/report_ivk_heckman_2004.pdf

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