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Importance of early childhood development

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Synthesis

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How important is it?

"Learning starts in infancy, long before formal education begins, and continues throughout life. Early learning begets later learning and early success breeds later success, just as early failure breeds later failure." – *James J. Heckman*

"ECD has taken its place in the economic literature besides schooling, on the job training, public health and informal learning." – *David Dodge*

"A wide range of policies, including those directed toward early care and education, primary health care, child protective services, adult mental health, and family economic supports, among many others, can promote the safe, supportive environments and stable, caring relationships that children need." – *Jack P. Shonkoff*

"The early years of human development establish the basic architecture and function of the brain." – *J. Fraser Mustard*

"The interplay of the developing brain with the environment is the driving force of development." – *Clyde Hertzman*

"The Convention of the Rights of the Child was adopted far more quickly and broadly than any previous human rights treaty." – *Gary B. Melton*

What do we know?

Human capital interventions should include, in addition to cognition and "academic smarts", social adaptability and motivation. – *James J. Heckman*

Neglecting investment in good health (pre and post conception), good nutrition, good parenting, strong social support and stimulative interaction with others outside the home reduces the value of investment in other areas. – *David Dodge*

"From pregnancy through early childhood, all of the environments in which children live and learn, and the quality of their relationships with adults and caregivers, have a significant impact

on their cognitive, emotional and social development." – *Jack P. Shonkoff*

"We now know that nurture in early life as well as nature is important in early human development and that nurture in the early years has major effects on learning in school and physical and mental health throughout the life cycle." – *J. Fraser Mustard*

"The competencies and skills fostered through ECD programs are not limited to cognitive gains, but also include physical, social and emotional gains - all of which are determinants of health over the life course." – *Clyde Hertzman*

"The child's right to personality is meaningful from the moment of birth." – *Gary B. Melton*

What can be done?

"As a society, we cannot afford to postpone investing in children until they become adults, nor can we wait until they reach school age – a time when it may be too late to intervene. The best evidence supports the policy prescription: invest in the very young and improve basic learning and socialisation skills." – *James J. Heckman*

"Public investment in human capital should be directed towards the very young but the way these investments should be directed in order to be productive is far less clear." – *David Dodge*

"The basic principles of neuroscience indicate that providing supportive conditions for early childhood development is more effective and less costly than attempting to address the consequences of early adversity later." – *Jack P. Shonkoff*

"…epigenetic effects initiated during early development can be prevented or reversed by good nutrition and stimulation." – *J. Fraser Mustard*

"National policy and economic factors are significant for ECD. Although child development tends to be more successful in wealthy than poor countries, the priority given to children in social policy can overcome national poverty in child developmental outcomes." – *Clyde Hertzman*

"The U.N. Committee emphasized the need for public investment in services for young children, not just school-aged children, and in related data collection, research and training for parents and professionals involved in young children's care and education." – *Gary B. Melton*

Invest in the Very Young

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February 2007, 2e éd.

Learning starts in infancy, long before formal education begins, and continues throughout life. Early learning begets later learning and early success breeds later success, just as early failure breeds later failure. Success or failure at this stage lays the foundation for success or failure in school, which in turn leads to success or failure in post-school learning. Recent studies of early childhood investments have shown remarkable success and indicate that the early years are important for early learning. Moreover, early childhood interventions of high quality have lasting effects on learning and motivation. As a society, we cannot afford to postpone investing in children until they become adults, nor can we wait until they reach school age – a time when it may be too late to intervene.

However, current policies regarding education and job training are based on fundamental misconceptions about the way socially useful skills embodied in persons are produced. By focusing on cognitive skills as measured by achievement of IQ tests, they exclude the critical importance of social skills, self-discipline and a variety of non-cognitive skills that are known to determine success in life. Furthermore, this preoccupation with cognition and academic “smarts” as measured by test scores to the exclusion of social adaptability and motivation causes a serious bias in the evaluation of the human capital interventions.

Another common error in the analysis of human capital policies is the assumption that abilities are fixed at very early ages. This static conception of ability is at odds with a large body of research in the child development literature. More specifically, research has shown that, in the early years of life, basic abilities can be altered. A more corrective view of ability (or rather abilities) is that they are developed in a variety of learning situations and that early ability in turn fosters further learning. Also missing from current policy discussion of education and training policy is any consideration of priorities or recognition of the need to prioritize. Unfortunately, in an era of tight government budgets, it is impractical to consider active investment program for all persons. The real question is how to use the available funds wisely. The best evidence supports the policy prescription: invest in the very young and improve basic

learning and socialization skills.

Note:

This text is adapted from the paper “The real question is how to use the available funds wisely. The best evidence supports the policy prescription: Invest in the very young,” published by the Ounce of Prevention Fund and the University of Chicago Harris School of Public Studies. 2000. The present paper has been approved by Dr. Heckman.

Human Capital, Early Childhood Development and Economic Growth

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February 2007, 2e éd.

While parents, along with some psychologists, sociologists and public-health experts, have long intuitively understood the importance of early childhood development (ECD), it is really only over the last quarter-century or so that scientists, physicians and social scientists have come to recognize the crucial role played by ECD. And it is only very recently that ECD has taken its place in the economic literature beside schooling, on-the-job training, public health and informal learning.

Successful ECD depends on the interaction of a number of factors. As is the case for the development of human capital in later years, the various factors influencing ECD interact multiplicatively to produce "success," as measured by readiness to learn when entering primary school. Good health (of both mother and child), good nutrition, good parenting, strong social supports and stimulative interaction with others outside the home all combine to provide the best chance of success. Since neglecting investment in any one of these areas reduces the value of investment in other areas, investments to improve pre- and post-conception health of the future mother are a crucial input to ECD. Thus, support of all types to improve parenting during this period is crucial. This support includes development of parenting skills, social support, employer and government support to increase the amount of time parents can spend with their children and, in some cases, direct income support.

In the final period of ECD – roughly ages three through five – the research demonstrates clearly that some form of ECD outside the home makes a very important contribution to the development of the child. This form of intervention, in combination with effective parenting, would appear to significantly increase the chances of a child being "ready to learn" when he or she enters primary school.

The issue then arises as to the appropriate allocation of public (and private) funding for human capital formation. To generate the maximum total return on investment in human capital, it is

important that new investment be allocated efficiently at the margin – just as is the case for physical capital. Thus, it is critical to try to ascertain the return at the margin for different types of investment in human capital – a very difficult exercise. And we should not be surprised that empirical research does not produce definitive numerical results. So while it seems clear that, at the margin, public investment in human capital should be directed towards the very young, how to make those investments most productive is far less clear.

Note:

This text is adapted from Dr. Dodge's Keynote address "Human Capital, Early Childhood Development and Economic Growth: an Economist's Perspective," delivered at the Sparrow Lake Alliance's Annual Meeting, May 2003. Dr. Dodge, who spoke at this event in a personal capacity, has approved this excerpt.

Investment in Early Childhood Development Lays the Foundation for a Prosperous and Sustainable Society

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The first years of life are important, because what happens in early childhood can matter for a lifetime. Science shows us what children must have, and what they need to be protected from, in order to promote their healthy development. Stable, responsive, nurturing relationships and rich learning experiences in the earliest years provide lifelong benefits for learning, behavior and both physical and mental health.[1] In contrast, research on the biology of stress in early childhood shows how chronic stress caused by major adversity, such as extreme poverty, abuse or neglect, can weaken developing brain architecture and permanently set the body's stress response system on high alert, thereby increasing the risk for a range of chronic diseases.[2]

The following basic concepts, established over decades of neuroscience and behavioral research, help illustrate why healthy child development from birth to five years provides a foundation for a prosperous and sustainable society.[3,4]

Brains are built over time, from the bottom up. The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood. Early experiences affect the quality of that architecture by establishing either a sturdy or a fragile foundation for the learning, health and behavior that follow.[3] In the first few years of life, 700 new neural connections (called synapses) are formed every second.[5,6] After this period of rapid proliferation, these connections are reduced through a process called pruning, so that brain circuits become more efficient.[7] Sensory pathways, like those for basic vision and hearing, are the first to develop, followed by early language skills and later by higher cognitive functions. Connections proliferate and prune in a prescribed order, with later, more complex brain circuits built upon earlier, simpler circuits.[8,9,10,11]

The interactive influences of genes and experience shape the developing brain. Scientists now know a major ingredient in this developmental process is what has been called a “serve and return” relationship between children and their parents and other caregivers in the family or community. Young children naturally reach out for interaction through babbling, facial expressions and gestures, and adults respond with similar kinds of vocalizing and gesturing back at them.[3] In the absence of such responses – or if the responses are unreliable or inappropriate – the brain’s architecture does not form as expected, which can lead to disparities in learning and behavior.[12]

The brain’s capacity for change decreases with age. It is most flexible, or “plastic,” early in life to accommodate a wide range of environments and interactions, but as the maturing brain becomes more specialized to assume more complex functions, it is less capable of reorganizing and adapting to new or unexpected challenges. For example, by the end of the first year, the parts of the brain that differentiate sounds are becoming specialized according to the language the baby has heard. At the same time, the brain is already starting to lose the ability to recognize different sounds found in other languages. Although the “windows” for complex language learning and other skills remain open, these brain circuits become increasingly difficult to alter over time. Early plasticity means it’s easier and more effective to influence a baby’s developing brain architecture than to rewire parts of its circuitry during adolescence and the adult years.[7]

Cognitive, emotional, and social capacities are inextricably intertwined throughout the life course. The brain is a highly integrated organ, and its multiple functions operate in a richly coordinated fashion. Emotional well-being and social competence provide a strong foundation for emerging cognitive abilities, and together they are the bricks and mortar that make up the foundation of human development. The emotional and physical health, social skills and cognitive-linguistic capacities that emerge in the early years are all important prerequisites for success in school and, later, in the workplace and community.[11,13,14]

Although learning how to cope with adversity is an important part of healthy child development, excessive or prolonged stress can be toxic to the developing brain. When we are threatened, our bodies activate a variety of physiological responses, including increases in heart rate, blood pressure, and stress hormones, such as *cortisol*. When a young child is protected by supportive relationships with adults, he learns how to adapt to everyday challenges and his stress response system returns to baseline. Scientists call this positive stress. Tolerable stress occurs when more serious difficulties, such as the loss of a loved one, a natural disaster, or a frightening injury, are

buffered by caring adults who help the child adapt, thereby mitigating the potentially damaging effects of abnormal levels of stress hormones. When strong, frequent or prolonged adverse experiences, such as extreme poverty or repeated abuse, are experienced without adult support, stress becomes toxic and disrupts developing brain circuits. Toxic stress experienced early in life can also have a cumulative toll on learning capacity as well as physical and mental health. The more adverse experiences in childhood, the greater the likelihood of developmental difficulties and other problems. Adults with more adverse experiences in early childhood are also more likely to have chronic health problems, including alcoholism, depression, heart disease and diabetes.[15]

Early intervention can prevent the consequences of early adversity. Research shows that later interventions are likely to be less successful – and in some cases are ineffective. For example, when children who experienced extreme neglect were placed in responsive foster care families before age two, their IQs increased more substantially and their brain activity and attachment relationships were more likely to become normal than if they were placed after the age of two.[16] While there is no “magic age” for intervention, it is clear that, in most cases, intervening as early as possible is significantly more effective than waiting.[7]

Stable, caring relationships are essential for healthy development. Children develop in an environment of relationships that begin in the home and include extended family members, early care and education providers, and other members of the community.[1] Studies show that toddlers who have secure, trusting relationships with their parents or non-parent caregivers experience minimal stress hormone activation when frightened by a strange event, and those who have insecure relationships experience a significant activation of the stress response system.[2] Numerous scientific studies support the conclusion that providing supportive, responsive relationships as early in life as possible can prevent or reverse the damaging effects of toxic stress.[2]

Conclusion

The basic principles of neuroscience indicate that providing supportive conditions for early childhood development is more effective and less costly than attempting to address the consequences of early adversity later.[4] To this end, a balanced approach to emotional, social, cognitive and language development will best prepare all children for success in school and later in the workplace and community. For children experiencing toxic stress, specialized

interventions – as early as possible – are needed to target the cause of the stress and protect the child from its consequences.[15]

From pregnancy through early childhood, all of the environments in which children live and learn, and the quality of their relationships with adults and caregivers, have a significant impact on their cognitive, emotional and social development. A wide range of policies, including those directed toward early care and education, primary health care, child protective services, adult mental health, and family economic supports, among many others, can promote the safe, supportive environments and stable, caring relationships that children need.

References

1. National Scientific Council on the Developing Child. *Young children develop in an environment of relationships*. Cambridge, MA: National Scientific Council on the Developing Child; 2004. Working Paper No. 1. Available at: http://developingchild.harvard.edu/library/reports_and_working_papers/wp1/. Accessed December 1, 2009.
2. National Scientific Council on the Developing Child. *Excessive stress disrupts the architecture of the developing brain*. Cambridge, MA: National Scientific Council on the Developing Child; 2005. Working Paper No. 3. Available at: http://developingchild.harvard.edu/library/reports_and_working_papers/wp3/. Accessed December 1, 2009.
3. Center on the Developing Child at Harvard University. *A science-based framework for early childhood policy: Using evidence to improve outcomes in learning, behavior, and health for vulnerable children*. Cambridge, MA: Center on the Developing Child at Harvard University; 2007. Available at: http://developingchild.harvard.edu/library/reports_and_working_papers/policy_framework/. Accessed December 1, 2009.
4. Knudsen EI, Heckman JJ, Cameron JL, Shonkoff JP. Economic, neurobiological, and behavioral perspectives on building America's future workforce. *Proceedings of the National Academy of Sciences* 2006;103(27):10155-10162.
5. Bourgeois JP. Synaptogenesis, heterochrony and epigenesis in the mammalian neocortex. *Acta Pædiatrica Supplement* 1997;422:27–33.
6. Huttenlocher PR, Dabholkar AS. Regional differences in synaptogenesis in human cerebral cortex. *The Journal of Comparative Neurology* 1997;387(2):167-178.
7. National Scientific Council on the Developing Child. *The timing and quality of early experiences combine to shape brain architecture*. Cambridge, MA: National Scientific Council on the Developing Child; 2007. Working Paper No. 5. Available at: http://developingchild.harvard.edu/library/reports_and_working_papers/wp5/. Accessed December 1, 2009.
8. Dawson G, Fischer K, eds. *Human behavior and the developing brain*. New York, NY: Guilford Press; 1994.
9. Nelson CA. The neurobiological bases of early intervention. In: Shonkoff JP, Meisels SJ, eds. *Handbook of early childhood intervention*. 2nd ed. New York: Cambridge University Press; 2000: 204-227.
10. Nelson C, Bloom F. Child development and neuroscience. *Child Development* 1997; 68(5):970-987.
11. Shonkoff J, Phillips D, Committee on Integrating the Science of Early Childhood Development, eds. *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press; 2000.
12. National Scientific Council on the Developing Child, the National Forum on Early Childhood Program Evaluation. *Maternal depression can undermine the development of young children*. Cambridge, MA: National Scientific Council on the Developing Child. Working Paper No. 8. In press.

13. Emde R, Robinson J. Guiding principles for a theory of early intervention: A developmental-psychoanalytic perspective. In: Shonkoff JP, Meisels SJ, eds. *Handbook of early childhood intervention.* 2nd ed. New York: Cambridge University Press; 2000:160-178.

14. McCartney K, Phillips D, eds. B*lackwell handbook of early childhood development*. Oxford, UK: Blackwell Pub.; 2006.

15. Shonkoff JP, Boyce WT, McEwen BS. Neuroscience, molecular biology, and the childhood roots of health disparities: Building a new framework for health promotion and disease prevention. *JAMA: The Journal of the American Medical Association* 2009;301(21):2252-2259.

16. Nelson CA, Zeanah CH, Fox NA, Marshall PJ, Smyke A, Guthrie D. Cognitive recovery in socially deprived young children: The Bucharest Early Intervention Project. *Science* 2007;318(5858): 1937-1940.

Early Brain Development and Human Development

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The early years of human development establish the basic architecture and function of the brain.[1] This early period of development, (conception to ages 6-8), affects the next stage of human development, as well as the later stages. We now better understand, through developmental neurobiology, how experience in early life affects these different stages of development.[1] Poor early development affects health (physical and mental), behaviour and learning in later life.

The architecture and function of the brain is sculpted by a lifetime of experiences which affect the architecture and function of neurobiological pathways.[1,2] Stimuli transmitted to the brain through sensing pathways pre- and post-natally, as well as in later stages of life, differentiate the function of neurons and neural pathways.

The billions of neurons in an individual's brain have the same gene coding (DNA). The neurons differentiate for their diverse functions (e.g. vision, hearing, touch, behaviour, etc) through epigenetics.[1,3,4,2] Epigenetics is the molecular and cellular process that governs the function of genes. These processes include *DNA methylation*, changes in *chromatin structure*, non-coding *RNA*s and *RNA editing*.[3,4,5] Those working in epigenetics have concluded that understanding the mechanisms that regulate gene differentiation and function will be a critical component of neurobiological research in the 21st century.[3,4,2] The epigenetic changes in neuron function affect neurobiological pathways that influence health (physical and mental), behaviour and learning.[2,6,4] The effects of epigenetics on gene function begins at conception and continues during in utero development, and development following birth.

Experiences that affect brain development through the sensing pathways include sound, touch, vision, smell, food, thoughts, drugs, injury, disease and other factors.[2,4]

Identical twins have the same DNA in their neurons (*genotype*) but will not have the same experience, leading to differences through epigenetics in gene expression (*phenotype*). Identical twins can have a 20 to 30% difference in behaviour as adults (phenotype).[7] This difference is probably related to epigenetic affects on neuron function in early development. As a result of

these studies, there is increasing interest in how epigenetics could be a factor in schizophrenia, bi-polar disorders and conditions such as Attention Deficit Hyperactivity Disorder (ADHD) as well as physical health in adult life.[2,8,6,9] Studies have shown that there is *hypermethylation* of the *DNA promoter region* in the *hippocampus* of suicide victims with a history of abuse and neglect in early life[10] but not in suicide victims with no early abuse or neglect.

Animal studies have demonstrated epigenetic affects on gene function. The normal mouse *agouti gene* leads to brown pigmented fur and normal body size. The variant agouti gene is dominant over the normal agouti gene and results in obese mice with yellow fur.[11] It was found that when pregnant mothers with the variant agouti *allele* were fed methyl-donor dietary supplements to methylate in utero, the variant agouti gene regulator, the offspring showed extensive methylation of the gene and were of normal colour and not obese. The coat colour and size of these newborn mice correlated with the amount of methylation of the variant agouti gene.

In rats, behaviour responses to stressful situations are correlated with the number of *glucocorticoid* receptors in the brain's hippocampus.[4] The more glucocorticoid receptors in the hippocampus, the better the adult rat is able to regulate the glucocorticoid hormones and stress. The rats exposed to strong licking and grooming by their mothers after birth, lose the methylation of the glucocorticoid receptor gene, leading to good receptor formation in the hippocampus. The animals with good receptor formation show a better regulated stress pathway and are easy to handle, while the animals with decreased glucocorticoid receptor capacity are easily stressed. In these studies, the researchers found that the administration of a compound (*trichostatin A*) removed the epigenetic effect and normalized the stress behaviour of the rats.[4]

Retrospective studies in humans have shown that development in the utero period and infancy influences risks for adult diseases (*type II diabetes*, hypertension, heart attacks, obesity, cancer and aging).[2,6,12] The Kaiser Permanente studies in California[13] found that adults with mental health problems, addiction, obesity, type II diabetes, coronary artery disease, and other conditions in adult life had poor early child development.

If these and other problems related to development are contributed to by epigenetic effects in early life, can early intervention prevent or easily reverse the processes?

The work of Grantham-McGregor and colleagues has demonstrated that stunted children at birth, if given nutrition and stimulation after birth, can approach the performance of control

children after 24 months.[14] These studies are compatible with the hypothesis that epigenetic effects initiated during early development can be prevented or reversed by good nutrition and stimulation. The orphanage studies in Romania show that children placed in middle class homes in Great Britain, Canada and the US who were in the orphanages for eight months or longer had, at 11 years of age, in contrast to the children adopted within four months after birth, abnormal brain development (small brain), abnormal electroencephalograms (EEGs) and low metabolic activity.[15] The children adopted late showed abnormal behaviour (ADHD, aggression, and quasi autism) and poor cognitive development (low IQ) at age 11. Some children in the orphanages were randomized to foster parenting in Romania and compared to children left in the orphanages.[16] When this study was done, the majority of the children had spent at least two years in the orphanages. The mean IQ of the orphanage children was 71; the IQ of children placed in foster care was 81; and for children brought up by their biological parents, the IQ was 110.[16] Children placed in foster care early were approaching normal human development but this was not occurring for children placed in foster care after the age of two.

In the Abecedarian study in North Carolina, African American children at four months of age were randomized into two groups: an intensive yearly preschool program or no specific program.[17] When the children entered the school system, the children in each group were randomized to either a special three-year education program or the standard school program. The special three-year program produced some improvement in the reading and numeracy function of the children not in the preschool program but the effect was small and gradually lost. The children given the preschool program and the standard school program showed much better school performance but there was some loss of performance by age 21. The children given the preschool program plus the three-year education program showed the biggest gains and this was sustained.

We now know that the quality of child development at the time of school entry predicts performance in school programs.[18,19]

Results from developmental neurobiology studies and animal and human studies provide strong evidence that early neurobiological development affects health (physical and mental), behaviour and learning in the later stages of life. Countries that provide quality universal early development programs for families with young children tend to out-perform countries in which the early development programs are chaotic.[1]

Cuba established in the mid-1970s a poly-clinic structure for prenatal and post-natal care (nutrition, healthy development and stimulation). The outstanding improvement in the health status of Cubans in contrast to other Caribbean and Latin American countries may well be related to the quality of the poly-clinic program on early development (according to a conversation with A. Tinajero in 2009). It is possible that this program, which began with pregnancy, is also an important reason why the Cubans substantially out-perform the other Latin American countries in the UNESCO studies of language and literacy and numeracy in grades 3 and 6.

We now know that nurture in early life as well as nature is important in early human development and that nurture in the early years has major effects on learning in school and physical and mental health throughout the life cycle.

References

1. McCain MN, Mustard JF, Shanker S. *Early years study 2: Putting science into action*. Toronto, ON: Council for Early Child Development; 2007.
2. Gilbert SF, Epel D. *Ecological developmental biology*. Sunderland, MA: Sinauer Associates; 2009.
3. Mehler MF. Epigenetics and the nervous system. *Annals of Neurology* 2008;64(6):602-617.
4. Szyf M, McGowan P, Meaney MJ. The social environment and the epigenome. *Environmental & Molecular Mutagenesis* 2008;49(1):46-60.
5. Fabian MR, Mathonnet G, Sundermeier T, Mathys H, Zipprich JT, Svitkin YV, Rivas F, Jinek M, Wohlschlegel J, Doudna JA, Chen CY, Shyu AB. Yates JR 3rd. Hannon GJ. Filipowicz W. Duchaine TF. Sonenberg N. Mammalian miRNA RISC recruits CAF1 and PABP to affect PABP-dependent deadenylation. *Molecular Cell* 2009;35(6):868-880.
6. Gluckman PD, Hanson MA, Cooper C, Thornburg KL. Effect of in utero and early life conditions on adult health and disease. *New England Journal of Medicine* 2008;359(1):61-73.
7. Caspi A, Moffitt TE, Morgan J, Rutter M, Taylor A, Arseneault L, Tully L, Jacobs C, Kim-Cohen J, Polo-Tomas M. Maternal expressed emotion predicts children's antisocial behaviour problems: using monozygotic twin differences to identify environmental effects on behavioural development. *Developmental Psychology* 2004;40(2):149-161.
8. Mill J, Petronis A. Pre- and peri-natal environmental risks for attention-deficit hyperactivity disorder (ADHD): the potential role of epigenetic processes in mediating susceptibility. *The Journal of Child Psychology and Psychiatry* 2008;49(10):1020-1030.
9. Fraga MF, Ballestar E, Paz MF, Ropero S, Setien F, Ballestar ML, Heine-Suner D, Cigudosa JC, Urioste M, Benitez J, Boix-Chornet M, Sanchez-Aguilera A, Ling C, Carlsson E, Poulsen P, Vaag A, Stephan Z, Spector TD, Wu YZ, Plass C, Esteller M. Epigenetic differences arise during the lifetime of monozygotic twins. *Proceedings of the National Academy of Sciences of the United States of America* 2005;102(30):10604-10609.
10. McGowan PO. Sasaki A. D'Alessio AC. Dymov S. Labonte B. Szyf M. Turecki G. Meaney MJ. Epigenetic regulation of the glucocorticoid receptor in human brain associates with childhood abuse. *Nature Neuroscience* 2009;12(3):342-348.
11. Waterland RA, Jirtle RL. Transposable elements: targets for early nutritional effects of epigenetic gene regulation. *Molecular & Cellular Biology* 2003;28:5293-5300.

12. Barker DJP. Mothers, babies and disease in later life. London, UK: BMJ Publishing Group; 1994.

13. Felitti VJ. Anda RF. Nordenberg D. Williamson DF. Spitz AM. Edwards V. Koss MP. Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine* 1998;14(4): 245-258.

14. Grantham-McGregor SM, Powell CA, Walker SP, Himes JH. Nutritional supplementation psychosocial stimulation and mental development of stunted children: the Jamaican study. *The Lancet* 1991;338(8758):1-5.

15. Ames EW. The development of Romanian orphanage children adopted to Canada: *Finalreport to the National Welfare Grants Program: Human Resources DevelopmentCanada*.. Burnaby, BC: Simon Fraser University; 1997.

16. Nelson CA 3rd, Zeanah CH, Fox NA, Marshall PJ, Smyke AT, Guthrie D. Cognitive recovery in socially deprived young children: The Bucharest Early Intervention Project. *Science* 2007;318(5858):1937-1940.

17. Campbell FA, Ramey CT, Pungello E, Sparling J, Miller-Johnson S. Early childhood education: Young adult outcomes from the Abecedarian Project. *Applied Developmental Science* 2002;6(1):42-57.

18. Lloyd J, Hertzman C. From kindergarten readiness to fourth-grade assessment: Longitudinal analysis with linked population data. *Social Science & Medicine* 2009;68:111-123.

19. Wylie C, Ferral H, Hodgen E, Thompson J. Competencies at age 14 and competency development for the Competent Learners study sample. Wellington, NZ: New Zealand Council for Educational Research; 2006.

Framework for the Social Determinants of Early Child Development

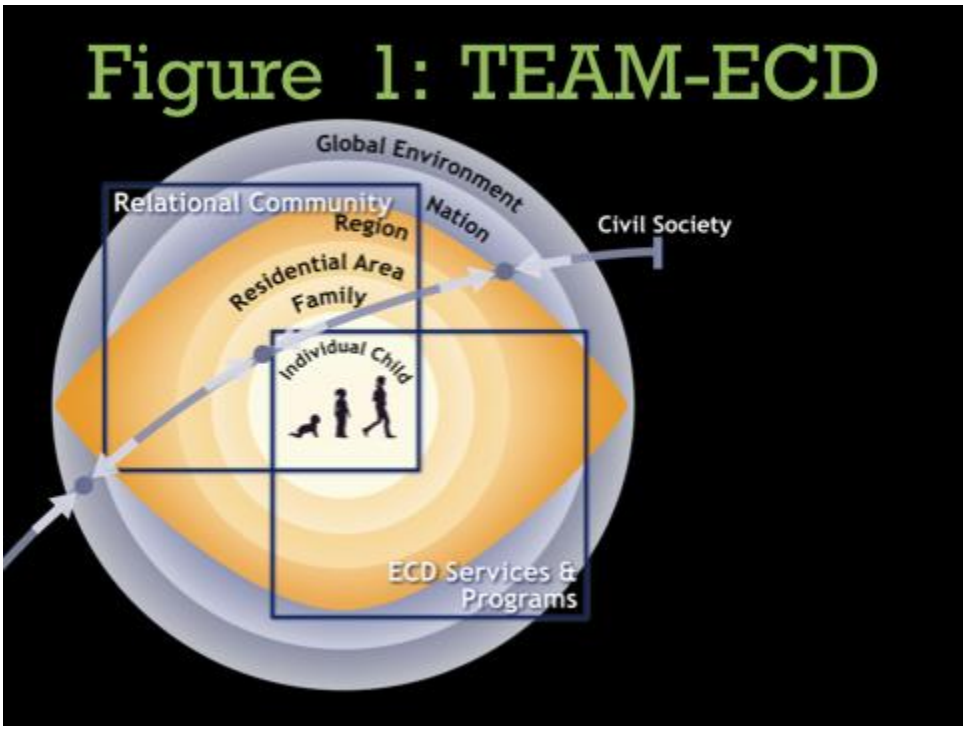
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The Total Environment Assessment Model for Early Child Development (see Figure 1 – TEAM-ECD) was developed for the World Health Organization's Commission on the Social Determinants of Health to highlight the environments and experiences that influence ECD.[1] TEAM-ECD builds on the bio-ecological model,[2] developmental psychology,[3] the concept of "biological embedding,"[4] the social determinants of health,[5,6] research regarding social relations in human society,[7] and political economy.[8] It features interacting and interdependent spheres of influence that are instrumental for ECD: the individual, family and dwelling, residential and relational communities, programs and services, regional, national and global environments, and civil society.

Figure 1. Total Environnement Assessment Model for Early Child Development (TEAM-ECD)



The Individual Child

Early in life, sensitive periods occur in the brain when the child is disproportionately sensitive to the influences of the external environment.[2,9,10] The interplay of the developing brain with the environment is the driving force of development. The process of early experience shaping brain and biological development in ways that influence development over the life course is known as biological embedding.[4] Young children's optimal growth and development requires adequate nutrition, beginning in utero, with adequately nourished mothers. During the first months of life, breastfeeding plays a critical role in providing children with necessary nutrients but, the quality of relationships also matters right from the start. Children are social actors shaped by their environment[11,12,13,14] who, in turn, play a role in shaping it. Young children develop best in warm, responsive environments that protect them from inappropriate disapproval and punishment; environments in which there are opportunities to explore their world, to play, and to learn how to speak and listen to others.[15] Stimulation has an independent effect on perceptual motor development outcomes among stunted children, over and above nutritional supplementation.[16]

The Family

The family (defined here as any group of people who dwell, eat and participate in other daily, home-based activities together) is the primary environmental influence on children's development.[17,18] Any chronic domestic problem, especially of the mother or primary caregiver, such as intimate-partner violence[19,20] or chronic illness, can have a deleterious effect on child development. Family members provide most stimuli for children, and families largely control children's contact with the wider environment.[21] The most salient features of the family are its social and economic resources. Social resources include parenting skills and education, cultural practices and approaches, intra-familial relations, and the health status of family members. Economic resources include wealth, occupational status and dwelling conditions. The influence of family resources (herein, socio-economic status, or SES) is mediated by access to societal resources that enable families to make choices and decisions in the best interests of their children, including services such as parenting and caregiver support,[21] quality childcare,[22,23,24,25] and primary health care and education.

As one goes from the bottom to the top of family SES in virtually all societies, child developmental outcomes, on average, improve. This is the "gradient effect," which is a principal

source of modifiable inequality in ECD.[26] Family SES has an impact on outcomes as diverse as low birth weight, risk of dental caries, cognitive test scores, difficulties with behaviour and socialization, and risk of disengagement from school.[3] Children born into low SES families are more likely to be exposed to – and affected by –conditions that are adverse for development, such as homelessness, crowding, slum living conditions or unsafe neighborhoods.[27,28] Low levels of parental education and literacy affect the knowledge and skill-base of children's caregivers. Feeding and breastfeeding practices vary according to SES, as does parental stress. Low SES parents are at increased risk for a variety of forms of psychological distress, including negative self-worth and depression. The severity and chronicity of maternal depression are predictive of disturbances in child development.[24,29] SES gradients in language and cognitive development are strongly influenced by the richness of the domestic language environment.[30] Family SES is also associated with ability to access other resources, such as health care and high-quality childcare.[31]

Residential and Relational Communities

Socioeconomic, social capital, physical and service characteristics of residential communities influence ECD.[32] Socioeconomic inequalities among residential communities are associated with inequalities in children's development, but there are important caveats. Children from low SES families living in economically-mixed neighbourhoods often do better in their development than low SES children living in poor neighbourhoods.[33] There is an inverse association between the socioeconomic status of a community and the chances that its residents will be exposed to toxic or otherwise hazardous exposures such as wastes, air pollutants, poor water quality, excessive noise, residential crowding or poor housing quality.[34] Physical spaces accessible to children create both opportunities and constraints for play-based learning and exploration, both critical for motor, social/emotional and cognitive development.[12,35] Access to high quality services often varies according to community SES: learning and recreation, child care, medical, transportation, food markets and opportunities for employment.[36] Child development is also influenced by the quality of community social capital – an umbrella term that encompasses constructs such as informal social control (e.g., I can leave my door unlocked because the neighbourhood teenagers respect the citizens here), norms of reciprocity (e.g., I believe that something promised will be kept because the standards in my community are like that), social engagement, participation, cohesion and trust.[37,38,39]

The relational community is the group that gives children and families their identity and, often, how outsiders identify them. It is a primary source of social inclusion or exclusion, sense of self-

worth, self-esteem and gender socialization. Relational communities transmit information regarding child-rearing practices and norms of child development. The extent to which adults and children in communities are linked to one another, whether there is reciprocated exchange (of information, in-kind services and other forms of support), and whether there is informal social control and mutual support is, in part, a function of the relational community. These are aspects of social capital, highlighting the overlap in the influences of relational and residential communities.[7,40,41,42]

ECD Programs and Services

Investment in early childhood is a powerful economic strategy, with returns over the life course many times the size of the original expenditure. ECD programs promote the quality of human capital; that is, individuals' competencies and skills for participating in society and the workforce.[43] The competencies and skills fostered through ECD programs are not limited to cognitive gains, but also include physical, social and emotional gains – all of which are determinants of health over the life course.[44] Accordingly, ECD programs, which incorporate and link health-promoting measures (e.g., good nutrition, immunization) with nurturance, participation, care, stimulation and protection, offer the prospect of sustained improvements in physical, social, emotional, language and cognitive development.

Regional Environment

Interrelated aspects of regions that are significant for ECD include physical (e.g., degree of urbanization, the physical lay-out of cities), social, political and economic factors. In low- and middle-income countries, inequalities in child health outcomes – for example under-five mortality rates – vary according to geography, such as between rural and urban areas; often due to unequal allocation of resources.[45] But regional inequalities in ECD are also seen in resource-rich countries.[46] At the sub-national level, regional and relational communities may intersect in ways that create nurturant conditions systematically different from the rest of a country. For example, norms in some regions of southern India, in contrast to northern India, provide women more exposure to the outside world, more voice in family life and more freedom of movement than do the social systems of the north.[47] Women's autonomy itself is determined largely by women's education, which is much more accessible in southern regions of India, such as the state of Tamil Nadu.[47,48] Women's autonomy, in turn, demonstrably influences opportunities for successful ECD.[49]

National Environment

National policy and economic factors are significant for ECD. Although child development tends to be more successful in wealthy than poor countries, the priority given to children in social policy can overcome national poverty in child developmental outcomes. Kamerman's review[50] of child welfare policies across countries identified five domains that make a difference: income transfers (cash and tax benefits); employment policies; parental leave and other policies to support maternal employment; early childhood education and care services; and prevention and other interventions related to teen pregnancy. The transformation of the "Tiger Economies" of Southeast Asia from resource-poor, low life expectancy societies to resource-rich, high life expectancy societies was accomplished primarily through investment in children, from conception to school completion.[51]

The Global Environment

The global environment influences ECD through its effects on economic and social conditions within nations. Heymann's[52] research on children and families in resource-poor countries demonstrates the importance of access to quality child care for families worldwide. Due to increased female participation in the global workforce millions of children worldwide are home alone, in informal child care (often by other children), or are brought to work where they are exposed to unsafe working conditions. The global environment is also characterized by international treaties that affirm the rights of children[53] and of women,[54] which are meant to enhance the well-being of children. In particular, General Comment No.7: Implementing Rights in Early Childhood[55] creates an opportunity to hold signatory countries responsible for the physical, social/emotional and language/cognitive development of young children.

Civil Society

Non-governmental international bodies and civil society have a role in holding countries accountable for adopting policies that positively benefit children's well-being. Within many countries civil society groups take direct action or stimulate government and community action on the social determinants of ECD. They have been instrumental in organizing strategies at the local level to provide families and children with effective delivery of ECD services; to improve the safety, cohesion and efficacy of residential environments; and to increase the capacity of local and relational communities to better the lives of children.

References

1. Siddiqi A, Irwin L, Hertzman C. *Total environment assessment model for early child development: Evidence report for the World Health Organization's Commission on the Social Determinants of Health*. Vancouver, BC: Human Early Learning Partnership (HELP); 2007.
2. Bronfenbrenner U. *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press; 1979.
3. Brooks-Gunn J, Duncan GJ, Maritato N. Poor families, poor outcomes: The well-being of children and youth. In: Duncan GJ, Brooks-Gun J, eds. *Consequences of growing up poor*. New York, NY: Russell Sage Foundation; 1997.
4. Hertzman C. The biological embedding of early experience and its effects on health in adulthood. *Annals of the New York Academy of Sciences* 2000;896:85-95.
5. Dahlgren GW, Whitehead M. *Policies and strategies to promote social equity in health*. Stockholm, Sweden: Institute of Futures Studies; 1991.
6. Heymann J, Hertzman C, Barer ML, Evans RJ, eds. *Healthier societies from analysis to action*. New York, NY: Oxford University Press; 2006.
7. Putnam R. *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster; 2000.
8. Siddiqi A, Hertzman C. Towards an epidemiological understanding of the effects of long-term institutional changes on population health: a case study of Canada versus the United States. *Social Sciences & Medicine* 2007;64(3):589-603.
9. Barker DIP. *Mothers, babies and disease later in life*. London, UK: BMJ Publishing Group; 1994.
10. Wadsworth MEJ. Health inequalities in the life course perspective. *Social Science & Medicine* 1997;44(6):859-869.
11. Boyden J, Levison D. *Children as economic and social actors in the development process*. Stockholm, Sweden: Expert Group on Development Issues; 2000. Working paper 1.
12. Irwin LG. The potential contribution of emancipatory research methodologies to the field of child health. *Nursing Inquiry* 2006;13(2):94-102.
13. Irwin LG, Johnson JL. Interviewing young children: explicating our practices and dilemmas. *Qualitative Health Research* 2005;15(6):821-831.
14. Mayall B. *Children's childhoods: Observed and experienced*. London, UK: Farmer Press; 1994.
15. Ramey CT, Ramey SL. Prevention of intellectual disabilities: early interventions to improve cognitive development. *Preventive Medicine* 1998;27(2):224-232.
16. Grantham-McGregor SM, Walker SP, Chang SM, Powell CA. Effects of early childhood supplementation with and without stimulation on later development in stunted Jamaican children. *American Journal of Clinical Nutrition* 1997;66(2):247-253.
17. United Nations Children's Fund (UNICEF). *State of the world's children 2007: Women and children: The double dividend of gender equality*. New York, NY; United Nations Children's Fund (UNICEF); 2006.
18. Shonkoff J, Philips D, eds. *From neurons to neighborhoods: The science of early childhood development*. Washington, DC: National Academy Press; 2000.
19. Anda RF, Felitti VJ, Bremner JD, Walker JD, Whitfield CH, Perry BD, Dube SR, Giles WH. The enduring effects of abuse and related adverse experiences in childhood: a convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience* 2006;256(3):174-86.
20. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine* 1998;14(4):245-58.

21. Richter L. *The importance of caregiver child interactions for the survival and healthy development of young children: A review*. Geneva, Switzerland: Department of Child and Adolescent Health and Development. World Health Organization; 2004.

22. Goelman H. Early childhood education. In: Reynolds WM, Miller GE, eds. *Educational psychology*. Hoboken, NJ: Wiley; 2003:285-332. *Handbook of psychology*; vol 7.

23. Lamb ME, Anhert L. Non-parental child care: context, quality, correlates and consequences. In: Sigel IE, Renninger KA, eds. *Child psychology in practice*. 5th Ed. New York, NY: Wiley; 1998: 73-133. Dam W, ed. *Handbook of child psychology*; vol 4.

24. NICHD Early Child Care Network. Early child care and children's development prior to school entry: results from the NICHD study of early child care. *American Educational Research Journal* 2002;39:133-164.

25. Vandell D, White B. *Child care quality: does it matter?* Madison, WI: University of Wisconsin Institute for Research of Poverty; 2000.

26. Houweling TA, Caspar AE, Looman WN, Mackenbach JP. Determinants of under-5 mortality among the poor and the rich: a cross-national analysis of 43 developing countries. *International Journal of Epidemiology* 2005;34(6):1257-1265.

27. Dunn JR, Hayes MV. Social inequality, population health, and housing: a study of two Vancouver neighbourhoods. *Social Science & Medicine* 2000;51:563-587.

28. DiPietro JA. Baby and the brain: advances in child development. *Annual Review of Public Health* 2000;21:455-471.

29. Patel V, DeSouza N, Rodrigues M. Post-natal depression and infant growth and development in low income countries: a cohort study from Goa, India. *Archives of Disease in Childhood* 2003;88:34–37.

30. Hart B, Risley TR. *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Brookes; 1995.

31. Hertzman C, Wiens M. Child development and long-term outcomes: a population health perspective and summary of successful interventions. *Social Science & Medicine* 1996;43(7):1083-1095.

32. Kawachi I, Berkman LF, eds. *Neighborhoods and health*. New York, NY: Oxford University Press; 2003.

33. Kohen DE, Brooks-Gunn J, Leventhal T, Hertzman C. Neighbourhood income and physical and social disorder in Canada: associations with young children's competencies. *Child Development* 2002;73:1844-1860.

34. Evans GW, Katrowitz E. Socioeconomic status and health: the potential role of environmental risk exposure. *Annual Review of Public Health* 2002;23:303-331.

35. James A. *Childhood identities: self and social relationships in the experience of the child*. Edinburgh, UK: Edinburgh University Press; 1993.

36. Leventhal T, Brooks-Gunn J. The neighborhoods they live in: the effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin* 2000;126(2):309-337.

37. Carpiano RM. Toward a neighborhood resource-based theory of social capital for health: Can Bourdieu and sociology help? *Social Science & Medicine* 2006;62:165-175.

38. Drukker M, Kaplan C, Schneiders J, Feron FJM, van Os J. The wider social environment and changes in self-reported quality of life in the transition from late childhood to early adolescence: A cohort study. *BMC Public Health* 2006;6(133):1-11.

39. Putnam RD. Foreword. In: Saegert S, Thompson JP, Warren MR, eds. *Social capital and poor communities*. New York, NY: Russell Sage Foundation; 2001: xv–xvi.

40. Samspon RJ, Morenoff JD, Earls F. Beyond social capital: spatial dynamics of collective efficacy for children. *American Sociological Review* 1999;64(5):633-660.

41. Carter MR, Maluccio JA. Social capital and coping with economic shocks: an analysis of stunting of South African children. *World Development* 2003;31(7):1147-1163.

42. Jencks C, Mayer SE. The social consequences of growing up in a poor neighborhood. In: Lynn LE Jr, McGeary MGH. eds. *Inner-city poverty in the United States*. Washington, CD: National Academy Press; 1990.

43. Knudsen EI, Heckman JJ, Cameron J, Shonkoff JP. Economic, neurobiological, and behavioral perspectives on building America's future workforce. *Proceedings of the National Academy of Sciences* 2006;103(27):10155-10162.

44. Carneiro PM, Heckman JJ. *Human capital policy*. Bonn, Germany: Institute for the Study of Labor; 2003. IZA discussion paper No. 821.

45. Houweling TAJ, Kunst AE, Borsboom G, Mackenbach JP. Mortality inequalities in times of economic growth: time trends in socioeconomic and regional inequalities in under 5 mortality in Indonesia, 1982-1997. *Journal of Epidemiology and Community Health* 2006;60:62-68.

46. Kershaw P, Irwin L, Trafford K, Hertzman C. *The British Columbia atlas of child development*. Vancouver, BC: Human Early Learning Partnership. Western Geographical Press; 2006. Canadian western geographical series 1203-1178; vol 40.

47. Jejeebhoy SJ, Sathar ZA. Women's autonomy in India and Pakistan: the influence of religion and region. *Population and Development Review* 2001;27(4):687-712.

48. Jejeebhoy SJ. *Women's education, autonomy, and reproductive behaviour: Experience from developing countries*. Oxford, UK: Clarendon Press; 1995.

49. United Nations Educational, Scientific and Cultural Organization (UNESCO). *EFA Global Monitoring Report: Strong foundations: Early childhood care and education*. Paris, France: UNESCO; 2006.

50. Kamerman SB, Neuman M, Waldfogel J, Brooks-Gunn J. *Social policies, family types, and child outcomes in selected OECD countries*. Paris, France: OECD; 2003. OECD Social, Employment, and Migration Working Papers 6.

51. Siddiqi A, Hertzman C. Economic growth, income equality and population health among the Asian Tigers. *International Journal of Health Services* 2001;31:323-34.

52. Heymann J. *Forgotten families: ending the growing confrontation children and working parents in the global economy*. New York, NY: Oxford University Press; 2006.

53. United Nations. Office of the United Nations High Commission for Human Rights (CRC). *Convention on the Rights of the Child*. Geneva, Switzerland: United Nations. Available at: http://www2.ohchr.org/english/law/crc.htm. Accessed October 6, 2010.

54. United Nations. Office of the United Nations High Commission for Human Rights (CRC). *Convention on the elimination of all forms of discrimination against women (CEDAW)*. Geneva, Switzerland: United Nations. Available at: http://www2.ohchr.org/english/law/cedaw.htm. Accessed October 6, 2010.

55. United Nations. Office of the United Nations High Commission for Human Rights Committee on the Rights of the Child (CRC). *General Comment No. 7: Implementing Child Rights in early childhood*. Geneva, Switzerland: United Nations; 2005.

Young Children's Rights

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The field of children's rights has long been fraught with both controversy and confusion. The conundrum arises from the fact that even self-described child advocates typically fail to reach consensus about the scope of children's rights.[1,2] Some are child-savers committed to societal engagement in children's protection. Typically, they focus on children's vulnerability and dependency, and they often set a low threshold for state intervention in the lives of children and families, whether for protection of their interests or assurance of the requisites for healthy development. They commonly believe that children's best interests demand their protection from themselves, not just from environments that are inadequate or even harmful. Such an approach is likely to be applied with particular vigour in regard to young children, who may be presumed to be vulnerable to even brief disruptions of their care or safety.[3,4]

By contrast, so-called kiddie libbers place primary emphasis on protection of children's autonomy and privacy. Kiddie libbers are usually most concerned with the interests of older children and adolescents, for whom they are especially salient.[1] Moreover, kiddie libbers are prone to see even young children as generally competent, often self-directed actors– provided that adults do not get in their way. For example, some believe that toddlers should be able to determine when their diaper is to be changed.[5,6] Showing respect for children in more far-reaching ways, some child care programs (e.g., those associated with the models prevalent in the Nordic countries and Reggio Emilia, Italy) apply developmentally-relevant democratic principles to their operation (e.g., respect for diversity; support for curiosity, uncertainty and subjectivity.[7,8]) Such matters may rise to problems of rights when care is administered in a program that is managed, financed or regulated by government.

The Enactment and Implementation of the Convention on the Rights of the Child

Notwithstanding the continuing disagreements within the field, the long-standing fractionation and related conceptual incoherence of the child advocacy movement were substantially reduced– and the movement's influence was substantially increased– with the promulgation of the

Convention of the Rights of the Child (CRC).[9] After a 10-year drafting period, the CRC was unanimously adopted by the UN General Assembly, subsequently signed by all national governments (an action that signals an intent to work toward ratification and that pledges not to adopt measures contrary to the treaty), and then adopted as a matter of law through ratification, accession or succession by all but two consensually recognized nation-states (Somalia and the United States). Optional protocols to the CRC on children in armed conflict and on sexual exploitation of children[10] have also been widely ratified (respectively, by 139 and 142 nations). The United States but not Somalia, which has no widely recognized sovereign government, has ratified the Optional Protocols.

Hence, the Convention of the Rights of the Child was adopted far more quickly and broadly than any previous human rights treaty. Accordingly, every member of the United Nations except Somalia reports to the UN Committee on the Rights of the Child, an international panel of experts elected by the states parties to oversee the implementation of the CRC. Although the Committee does not have the authority to receive complaints from private parties, an additional Optional Protocol that would enable such consideration is currently under consideration.[11,12]

Of course, the CRC did not eliminate ideological differences among child advocates. However, it did greatly attenuate them by bridging protective and liberationist impulses through a focus on dignity, a word that appears eight times in the CRC.[13] For example, if children are to be taken seriously as people, they should have the opportunity to be heard in the context of community life. Not only should they have access to a forum (freedom of assembly; freedom of expression), but they also should have opportunities for media that provide them with information needed to form their opinions, education that enables them to articulate their views, and protection that prevents them from harm when others disagree with their own opinions or their parents' positions. Especially for young people, the whole package is necessary if children are to be treated as productive members of the community. It means being treated as people who are "somebody." Indeed, it means having relationships with parents and other important adults who also are "somebody"– models for the child who themselves have the respect and social support of the community and who thereby demonstrate and teach that people can make a difference.

Put into a more psychological framework, belonging to a community can be understood as a two-way process:

It is about a child's needs and rights being recognized and met, being protected and provided for, and feeling cared for, respected and included. It is also about having opportunities to express personal agency and creativity, feeling able to contribute, love and care for others, to take on responsibilities and fulfil roles, to identify with personal and community activities, and to share in collective celebrations.[14 (p.3)]

Such recognition is fundamental to the child's personality, as the term is used in international human rights law.[15] The child's right to personality is meaningful from the moment of birth. Thus, for example, the CRC requires states parties to register children at birth, ensure that they have a name and nationality, and protect and support the family relationships that ensure their survival and healthy development. In effect, the CRC requires the development of national and international structures and processes to ensure that children are noticed and cared for, both individually and collectively, as people worthy of respect. Such recognition serves ultimately as the foundation for children's development of a sense of identity[14] and their participation as productive citizens contributing to the well-being of the community and enjoying its concern for them as human beings.[8]

That such philosophical coherence can be found in the CRC is truly remarkable, because it represents, in effect, the least common denominator.[16] The working group that drafted the CRC consisted of representatives of interested national governments, international agencies (e.g., UNICEF), and a coalition of international non-governmental organizations. For language to remain in the draft of the CRC, it had to be accepted by group consensus. Hence, every participant effectively had veto power.

Ironically, the coherence that emerged resulted from both the Cold War and the new world order that succeeded it.[a] Accordingly, in the early years of the drafting process, the West (especially the U.S. during the Reagan and Bush administrations) adamantly demanded recognition of civil and political rights for children (e.g., free expression)– a stance that now, in a double irony, draws conservative opposition to efforts to achieve U.S. ratification. At the same time, the East (especially the former Soviet Union) equally adamantly demanded inclusion of social, cultural and economic rights (entitlements to care and protection). Toward the end of the drafting process, with the end of the Cold War, there was openness to a fresh approach that would integrate the heretofore warring philosophies. The result was a commitment to democratic values grounded in global recognition of the fundamental concerns of people, especially those in historically disadvantaged groups.

It is noteworthy that the drafting group was convened and chaired by then-Communist Poland in observance of the International Year of the Child in 1979. By the time that the CRC was enacted by the U.N. General Assembly in 1989, a new staunchly anti-Communist regime was emerging in Poland.

In that context, more than the initial working group could have imagined, the CRC elevated children's rights on political agendas around the world.[17] The CRC is the embodiment of "a striking [and new] worldwide consensus...that children are indeed persons, that they are entitled a fortiori to respect and protection, and that nation-states should ensure the fulfillment of such rights with the force of law."[13(p.66)]

Of course, the near-universality of the CRC's adoption does not mean that its practical significance is on the same scale. Even among the most rights-oriented countries, egregious practices sometimes persist. For example, more than 4,000 British preschoolers (aged 5 and under) are suspended each year for misbehaviour.[5,18] Much more pervasively, settings for children often do not provide means of listening to them respectfully.[15,19,20,21] Too often, guided participation[19,22] of young children gives way to the sheer assertion of the physical power of adult authorities, with the result that hundreds of millions of young children are subjected to violence each year.[17] The very survival of many young children is still in question, especially but by no means exclusively in cases of national emergencies[17] (see Save the Children,[23] discussing the use of child-centered spaces to ensure the development of places, both literally and figuratively, for children in their communities during times of disaster).

General Comment No. 7

Ambivalence in the acceptance and implementation of the CRC has been particularly pronounced in regard to young children. In effect, the question of children's status as people is most unsettled in regard to young children. As an effort to reduce this perceived ambiguity, the U.N. Committee[24,25] issued a 20-page General Comment (GC-7) on Implementing Child Rights in Early Childhood. (In U.N.-speak, a general comment is an advisory opinion rendered by an authoritative body about the meaning of a provision in an international treaty.)

Doek and colleagues identified four ideas of "special significance"[26(p. 33)] that were embedded in GC-7. First, the U.N. Committee[24,25] unequivocally held that even "the very youngest children" must be "respected as persons in their own right".[26(p. 3)] Drawing on contemporary developmental

theory and research that indicate that infants are not merely passive recipients of sensory stimuli, the U.N. Committee grounded its moral assertion on the empirical premise that young children are “active members of families, communities and societies, with their own concerns, interests and points of view”.[26(p. 3)]

Second, as Doek and colleagues pointed out,the U.N. Committee[24,25] drew attention to “the fact that the young child has the ability to communicate views”.[26(p. 33)] In Doek et al.’s words,[26] the Committee emphasized that pre-verbal children “use gestures and facial expressions, laughter and tears to express messages about their interests and wishes, to share their joy and excitement and to communicate their fears and worries”.[26(p. 33)]

At least implicitly, by drawing this conclusion, the Committee made clear that the right to participate applies even to very young children. The CRC requires states parties to assure that any “child who is capable of forming his or her own views [has] the right to express those views freely” (art. 12, § 1, emphasis added).[9] The standard for competence in this instance is quite low– simply an ability to express a preference.[27,28]

Applying to “all matters affecting the child” (art. 12, § 1),[9] the scope of this right is broad indeed. For example, it appears to apply to all clinicians in government-managed pediatric health care or to teachers in government-financed child care centers. In effect, professionals in early childhood programs and their assistants have an obligation to have some level of conversation with any child whom they are serving– to form the rudiments of a partnership, not simply an authority relationship.

This principle does not mean that young children’s views about matters affecting them, whether large (their custody in divorce) or small (the scheduling of naptime today), will be dispositive. To the contrary, the CRC specifies that “the views of the child…[shall be] given due weight in accordance with the age and maturity of the child” (art. 12, § 1).[9] Note, however, that the moderating factors of “age and maturity” apply to the question of how a child’s views shall be considered, not whether they shall be heard. Hence, Article 12, as suggested by its plain language and as interpreted by the U.N. Committee, does presume a revolution in the everyday practices of work with (not on) children.

In that regard, the third central idea in the U. N. Committee’s[24,25] analysis was that young children need nearly constant “support, communication, shared understanding and guidance”

provided within a broad array of programs for their care, education, play and protection.[26(p.33)] Such assistance cannot occur "if the children do not receive sufficient attention from caring persons, if their physical needs are not met, if their cognitive capacities are not challenged, if their emotional security is not ensured, or if they are not integrated within a network of social relationships..., the more so if their rights are violated through humiliation, abuse or exploitation." [26(p.33)] To such ends, the U.N. Committee[24,25] emphasized the need for public investment in services for young children, not just school-aged children, and in related data collection, research and training for parents and professionals involved in young children's care and education. As one senior aid worker summarized, "We need to shift the perception of early childhood care and development from being viewed as a luxury item".[29(p. 154)]

Fourth, the U.N. Committee[24,25] recognized that such resources would probably not be raised and effectively administered without "a framework of policies, laws, programmes and other measures,"[26(p. 34)] including independent monitoring and special plans of action.[24,25(p. 3)] For example, implementation of children's right to participate in decisions affecting them might occur if professional licensing standards reflected a norm of conversations with child-clients.[19] Thus, a Child Participation Policy Act might directly state the links of the specific policy to the CRC[9] and the values that it represents, and it might provide multiple ways in which the authority and resources of the government would be used to facilitate the implementation of the policy. Similarly, a national or state (provincial) policy on child care might address how the CRC[9] would be used to guide not only the availability of child care but also the means by which it is provided.[30] For example, parents' wealth or ethnicity should not affect their children's access to child care, and affirmative efforts should be made to engage parents in their children's care.

With numerous provisions clearly targeted toward, or relevant to, early childhood,[31] the CRC[9] itself can indeed serve as the framework on which particular policies (e.g., encouragement of safe, healthy and developmental play) can be built. A transformation of thought and action at the level contemplated by the drafters of the CRC[9] will not occur without a carefully articulated, multi-faceted, multi-sector policy. Such a transformation must also rest on moral passion, behavioural commitment, and empirical knowledge – the recognition of young children as people, the investment of money and energy in the fulfillment of that vision, and the creation of knowledge needed to effect such change.

References

1. Melton, G. B. (1983). *Child advocates: Psychological issues and interventions*. New York: Plenum.

2. Ruck, M. D., & Horn, S. S. (Eds.). (2008). Young people's perspectives on the rights of the child: Implications for theory, research, and practice [Special issue]. *Journal of Social Issues*, 64, 685-943.
3. Goldstein, J., Freud, A., & Solnit, A. J. (1973). *Beyond the best interests of the child*. New York: Free Press.
4. Goldstein, J., Freud, A., & Solnit, A. J. (1979). *Before the best interests of the child*. New York: Free Press.
5. George, S. (2009). *Too young for respect? Realising respect for young children in their everyday environments: A cross-cultural analysis* (Working Paper in Early Childhood No. 54). The Hague, The Netherlands: Bernard van Leer Foundation.
6. Priebe, M. (2008). Living democracy in day nurseries. Part 3. Autonomy and independence: Diaper changing and bathroom routines. *Betrifft Kinder* 11, 23-25.
7. Moss, P. (2007). Bringing politics into the nursery: Early childhood education as a democratic practice. Working Papers in Early Childhood Development No. 43. The Hague, The Netherlands: Bernard van Leer Foundation.
8. Melton, G. B. (2002). Democratization and children's lives. In N. H. Kaufman & I. Rizzini (Eds.), *Globalization and children: Exploring potentials for enhancing opportunities in the lives of children and youth* (pp. 47-67). New York, NY: Kluwer Academic/Plenum.
9. Convention on the Rights of the Child, G.A. Res. 44/25, annex, U.N. GAOR, 44th Sess., Supp. No. 49, at 167, U.N. Doc. A/44/49 (1989).
10. Optional protocols to Convention on the Rights of the Child on the involvement of children in armed conflict and on the sale of children, child prostitution and child pornography, G.A. Res. 54/263 (2000).
11. Child Rights Information Network. (2010). Campaign for a CRC complaints mechanism. Available at http://www.crin.org/law/crc_complaints/.
12. U.N. Committee on the Rights of the Child. (2010, October 13). Comments by the Committee on the Rights of the Child on the proposal for a draft optional protocol prepared by the chairperson-rapporteur of the open-ended Working Group on an Optional Protocol to the Convention on the Rights of the Child to provide a communications procedure (U.N. Doc. A/HRC/WG.7/2/3). Statement prepared for consideration by the U.N. General Assembly, Human Rights Council, Working Group on an Optional Protocol to the Convention on the Rights of the Child.
13. Melton, G. B. (1991). Socialization in the global community: Respect for the dignity of children. *American Psychologist* 46, 66-71.
14. Woodhead, M., & Brooker, L. (2008). A sense of belonging. *Early Childhood Matters* No. 111, 3-17. The Hague, The Netherlands: Bernard van Leer Foundation
15. Melton, G. B. (2005b). Treating children like people: A framework for research and advocacy. *Journal of Clinical Child and Adolescent Psychology* 34, 646-657.
16. Johnson, D. (1992). Cultural and regional pluralism in the drafting of the U.N. Convention on the Rights of the Child. In M. D. A. Freeman & P. E. Veerman (Eds.), *The ideologies of children's rights* (pp. 95-114). Dordrecht, Netherlands: Martinus Nijhoff.
17. United Nations Children's Fund (UNICEF). (2009). *The state of the world's children: Special edition. Celebrating 20 years of the Convention on the Rights of the Child*. New York, NY; United Nations Children's Fund.
18. Eurochild. (2008). European Community programme for employment and social solidarity. Brussels, Belgium: European Commission.
19. Melton, G. B. (1999). Parents and children: Legal reform to facilitate children's participation. *American Psychologist* 54, 941-951.
20. Melton, G. B. (2005a). Building humane environments respectful of children: The significance of the Convention on the Rights of the Child. *American Psychologist* 80, 918-926.

21. Melton, G. B. (2006, Sept). Background for a General Comment on the right to participate: Article 12 and related provisions of the Convention on the Rights of the Child (Report prepared under contract to UNICEF for submission to the U.N. Committee on the Rights of the Child). Clemson, SC: Clemson University, Institute on Family and Neighborhood Life.
22. Rogoff, B., Mistry, J., Goncu, A., & Mosier, C. (1993). Guided participation in cultural activity by toddlers and caregivers. *Monographs of the Society for Research in Child Development* 58, 1-179.
23. Save the Children. (2009). Supporting children's rights in an emergency. *Early Childhood Matters,* No 113, 18-23. The Hague, The Netherlands: Bernard van Leer Foundation
24. United Nations Committee on the Rights of the Child. (2005, September). General Comment No. 7: Implementing child rights in early childhood. Published in 2006 U.N. Doc. No. CRC/C/GC/7/Rev.1
25. U.N. Committee on the Rights of the Child, U.N. Children's Fund, & Bernard van Leer Foundation (U.N. Committee/UNICEF/van Leer). (2006). *Implementing child rights in early childhood: A guide to General Comment 7.* The Hague, The Netherlands: Bernard van Leer Foundation.
26. Doek, J. E., Krappmann, L. F., & Lee, Y. (2006). Introduction to the General Comment. In U.N. Committee on the Rights of the Child, U.N. Children's Fund, & Bernard van Leer Foundation (Eds.). *A guide to General Comment 7: Implementing child rights in early childhood* (pp. 31-34). The Hague, Netherlands: Bernard van Leer Foundation.
27. Weithorn, L. A. (1983). Involving children in decisions affecting their own welfare. In G. B. Melton, G. P. Koocher, & M. J. Saks (Eds.), *Children's competence to consent* (pp. 235-260). New York, NY: Plenum.
28. Weithorn, L. A., & Campbell, S. B. (1982). The competency of children and adolescents to make informed treatment decisions. *Child Development* 53, 1589-1598.
29. Arnold, C. (2006). Positioning early childhood development in the 21st century. In U.N. Committee on the Rights of the Child, U.N. Children's Fund, & Bernard van Leer Foundation (Eds.), *A guide to General Comment 7: Implementing child rights in early childhood* (pp. 154-158). The Hague, Netherlands: Bernard van Leer Foundation.
30. Small, M. A., Melton, G. B., Olson, K. A., & Tomkins, A. J. (2002). Creating caring communities: The need for structural change. In G. B. Melton, R. A. Thompson, & M. A. Small (Eds.), *Toward a child-centered, neighborhood-based child protection system* (pp. 263-279). Westport, CT: Praeger.
31. Langhorne, P. (2006). Our children are the future. In U.N. Committee on the Rights of the Child, U.N. Children's Fund, & Bernard van Leer Foundation (Eds.), *A guide to General Comment 7: Implementing child rights in early childhood* (pp. 20-24). The Hague, Netherlands: Bernard van Leer Foundation.

Note:

[a] In international bodies, to connote equality of status, delegates typically sit in the alphabetical order of their country names (usually in English; sometimes rotating between English and French). I once heard Michael Longford, who was the United Kingdom's representative during much of the drafting process, talk with some bemusement about the experience of perennially sitting between the delegates of the Union of Soviet Socialist Republics and the United States of America.