Towards an integrated understanding of the child

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Throughout the world there is a growing concern that children are being exposed to a range of pressures that may be damaging to their long-term health and wellbeing – and hence, as children grow up to be adults, the wellbeing and sustainability of larger society. Questions are being asked about the need for these pressures, what they really serve and whether they are conducive to fulfilling and meaningful lives. The Save Childhood Movement was established to provide a forum for these concerns and to encourage and facilitate multi-disciplinary collaboration in the search to better understand the psychological, social and neuro-scientific foundations of human wellbeing, particularly in the period pre-birth to eight (referred to in this document as ‘the early years’). This is the first of a series of papers that we are publishing to facilitate this process.

Starting at the beginning

The beginning actually starts pre-birth and we now know, through advances in epigenetic research, that genes are vulnerable to modification in response to toxic stress, nutritional problems and other negative influences. This underscores the importance of providing supportive and nurturing experiences for young children in the earliest years, when physical and neurological development is most rapid. It is therefore in society's interest to strengthen the foundations of healthy body and brain architecture in all young children to maximize the return on future investments in education, health, and societal wellbeing. It is also in society’s interest to ensure that we are nurturing the child's creative spirit.

The role of nurture

To a certain extent our development is programmed by the genetic codes we inherit, but human beings are primarily social animals and need nurture in order to thrive. Just as a plant needs water and light, so a child needs the right environmental conditions in which to grow and this includes loving, consistent and supportive relationships with key others. It matters to the child to feel special and unconditionally loved and this is particularly so within its first early relationships. We know that strong early attachment helps children develop the capacity for secure, empathic, peaceful, and enduring relationships that follow them into adulthood. The parent-child relationship is critical for healthy emotional development and the impact of negative early attachment experiences can be carried with us through our lifetimes.

But it is not just parental relationships that matter. Children need the company of emotionally mature and empathic adults that understand sensory as well as verbal language. This is particularly so for their first early carers and teachers who have the responsibility of literally shaping the worlds and experiences that children are exposed to and that they will then absorb into their evolving personalities. Developmentally inappropriate and negative experiences at this stage can profoundly impact the child’s desire to continue exploring learning challenges within the environment – and can compromise his or her intrinsic sense of self-worth.

1 Harvard Centre on the Developing Child http://developingchild.harvard.edu
2 Baby Bonds, Parenting, attachment and a secure base for children, Sutton Trust, 2014
3 Attachment Parenting International http://www.attachmentparenting.org)
Pattern and meaning-making

From the moment they are born children have certain innate needs that they will seek to fulfil in order to feel whole and to do so they need to interpret, communicate and seek to make sense of their experiences. The nature of their genetic guidance means that they do not do this in a haphazard fashion, but that they instead process information in a very systematic manner – seeking out particular patterns and signals from the environment. Thus over the first years of their development children worldwide exhibit the same initial impulses and sensitivities.

Neural circuits are constructed and re-enforced by regular use with circuits and, as the infant mental health expert Richard Balbernie says, ‘neurons that fire together wire together’ 4 so that positive or negative emotional experiences are then neurologically related to particular memories. The categorial nature of thought underlies its orderly and rule-bound nature. There seems, however, to be some form of pre-programmed sensitivity to certain elements within the environment. For example, newborn babies throughout the world demonstrate identical patterns of seeking out faces in preference to any other stimuli, and this happens within half an hour of birth. 5 What is more there seem to be critical periods of time when this hyper-sensitivity of the brain to certain experiences is at its peak and the neurological connections in specific areas can be built up at a faster rate than at any other time of life. These ‘sensitive periods’ have been recognised by numerous experts, both past and current. 6

Playfulness

Play shapes children’s brains, strengthens their competencies, and allows them to spontaneously experiment with their learning and emotions without worrying about pre-determined outcomes. It is fundamental to human creativity and wellbeing and is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child (Article 31). It is vital for the enjoyment of childhood as well as children’s social, emotional, intellectual and physical development.

Over the last few decades a variety of factors that have significantly reduced children’s ability to play, including changes in family structure, a more hurried lifestyle, a more risk-averse society and the increasing value applied to adult-led, rather than child-initiated, learning activities. This is serious as it is playfulness that underpins human creativity and innovation – capacities that are essential to a 21st century world.

Multiple intelligences and learning strategies

Intelligence is an indisputable factor in making us human, for it is intelligence that helps to make us ‘self’ conscious and that underpins our ability to change or modify the structure of our cognitive functioning in response to the changing demands of the external environment. Our views on the genetically pre-determined nature of intelligence have, however, now moved from it being a single, general capacity that every human possesses to a greater or lesser extent, to it instead being a much richer blend of capacities that are both genetically and environmentally predicted. According to the psychologist Howard Gardner these include: musical–rhythmic, visual–spatial, verbal–linguistic, logical–mathematical, bodily–kinesthetic, interpersonal, intrapersonal, and naturalistic. 7

On top of this we know that children develop different learning strategies and ways of processing environmental information. Depending on their unique neurology they may prioritise some forms of representation (i.e. visual, auditory, kinesthetic, gustatory, olfactory) more than others and this may then have a significant impact of how successfully they interpret information, especially within teaching contexts. What one child understands easily may therefore be a challenge to another.

We are designed to be dynamic natural learners and to each have a unique set of environmentally modifiable competences. The task of cultures should therefore be to find ways of supporting the innate intelligences and strategies of young children so that every child feels that he or she matters and that their particular competencies have value. To prioritise some skills, such as literacy and numeracy, over others, especially in the foundational early years, risks undermining the complexity of human learning and the sense of self-worth of all those children whose capacities are successfully developing in other areas.

The four basic aspects

The fulfilment of needs is fundamental to human wellbeing and these encompass the Physical, Emotional, Mental and Spiritual aspects of what it is to be human. As primarily social beings children develop both internal and external motivations that help them to fulfil their needs and to form the mindsets and dispositions that subsequently shape their personalities. We cannot help but be influenced by the worlds of others and, depending on our experiences we will develop a number of ways of seeing the world that encompass both our internal perspectives and those that relate to the external collective. We each create our own map of our world that we then use to navigate our ongoing experiences.

We therefore have both an inner and an outer life that needs to be balanced and integrated in order for us to feel whole – and wholeness is an essential prerequisite for wellbeing. The psychologist Ken Wilber mapped this with his own, now widely used, four quadrants model that aimed to show that multiple viewpoints are inherent in nature and clearly expressed in human diversity. The process is fundamentally creative and is a developmental journey of ongoing adaptation and capacity-building.

Intrinsic/extrinsic motivation

Our motivations therefore manifest though human feelings and depending on whether they are intrinsic (linked to genetics/natural laws and principles) or extrinsic (linked to learnt experience and feedback from the environment) they will influence the subsequent development of the child’s values, beliefs and behaviours in the world.

The four aspects of healthy human systems can be further broken down into seven forms of motivation that help us develop as fully balanced human beings:

**PHYSICAL:** Survival: Health, Safety, Security

**EMOTIONAL:** Relationship: Attachment and Nurture
Self-Esteem: Positive Feedback, Mastery and Achievement

**MENTAL:** Pattern and Meaning-Making, Purpose, Self Expression and Self-Regulation

**SPIRITUAL:** Internal Cohesion, Engagement and Flow
External Cohesion – Empathy and Co-operation
Ongoing Learning and Growth - Connection to the Whole

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9 Barrett Values Centre http://www.valuescentre.com
We know that children have an innate motivation to explore the environment, and that the culture in which they find themselves then has a great influence on their development. The young child's initial formation of a valuing system is a flexible process with the locus of evaluation found firmly within the self. He is intrinsically led and will seek out from the environment those experiences that best fulfil his basic needs and that satisfy his natural curiosity and desire for growth. There is a kind of inner guidance at play with self-worth deriving from the fulfilment of constantly responding to higher levels of challenge.

Over time, however, the child learns that things that feel right or good to him may result in emotionally negative responses from others and he will consequently seek to address this by gradually adopting external value systems, and particularly those of his primary carers. These adopted value systems will gradually become part of the child's personality even though they may go against his own innate feelings and experiences – and once the source of evaluation lies outside of the self the personality will aim to seek the approval of others in order to maintain self-worth. The way we look, the grades we get and external status become the primary means by which we then feel good (or bad) about ourselves.

It is clear, therefore, that certain needs are innate, rather than learned, and that these needs cross gender, time and culture. The widely supported Self Determination Theory (SDT) talks of 'inherent growth tendencies' with three innate psychological needs – autonomy, relatedness and competence that are reflected in the physical, emotional and mental levels above.

We cannot, however, ignore the vital integrative function of self realisation/actualisation that lifts optimal functioning to incorporate higher-level purpose and meaning to human lives. In other words, to be truly fulfilled, we need to experience ourselves as not only self-serving, but also intrinsically linked to the growth needs and purpose of the larger whole.

Such understanding is reflected in religions worldwide and has been widely explored through humanistic and transpersonal psychology. When we are first born we have no sense of separation. Over time, however, we create the personalities that we need to relate to others whilst maintaining our sense of unique self, but we also maintain a fundamental need for the original deeper and more meaningful connection. The recent growing interest in the value and impact of meditation and mindfulness is a reflection of this need and allows us, in a non-judgmental way, to integrate an awareness of our feelings, thoughts and emotions within the context of an underlying wholeness and interconnectivity. In this way we come to understand that we may be more than the programming of our bodies and minds.
The child as embedded in the environment

We cannot, therefore, see the child in isolation from his environment and we need to invest more in understanding the complex systems which impact on ongoing development. There are social, environmental and economic determinants of health and wellbeing and, as identified by the Canadian Human Early Learning Partnership (HELP), to fully understand the impact of such systems we need to explore:

- **Neurogenomics and Epigenetics** to inform our understanding of the biology of development, and explore the processes and structures that influence a child's development over time.
- **Developmental Trajectories** to enable us to build a rich database of child development information from all related sources that help us better understand children's development over time and informs policy and practice.
- **Policy and Program Monitoring** to develop evidence-based program and policy recommendations that are consistent with our understanding of the science of early development and that address high levels of child vulnerability.

This need to see the child as nested within larger systems was identified by Urie Bronfenbrenner in his work on Ecological Systems Theory and is being increasingly acknowledged by policymakers.

Concentration and flow

We know that when a child carries out an activity purely for the fulfilment that he experiences in the learning process itself he increases his contentment, self-confidence and general sense of being in harmony with the world. Children seek out meaningful work, demand responsibility and are capable of extraordinary concentration and creativity if left to their own devices in a supportive environment. What matters is not so much what they are doing, but how they perceive and interpret the activity. Researchers into intrinsic motivation have discovered an underlying similarity that is common to all intrinsically rewarding activities: they all give the participants a sense of discovery, exploration and problem solution. They also appear to need no goals or rewards external to the activity itself.

In Chicago Professor Csikzentmihalyi has spent many years studying states of optimal experience in adults- those times when they report feelings of intense concentration and deep enjoyment - and has showed that what makes experience genuinely satisfying is the state of consciousness which he calls 'flow'. Flow occurs when the experience of learning becomes its own reward. In the Flow state the achievement of goals is no longer a priority. Rather, the fact that one is not working to achieve specific goals allows the individual to escape the confines of boredom or anxiety and to fully enjoy the experience for itself. It seems that in Flow the individual can fully utilise those physical and intellectual skills that he has developed without the emotional barrier of the self-construct. The experience itself becomes immensely fulfilling, but one has to be careful not to always equate enjoyment with simple pleasure, for many flow activities are, to all intensive purposes, immensely complex, time-consuming and even frustrating. What we are really looking at is the pleasurable sensation that an organism experiences when it is functioning according to the limits of its physical and sensory potential.

14 Katz, L. Professor of Early Childhood Education. University of Illinois. BAEC Conference. Sept 95.5
The locus of control

Children, therefore, are active learners in their own right. They do not simply passively absorb the strategies of the adults around them, but rather they strive to be the causal agents in their own environments. There are gaps in the child’s understanding that resemble missing pieces of a puzzle and it is these gaps that spur the child on. Key developmental educators such as Piaget, Montessori, Steiner and Malaguzi all believed that the child himself would reveal what experiences it needed to move forward and that there were inherent dangers in attempts by others to accelerate development. By giving children external assistance and direction we encourage them to depend on others to know what and how to think and we encourage dependency rather than autonomy. There must, therefore, be a very fine balance achieved between the advantages of instruction and the very real dangers of outside assistance undermining the child’s independent intuitive thinking. Adult-direction and scaffolding definitely has its place, but to maximize development in the early years this must be highly sensitive to the developmental readiness/biological maturity of the child.

It seems that one of the most important ways to help children think and learn is to allow them access to a wide range of interesting activities and then to free them from the control of external expectations, rewards or punishments. Under instruction children may well learn the expected knowledge and demonstrate the skills, but, as made clear by the educator Lilian Katz, they may do so ‘at the expense of the disposition to use them’[15]. If learning is to be about the excitement of discovering something new, rather than a function of memory children will tend to be rewarded by the joy of the discovery itself. Classroom reward structures tend to implicate the children's self worth in their achievements, a problem that has been recognised by many researchers in the field[16]. Providing the correct degree of structure, however, seems essential for the child to make sense of the environment and to provide choices that lie within the ability of the chooser. Too many choices or too few could depress motivation and subsequent achievement.

A significant locus of control must, therefore, lie with the child and is the over-riding factor in creating a successful learning environment. To be given control over one's own actions, to be a decision maker, rather than one who is at the mercy of others, these are fundamental rights for all of us if we want to live creative, fulfilling lives. Michael Rutter in his work at the Maudsley Hospital emphasized the vital importance of this in his work with his adult patients[17]. Sir Christopher Ball also examined the differences between 'mastery' and 'helpless' children and the difference of performance in children who were directed by learning goals rather than performance goals[18] and in recent years the Canadian psychologist Carol Dweck has looked at the enormous differences between the development of fixed and growth mindsets[19]. Truly successful education lies in providing supportive environments where adults can share knowledge and understanding without compromising the child's innate need to seek his own questions and answers and respond to an authentic 'reaching out from within'.

Classrooms, by their very nature, express the values, preoccupations and fears found in the culture as a whole. The danger is that instead of us freeing children to become truly independent, creative learners, we must, by nature of our own conditioning, bind them to primarily fit the demands of the culture. They are clearly not all born the same. There are certain indisputable abilities that some have and others do not. Whether these abilities are genetically determined or are the result of environmental factors is something that has been endlessly debated, but we now know that the brain is not imprisoned by genes, that thought can be modified through its interaction with the environment and that intelligence is the result of a dynamic, synergistic co-operation of various parts of the brain[20]. We have a responsibility to honour and support the natural developmental capacities of every child, to make every child feel their own thoughts, skills and abilities matter and to address any system that might compromise them fulfilling their true potential.

19 Dweck, Carol, http://mindsetonline.com
Learning v education

Learning is therefore something that we are all programmed to do – even before birth. We cannot help but absorb experiences from the environment and to then try to categorise and make sense of them. In this way we are natural meaning-makers. We will seek out from the environment those experiences that best enable us to attain the sense of flow that we get from balancing our unique understanding, skills and abilities with the challenges of ever more complex and abstract problems. For young humans creative play provides the perfect way to do this, but we need adults to ensure that the environment can provide us with the necessary levels of challenge to meet our learning needs and expectations. Learning is innate and something that is a lifelong process.

Education is all about the knowledge, wisdom and skills that we need to effectively participate in the cultures within which we live. It incorporates the moral and spiritual guidelines of the culture and prepares us to be effective members of the workforce. We want to belong and to feel valued and we will try to adopt the value and belief systems that enable us to achieve this - even if it goes against our own developmental needs. The problem with many traditional education systems is that they have not been sufficiently responsive to the extraordinary developments in our understanding of child development and have continued to prioritise measurable targets and outcomes, without balancing these with child mental and emotional health and wellbeing. They have also undervalued the extraordinary level and complexity of children's innate learning abilities. All too often learning has been seen to only have real value, or even only to begin, after children start school.

“What we emphasise in education is generally what we get. When we emphasise achievement above all else, then we are likely to produce achievement above all else. High achievement is desirable. But at what cost?

When education becomes focussed on production - namely, evidence of demonstrable achievement, then we have lost what it means to be educated...

Teaching and learning are not just about achievement or quality-assured products. They are about care, compassion, love, hope, joy, passion, grace, relationship, and more ... They are about people and how we nurture and are nurtured on our learning journeys.”

Colin Gibb - 2009 article for Exchange Magazine
Readiness

Developmental maturity is critical for successful learning. We know that in the early years maturation of the pathways involved in control of the body, particularly those relating to balance, posture and proprioception provide the basis for subsequent control of coordination, oculo-motor functioning and visual-perception. In other words young children really need to experience physical movement – and lots of it. Children whose physical skills are under-developed in the pre-school years need more time and opportunity to develop these skills through free and structured play before reaching a stage of “readiness” for sedentary and fine motor tasks such as reading, writing and numeracy. This is particularly so for premature babies and summerborn children who need the biological time to catch up with their peers.

We also know that left and right hemisphere development is prodigious during the early years and that the nature and quality of the brain’s developing architecture is determined by which circuits are reinforced and which are pruned through lack of use. Sensory pathways are the first to develop, followed by early language skills and higher cognitive functions. Connections proliferate and prune in a prescribed order; the timing is determined genetically but experiences affect whether the circuits are strong or weak. The brain is never a blank slate – every new competency is built upon competencies that came before. You cannot force the process, but you can introduce stress factors that inhibit healthy connections. If the brain’s architecture does not form as expected it can lead to disparities in learning, behaviour and subsequent wellbeing.

The spirit of the child

The core characteristics of childhood are curiosity, playfulness, wonder and joy and these draw children to steadily connect with and explore the environment whilst balancing the needs of their inner and outer worlds. External capacities and accomplishments must therefore always be balanced with the internal need for personal meaning-making, connection and flow. Systems that focus only on external results are ignoring the vital importance of internal processes and undermine the child’s sense of wholeness. Feeling whole is a biological and psychological necessity for the child as he develops his sense of self and grows into adulthood. It lies at the heart of human wellbeing. The structure of values, beliefs and attitudes that we develop in the early years create the strong and permanent roots that will underpin our whole lives.

21 Sally Goddard-Blythe, Developmental Readiness – the Foundation for Success, OpenEYE seminar, 2008
22 Harvard Centre on the Developing Child, Core Concepts in the Science of Early Childhood Development
Societal wellbeing – the child as foundation

Children become the adults of the future and we know that getting things right in the early years really matters for societal wellbeing. There are significant economic arguments supporting this fact\(^\text{23}\), but, more importantly, the world needs adults who are not only responsive, quick-thinking, resilient, risk-taking and productive, but that are also caring and empathic people. Across the world there is consensus that educating for sustainability should begin very early in life. It is in the early childhood period that children develop the physical, emotional, intellectual, psychological and social foundations for lifelong learning together with the values, attitudes, skills and behaviours that support healthy, sustainable societies. Together with the values, attitudes, skills and behaviours that support healthy, sustainable societies.\(^\text{24}\)

The business world is also recognizing the essential importance of the early years and that we need to nurture and cultivate in children the values, capacities and adaptive practices that will serve a 21st century world. The 2010 IBM study identified creativity as the most crucial factor to business success and we need to better understand what fosters resilience and creativity and, more importantly, what undermines it.

“If we are to prosper and thrive in our changing society and in an increasingly interconnected and competitive world, both our mental and material resources will be vital. Encouraging and enabling everyone to realise their potential throughout their lives will be crucial for our future prosperity and wellbeing.”

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24 The Contribution of Early Childhood to a sustainable society, UNESCO, 2008
25 TGlobal IBM CEO Study, 2010
Measuring what matters

There is now widespread acknowledgement that measuring subjective wellbeing is an essential part of measuring quality of life alongside other social and economic dimensions.\textsuperscript{26} Governments are starting to explore how they can develop explicit and measurable goals\textsuperscript{27} and these must include the essential foundation that is early childhood. It is not enough to measure what has happened after this critical stage. To be truly effective we need to start looking at how we can nurture both the inner and outer aspects of human development in all its dimensions and to prevent the damage occurring in the first place.

Such exploratory research should encompass:

- Early Environments and social epigenetics
- Cognitive Neuroscience
- Neurophysiological Psychology
- The cultivation of values and character
- The value of playfulness and creativity
- Environmental design
- Art and Aesthetics
- Consciousness and spirituality

To facilitate the process we now need to develop new tools that ensure that we are measuring what really matters for human wellbeing. In the first instance these could include:

- a series of child developmental readiness tools (CDRT) to measure neuromotor and cognitive maturity prior to school entry and at key stages of the education process
- a Child Wellbeing Impact Assessment Tool (CWIAT) to measure the likely impact of all civic policymaking on child health and wellbeing.
- a Child Rights Indicator (CRI) and Child Rights Framework (CRF) to assist in meeting national obligations under the UN Convention on the Rights of the Child.

It is an exciting time in our understanding of human processes and the global move away from systems that are focused on only some aspects of human development to ones that instead celebrate what makes a life worth living. Hopefully we are beginning the see the formation of a new and more integrated science of human learning and development that recognizes the foundational importance of the patterns created in early childhood.

It is really a matter of natural versus unnatural development – how we can support the former and the consequences that we bear as society if we get it wrong.

“Feeling whole is a biological and psychological necessity for the child as he or she develops his or her sense of self and grows into adulthood. It lies at the heart of human wellbeing.”

Save Childhood Movement

\textsuperscript{26} Guidelines on Measuring Wellbeing, OECD, 2013
\textsuperscript{27} The Pursuit of Happiness, Centre Forum Mental Health Commission, 2014
# Foundations of Wellbeing

## The Seven Forms of Human Motivation

### The Seven Levels

<table>
<thead>
<tr>
<th>Level</th>
<th>Natural Growth:</th>
<th>Unnatural Growth:</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 External Cohesion</td>
<td>Feeling that you matter, Having a Voice, Sense of Connection, Collaboration, Caring for Others, Empathy, Openness, Inclusion, Trust, Compassion, Humility, Contribution</td>
<td>Feeling no-one cares, Self-interest, Self-focus, Lack of concern for others, Greed, Arrogance, Superiority, Contempt</td>
</tr>
<tr>
<td>5 Internal Cohesion</td>
<td>Engagement, Repetition, Self Reflection, Concentration, Thrill, Satisfaction, Authenticity, Integrity, Fulfilment, Joy, Contentment</td>
<td>Disconnection, Lack of Interest, Frustration, Boredom, Apathy, Avoidance, Greed, Unhappiness, Discontentment, Depression</td>
</tr>
<tr>
<td>4 Pattern and Meaning-Making</td>
<td>Purpose, Self Expression, Play, Risk-tasking, Problem-Solving, Excitement, Creativity, Curiosity, Desire to Explore, Desire to Learn, Resilience, Optimism</td>
<td>External control, Rigidity, Predictability, Anxiety, Caution, Comfort with the Known, Addiction, Measurability, External Motivation, Need for Rewards, Pessimism</td>
</tr>
<tr>
<td>2 Relationship</td>
<td>Attachment, Nurture, Affection, Attention, Feedback, Support, Validation, Patience, Respect, Affection, Satisfaction, Humour, Laughter</td>
<td>Neglect, Lack of Attention, Lack of Connection, Isolation, Abuse, Exclusion, Distrust, Control, Undermining, Disrespect, Dislike, Dissatisfaction, Sadness</td>
</tr>
<tr>
<td>1 Survival</td>
<td>Safety, Security, Positive Contact with Environment, Health, Positive Physical Growth, Positive Neurological Growth, Familiarity, Comfort</td>
<td>Threat, Insecurity, Negative contact with Environment, Fear, Disassociation, Vulnerability, Compromised Physical Growth, Compromised Neurological Growth</td>
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**The consequences of natural versus unnatural development**

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