

The ICDP programme applied with adolescents and their parents or guardians

WHAT HAS RESEARCH TAUGHT US

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Published in Spanish by UNICEF in the “Manual para Facilitadores” 2018

The ICDP programme reflects universally accepted humanitarian values about the significance of activating human empathy and compassion as a basis of care. The programme is another expression of the same humanitarian spirit as it is encoded in the convention of children’s rights. The Convention on the Rights of the Child is a value-based legal document ratified by most countries in the world. The promotion of children’s rights presupposes a parallel move or advocacy for a more humanized conception and sensitive relationship to children as the core and the content for all action, whereas the legal aspect relating to human rights provides a protective framework for the real caring work with children and their families. Without a deep activation of a more humanized and caring relationship to children, provided by social programs such as ICDP, the advocacy for children’s rights may become an empty shell without its basis in human realities (Hundeide & Armstrong 2011).

The central components in the ICDP programme have broad scientific coverage in developmental psychology and scientific research. On the following pages there are summaries of some of the studies that confirm the relevance and importance of the ICDP programme’s key messages.

PART ONE: PARENTS CAN EMPOWER CHILDREN’S AND ADOLESCENTS’ DEVELOPMENT

EMOTIONAL INTELLIGENCE

The ability to express and control our own emotions is important, but so is our ability to understand, interpret, and respond to the emotions of others. Psychologists refer to this ability as emotional intelligence, and some experts even suggest that it can be more important than IQ. Imagine a world where you couldn’t understand when a friend was feeling sad or when a co-worker was angry. Research suggests that emotional intelligence can be learned and strengthened.

An emotional message is conveyed 90 percent nonverbally. When a person’s words disagree with what is conveyed with his tone of voice, gesture and other non verbal expression, the emotional truth is in how he says something rather than in what he says.

Helping the child to see the other's child's experience and suffering/humiliation and taking responsibility for helping when needed, constitutes the basis for the development of the child as a moral subject, according to Eisenberg (1992).

EMPATHY

Empathy facilitates communication - communication breaks down when false presuppositions or assumptions are made about the other person's state. Caregiver-child communication requires a sophisticated degree of empathy. In order to communicate effectively the caregiver needs to be able to understand the child's affective and cognitive states. Caregivers' ability to attune with, and respond to, children's needs and initiatives constitutes the basis for good quality care.

When parents are mis-attuned to a child it is deeply upsetting and damaging. When a parent consistently fails to show any empathy with a range of emotions in the child – joys, tears, needing to cuddle - the child begins to avoid expressing and perhaps even feeling those same emotions. In this way an entire range of emotions can begin to be obliterated from the repertoire for intimate relations, especially if through childhood those feelings continue to be covertly or overtly discouraged.

CONDITIONS THAT FACILITATE EMPATHIC IDENTIFICATION

Here are some of the conditions that help release empathy (Hundeide 2000):

- We feel empathy more easily with persons with whom we have a close, intimate relationship – they are inside our zone of empathy. Usually these are our children, relatives and friends or other persons that we have close relationships with.
- We identify with the other person with empathy more easily when we are directly involved in face-to-face interaction and participate in the other person's emotional expressions.
- When the other person is responsive and accepting of our expressive invitations for contact we find it easier to identify with empathy.
- We tend to feel empathy more easily when we see and recognise the feelings that the other person is expressing. We do not identify with expressions that are outside our own emotional range of recognition. Therefore a person with similar background experiences will most likely be more responsive and sensitive, than a person with a different experiential background.
- We identify empathically with a person when we are able to join in with the initiatives and activities of the other person.
- It is easier to feel empathy for someone that we have defined in a positive way.
- We need to have "psychological space" to participate in the other person's suffering due to stress. A mother with a big workload with many children in a family striving for survival, may not have "psychological space" and motivation to participate in the suffering of her children, although in a more relaxed situation she would have that capacity.

INCLUSION INTO THE ZONE THROUGH TOUCH AND PHYSICAL CONTACT

Physical contact and loving touch is particularly important with affectively deprived children. We see these children in institutions for abandoned children. These children are usually victims of war and poverty. Here is one example in this context: She is a blind girl in an institution for abandoned children in Angola. When she came to the institution she was so weak and malnourished that she could not walk. After some time with supplementary feeding she started to recover and they then discovered that she was almost blind.

This made communication with her more difficult and when we met her, she seemed to be neglected with regard to human contact while the physical care seemed appropriate. One of our facilitators, an extremely sensitive woman, approached this girl first by taking her hand, holding it and after some moments she started to caress it slowly. There was an immediate change in the girl's expression; She leans back and relaxes and seems to enjoy the contact, she smiles and her face radiates in contentment. Gradually the caregiver expands the physical contact and starts touching and caressing her cheek in a loving and sensitive way. Finally she embraces her and holds her tightly. The girl reciprocates by putting her hands around the caregiver's neck clinging to her as if a deeply felt need is being fulfilled. At the same time the caregiver speaks softly

to her, repeating her name and guiding her hands to her face as she repeats her name. She then touches the eyes, the nose, the mouth, and the ears and says their names that she repeats. All the time while this is going on, she is holding her closely and there is content smile on the girl's face... The ice is broken and there is an intimate contact and trust between them. Through physical touch she has been included into the zone of intimacy, or more correctly; they had included each other into each other's zone of intimacy.

THE ZONE OF INTIMACY can be depicted as a physical barrier indicating those who are on the inside and who are on the outside. In this way we may locate spatially our relationship to people – from “persons” with whom we have a close personal relation with empathic identifications within the zone of intimacy, to “strangers” those on the outside with whom we do not spontaneously empathize.

This model shows that *seeing the child as a person is the first step towards humanisation and inclusion*. This means that we see the child as a fellow human being with the same needs for security, love, approval, self-respect and human rights as we have ourselves. When this conception of the child is in place, the crucial mechanism, that I have called *empathic identification with the child*, may be released. As shown in the model this again implies *emotional and attentional availability to the child* and sensitivity to its psychological and human needs. In this state of increased sensitivity the care-giver is capable of recognising and reading the child's expression and utterances and refer them to the child's mental state, its emotionality and intentionality.

SEVERE CONSEQUENCES OF LACK OF ATTUNEMENT

Studies of young criminals who committed violent crimes found that the one characteristic of their early lives that set them apart from other criminals was that

they had been moved from foster home to foster home, or raised in orphanages – life histories that suggest emotional neglect and little opportunity for attunement.

IT IS IMPORTANT TO BE “EMOTIONALLY AVAILABLE”

According to Zeynep Biringen (2004) emotionally available means that you as parent:

1. Are present with your child, paying attention to him when he or she requests it either verbally or nonverbally...
2. Offer your child opportunities to be emotionally involved with you. Reach out to your child during play and other times.
3. Be sensitive to your child's emotions and the way he or she communicates emotions. It is important for your child to know that s/he can express both positive and negative feelings and still keep your love. Be sensitive to your child's unique “emotional vocabulary”
4. Guard against expressing overt or covertly hostility towards your child – even when you are stressed
5. Be available without being intrusive – be available for interaction instead of pushing yourself on the child

MENTALIZING

Peter Fonagy and his colleagues (Fonagy, 2002) put forth a detailed theory for the way in which the abilities to *mentalize* and to regulate affect can determine an individual's successful development. They define mentalization as the ability to make and use mental representations of their own and other people's emotional states. The authors discuss the ways in which bad and insufficient parenting, leading to certain attachment styles, can leave children unable to modulate and interpret their own feelings, as well as the feelings of others. These inability to mentalize and regulate affect have implications for severe personality disorders as well as general psychological problems of self-confidence, and sense of self.

The four disparate anecdotes below can be compared from the vantage point provided by the concept of “mentalization”. The first and second are examples of the absence of mentalization, and the third and fourth indicate high levels of mentalization:

1. A boy, observed by Kanner, is enjoying a summer day at the beach. He spots something in the distance that captures his interest. Off he goes, straight towards his goal. But on the way he steps over everything in his path: blankets, newspapers, hands, feet, torsos.
2. A mother observing a videotape of her son crying is asked what she thinks is going on. She replies, “He always does that, he is OK.”
3. A boy, aged eight, notices a scowl on his mother's face and asks, “Mommy are you angry at me or are you just in a bad mood or upset about something else?”
4. Mother observes a video tape of her daughter at school having a temper tantrum and reflects that she thought her daughter was upset that day because she was getting a cold and was feeling exhausted and sick.

ROLE OF PREFRONTAL CORTEX

Sue Gerhardt (2004) explains the role of the prefrontal cortex. Good regulation and advanced social behaviour depend on feelings flowing freely through the body, while having the mental capacity to notice and reflect on them, and to choose whether or not to act on them. We now know that the prefrontal cortex is a key element in advanced social behaviour. Instead of merely reacting to someone who angers you, we are able to bring social awareness into play. The mind works with the “primitive feelings”; it neither submits to them, nor denies them. We do this by using the prefrontal cortex to explore the social impact of possible behaviours and we modulate our behaviour.

HOW CAN ADULTS PROMOTE ALTRUISM IN THEIR CHILDREN

Research has shown that those children who develop a high degree of altruism have had an upbringing where the parents take time to explain and communicate with them about why certain things are wrong, and where empathy enhancing explanations are used in order to explain the consequences of harassment or egotistic behaviour (Hoffman 2000, Eisenberg 2000).

Rudolf Shaffer (1998) 5 recommendations to promote altruism in children:

- 1. Providing clear rules and principles** - ‘You don’t bite people’, and being clear about consequences of child’s actions, ‘If you hit Susan it will hurt her’
- 2. Emotional conviction on the part of the adult** - Explanations ought not to be delivered in a calm and cool manner. On the contrary, with intensity of feeling, firmly, forcefully – according to research this will as result produce children with the high rates of altruism
- 3. Attributing pro-social qualities to the child** - ‘You were helpful’ or ‘That was generous of you’ or ‘It was kind of you’ – children internalize attributions and accordingly live up to their reputation
- 4. Modelling by adults** - Demonstrating altruistic behaviour to children encourages them to do the same
- 5. Empathic caregiving to child** - This is the most essential attribute, i.e. the existence of a warm and responsive relationship between adult and child; a loving, accepting manner towards children produces children with high rates of prosocial behaviour

HOW ADULTS DEFINE CHILDREN IS IMPORTANT

Karsten Hundeide (2010) describes the effect of different conceptions and definitions in relation to children:

When a child or a pupil is perceived (defined) negatively, it usually means that the support and care he receives will be reduced. This does not only happen in extreme emergency situations, but also in normal homes and in school; e.g. when a pupil is perceived by teachers and pupils as different and is described with some kind of

negative name (“stigma”), this can result in being bullied and pushed out from the “in-group”.

Most people will recognize this from their school days – how the different roles in class were distributed, or at best, negotiated; the clown on the back seat, the strongest who was the leader when playing football during the breaks, the most clever (“son of...”), and the guy who never managed to read properly, the girls who could not learn mathematics, the worst one who came from a poor family and was known in the community as mentally impaired and who soon was labelled by the stigmas directed towards the family and thereby became a verification of these... “He belongs to those people” or that family – “you remember how his dad used to be...” These are predefined role-expectations and positions ascribed to children, which may have negative consequences both for how they see themselves and thereby also as to how they behave and present themselves, for example in a school setting.

In the past, pupils with reading difficulties that we now call dyslexia, were often perceived as “stupid” and in many cases they accepted this description of themselves and entered the role as school-failures, in line with the negative expectations directed towards them, and they were treated accordingly.

TYPICAL CATEGORIES OF STIGMATIZATION

1. Stigmas related to school failure – this may invade a child’s self-perception and reduce his confidence and ability to cope and take challenges in other situations.
2. Family stigmas within the local community. These may be transferred to the child so that s/he is prejudged as belonging to “that family”...
3. Cultural stigmas against particular ethnic or social group (usually called “racism”)
4. Children with deviant appearance - they may have some physical defect or it may be their way of dressing. They are expelled from the in-group of “cool” children.
5. Children with a professional diagnosis. Sometimes a diagnosis (like ADHD) may have a negative effect both on the child’s self-perception and on the caregivers/teachers’ expectations of that child...
6. Stigmas in a family with high stress, the child becomes the family scapegoat...
7. Disturbed parents with negative models of care that stem from their own childhoods who project these models on their own children.

This shows that the same processes of inclusion and exclusion that are normally connected to more extreme situations with harassment and violence can also happen in relationships between ordinary people at work, home and in school. Some children and adults are defined negatively and pushed out from the intimate fellowship, and are exposed to bullying and abuse, often related to a negative definition (or conception) so that one can say that he or she deserves it. These are normal processes we all experience in our daily interaction with others.

Negative definitions can often serve as a reason for neglect and abuse (Bauman 1997). We see this in extreme forms in war situations where the enemy is almost always described as a monster with only negative qualities, which justifies treating him brutally and with violence - he deserves it.

CAREGIVER'S NEGATIVE INTERPRETATION OF THE CHILD'S SIGNALS

It has been shown that one of the most promising approaches to treating parents, who physically abuse their children, is to try helping them redefine their conception of the child's signals when problems arise. When problems arise, abusive parents tend to almost always ascribe evil intentions to the child, directed towards them as parents; the child wants revenge and wants to hurt and undermine their authority. Parents then react with violence and abuse in order to maintain respect and "to defend themselves" against the child.

In such a situation, parents need help to redefine the child's behaviour and see that there may be other reasons for the child's reaction than evil intentions directed towards them. In an investigation where such redefinition techniques were used on abusive parents, there was a considerable reduction in physical abuse compared to the control group (Bugental et al 2002).

WHEN CHILDREN ARE DEFINED POSITIVELY

In order for children to develop optimally it is therefore important that the child is defined positively in the sense that it is perceived by others and by itself as having possibilities for development, that it can achieve good results by applying its goodwill, and that a good attitude of hope and go-ahead spirit is created; or, using Vygotsky's words, that it has "a zone of proximal development." Within this attitude one looks for positive possibilities (resource orientation) rather than the opposite - to look for faults and weaknesses – which is essential when creating a social climate for growth and development.

A POSITIVE CONCEPTION OF THE CHILD LEADS TO A POSITIVE DIALOGUE

The significance of the caregiver's conception of the child is supported by a considerable amount of research (Goodnow and Collins 1990). One example is Werner's large longitudinal study of 698 children (Werner 1989). Among other things she found that what separated those who managed best ("the resilient") despite difficult circumstances (i.e. many risk factors – four or more) from those who did not manage well (the vulnerable), was that the mothers of the resilient children interpreted their temper positively, that they were warm and affectionate, while the mothers of the vulnerable children interpreted the children's temper negatively, as difficult and aggressive.

The vital question is 'how are caregivers' conceptions of the child?' Do the caregivers have a closed, stigmatized and negative conception, or are they open and

positively supporting the child so that there is hope and room for further development?

Conceptions of children may differ; from more superficial ways of talking about children and childrearing, to deeper cultural attitudes or attitudes related to conceptions with regards to own parents in early childhood (Stern 1995).

CULTURAL CONCEPTIONS - TRADITIONAL AND MODERN SOCIETIES

Regarding cultural conceptions of children in general, research has shown that it varies historically and between different societies (Rogoff 2003). In the traditional society where agriculture is the dominant activity, where the family and the clan are central, there seems to be a tendency to stress qualities such as obedience, respect, hardworking and loyalty towards the family and relatives. These are important qualities in a society where children have an economic function in terms of constituting important labor on the farm or in the family business and providing security for the parents in their old age (see LeVine et al 1988, Kagitcibasi 1996, Rogoff 2003).

In modern society this has changed and the care functions which used to belong to the family are more often covered by the public, the state and the local authorities. The qualities which characterized the traditional society, such as obedience and respect do not have the same meaning as they did in the traditional society. The qualities emphasized in the modern competitive society are qualities like independence, self-assertion, being oneself, individuality, and individual rights; “to each his own...”. These seem to be qualities linked to a modern and highly technologically developed lifestyle with competition, the market and education as the dominant forces in society.

Barbara Rogoff (2003) provides an example of this from an Inuit society in Northern Canada: In the American society verbal skills are highly emphasized, and children stand out by talking and saying their opinions in class. These are not qualities that are highly appreciated in different Indian and Inuit societies. Rather, silence, modesty, and self- control are preferred... At a parental meeting where an Inuit mother came to school to talk to the teacher about her son, the communication was as follows:

American teacher: “Your son talks a lot and asserts himself well in class”

Inuit mother: “I am sorry”

She apologized because the child spoke so much and asserted himself in class. These were qualities which the American teacher highly appreciated. The question here is how the same American teacher evaluated the other Inuit children who rather than “talking a lot” followed traditional Inuit qualities of silence and humility (perhaps she considered them retarded?). In such a collision between modern and traditional values, the chances are that children who diverge from the majority norms are considered failing – cultural difference is interpreted as failures.

“IT IS RELATIONSHIPS AND UNDERLYING CONTRACTS THAT BRING UP CHILDREN”

Good interactions in everyday life are important in order to establish long-term positive relationships. In a relationship there is a tacit or explicit agreement to interact in a particular way over some period of time.

Usually there is some content or activity ("what") and some reciprocal feeling ("how") that constitutes the core of a relationship (Hinde 1979, Sroufe 1987). As an example, it can be sharing a hobby, a friendship based on some sports-activity, or it can be a more general agreement of sharing a warm human feeling of reciprocal consideration and care when together, a love-relationship - focussed on some activities. Such contracts function like tacit self-instructions for how to act.

These kind of stabilised relationships give predictability in human interactions at the same time as they create a background in relation to which momentary interactions gain meaning. It is impossible to assess the meaning and the effect of any action between caregiver and child without knowing what is taken for granted as their normal relationship.

For example, when Chinese students were asked how they could tolerate the authoritarian discipline of their parents, they said it was part of a traditional pattern of discipline that confirms to the child the father's all-inclusive concern and responsibility. The point is that children do not react on actions or interactions in isolation, but on the meaning of actions. And the meanings are created on the background of established normative contracts or relationships between parents and children – very often as part of a collective cultural system of values that they tacitly endorse.

When relationships (meta-contracts) between caregiver and child are firmly established parents only need to indicate and signal a confirmation of the contract in order for children to follow what is agreed on tacitly. Just a look was enough for the child to understand how to behave... In a sense one can say that it is the meta-contracts that bring up children when they are firmly established (Hundeide 1989, 93).

Similarly, when meta-contracts are unclear and inconsistent, there is a need for a great deal more external parental control and regulation. In other words, the clearer and stronger the contracts between caregiver and child, the less external control is needed, and opposite; the less clarity and consistency is established in the contractual relationship, the more external control needs to be exercised.

CHILDREN'S MORAL DEVELOPMENT IS AFFECTED BY THE MODELS AND EXPERIENCES PROVIDED BY THEIR PARENTS

Research by the American psychologists Delia and Applegate (1990) has shown that different maternal styles of communication and discipline are related to the ways in which children interact with their peers. The children of mothers who adopt an authoritative disciplinary style and actions, are more likely to develop styles of

communication based on cooperation and mutual respect, than are the children of mothers who adopt a more authoritarian style of discipline.

RESEARCH ABOUT CORPORAL PUNISHMENT

Gershoff (2002) compiled 88 studies spanning more than 50 years and using meta-analyses to evaluate the outcomes. This review reflected the growing body of evidence indicating that corporal punishment does no good and may even cause harm. The weight of the available evidence, as well as theory, is clearly on the side of the negative effects of customary corporal punishment.

Psychologists who are concerned with children's development and promoting effective parenting would be remiss were they to advocate or justify spanking in the face of the evidence summarized by Gershoff (2002). The stakes are high for the welfare of children, of parents, and for societies committed to the ethical treatment of all individuals. (Perspectives on the Effects of Corporal Punishment: Comment on Gershoff (2002) George W. Holden)

TO "DISCIPLINE" DOES NOT MEAN TO "PUNISH"

The term discipline means "to teach". The most challenging moments that require disciplinary action are the opportunities for deep teaching. Daniel Siegel and Tyna Payne Bryson explain:

In brain terms, our brain has two fundamental modes — reactive or receptive— the key to a discipline interaction is to optimize the chance for learning by moving a child's brain from reactive to receptive. "Reactivity can take many forms such as the classic mild, moderate or intense states of fighting, fleeing, freezing or fainting. In such reactivity, learning will be limited. As Steven Porges suggests, we shut down our social engagement system when we are reactive."

Connecting first with a child's state of mind is the key to moving reactivity toward receptivity. Remember this with the acronym, PART; for the Presence, Attunement, Resonance and Trust that are the part we play in connecting with others.

Presence is our own state of mind to be curious, open, accepting and loving.

Attunement is how we focus attention on the internal state of another — not just on their outward behavior.

Resonance is how we allow our own internal state to be shaped by what we sense and perceive in someone else — so it's not really mirroring, but it's resonating.

Trust: When the other person recognizes and feels our resonance as it emerges from our attunement and presence, they will begin to develop trust as they turn on their social engagement system.

So when we enact our parental PART, we then connect with our child. Once he or she has moved from reactivity to receptivity, we can then begin the redirecting aspect of discipline, which will be how we teach about the particular issue unfolding at the time. Whether this is about not eating a whole cookie before dinner, not hitting a brother or learning to stop a video game and come to dinner after the second request, connecting first before redirecting will make the learning more likely to occur.

ALLOWING CHILDREN TO EXPERIENCE “SHARP CORNERS”

Gever Tulley inspires us to think outside our usual parental box of “keeping our children safe” with restrictive rules; he suggests letting them play with pocket knives, spears, fire, old gadgets and even the boundaries of the law. If our children never experience sharp corners, he suggests, we’ll be cutting them off from essential opportunities to learn about the world.

Tulley’s notion resonates in a fascinating way with modern biology. For our immune system, for example, we need exposure to all sorts of dirt and germs to develop an internal guard that knows “self” from “non-self” and keeps us appropriately safe. And for our nervous system, the more we develop an “extended self” by being actively engaged with objects in the world, the more our brain can develop a sense of how our physical body can safely and effectively move through space. Children need to directly experience the world around them, not just on screens in their laps.

THE ROLE OF FAMILY FUNCTIONING IN SUBSTANCE USE

Substance use during adolescence and emerging adulthood is a risk factor for subsequent substance abuse, and it may be related to emotional and behavioural problems. Research shows the importance of family relationships in preventing substance use. In 2016 a longitudinal study by M. Queija, A.O. Delgado, P. Jiménez, C. Martí, C. Vara de Rey found a linear increase of substance use throughout adolescence and emerging adulthood. They found no differences in early adolescence between sexes, but boys increased substance use more than girls throughout adolescence.

Moreover, adolescents who remembered caring mothers during childhood reported less substance use during early adolescence, and those with more cohesive families showed less increase in substance use during adolescence and emerging adulthood. The study shows the importance of family care and family cohesion on preventing substance use during adolescence and emerging adulthood.

IMPACT OF PARENTING STYLES ON ADOLESCENTS’ SELF-ESTEEM AND INTERNALIZATION OF VALUES IN SPAIN

Martínez, Isabel; García, José Fernando. *Impact of Parenting Styles on Adolescents' Self-Esteem and Internalization of Values in Spain*, in *The Spanish Journal of Psychology* 2007, Vol. 10, No. 2, 338-348

The relationship of parenting styles with adolescents' outcomes was analyzed within a sample of Spanish adolescents. A sample of 1456 teenagers from 13 to 16 years of age, of whom 54.3% were females, reported on their parents' child-rearing practices. The teenagers' parents were classified into one of four groups (authoritative, authoritarian, indulgent, or neglectful).

The results show that Spanish adolescents from indulgent households have the same or better outcomes than adolescents from authoritative homes.

Parenting is related with two self-esteem dimensions—academic and family. Adolescents of indulgent parents show highest scores in self-esteem whereas adolescents from authoritarian parents obtain the worst results.

COUNTERBALANCING DIGITAL AGE WITH INTERPERSONAL COMMUNICATION

Many parents are concerned about how much time adolescents spend using smartphones, tablets and computers. With regards to this concern, Daniel Siegel (Siegel 2014) provides us with a scientific outlook, as well as solution – read it below: One thing that emerges from the scientific research is that our self, our mind, is not only a product of our body and its nervous system, including the brain, but it is also a relational process. What this means is that we are not only shaped by what our brain does, but we are created by our relationships.

Relationships can be defined by how we share information with one another. And that exchange of information is a two-way street. One of the experiences that may arise from texting, for example, is a sense of connection with others, a sense of being seen and even a sense of defining who we are. Adolescents are certainly shaped by relationships — even through social media accounts — which gives them a sense of not being alone in the world. And even more to the point, these communications reveal how their sense of identity can be created by connections with others.

Too often the *inner* mental life becomes lost amidst a bombardment of *external* information. The Internet can contribute to this surface attention as it often distracts from connecting deeper with others in real time, focusing instead on one-way visual and auditory inputs that have a sense of being never-ending. These kinds of surface streams of stimuli can give a sense of never being done, never being complete, never having accomplished something that is finished. Teenagers can feel bad, and left empty at the surface.

With such a clear vision from modern science, what can be done to make life at home in the face of the lure of the Internet more connecting? Here are three simple solutions:

1. Engage your own “mindsight” circuits. By engaging in conversations that focus on the inner nature of adolescent mental lives it is possible to SIFT their experience by exploring four things that are the life of the mind beneath behaviour:

Sensations

Images

Feelings

Thoughts

When we SIFT the mind, we engage the “mindsight” circuits that support how we have insight into our own inner lives and empathy for the inner experience of others.

Mindsight is something that can give a deeper sense of knowing others, and of knowing oneself. It helps to begin with oneself, to know one’s own inner world, making sense of one’s inner life.

2. Turn off the gadget and turn toward each other.

When adolescents engage with others in such *reflective dialogues*, including with friends and family, they are making time to explore the inner life of each person, to share the SIFTing of minds and to find meaning in the connection. That is a meaningful conversation, an interactive experience that goes beneath the surface to illuminate the inner life of the mind. (See exercises in reflective conversations in Appendix 1 of this document.)

3. Focus on reflective dialogues with those around.

What we focus our attention on shapes the brain. Science would support the view that if we can have more reflective dialogues that engage our mindsight circuitry, we’ll have a deeper sense of who we are.

Social media has a reputation for being nothing but trouble for teenagers. There are many upsides to social media, not least of which is that it provides a way for teens to connect with one another. What is of greater concern than simply the time spent on screens is the time not spent in direct face-to-face connection.

The brain has two sides: the social, more emotionally dominant right side of the brain and the literal, logical and more objective left side. The right hemisphere picks up the more subtle signals of someone’s inner state — their feelings, meanings and intentions — but may not be as engaged on digital screens as it is in real-life, in-person interactions.

Since the brain responds to the energy and information that streams into it, it is deeply worrying that spending more time at the surface level of communication, something the left hemisphere can do quite well, will leave the adolescents with a surface level sense of who they are.

The digital world of chatting and texting is generally confined to letters and words, and the photos and videos sent are often not interactive; they are one-way streams of information.

The transmission of digital information is often just that — a one-way sending. It is not real-time deep engagement, not a sharing back and forth in open interaction. Teenagers write emails, type out chat responses and lob texts with delayed and word-based responses instead of engaging with eye contact, facial expressions, tone of voice, posture, gestures and touch.

But it is the right hemisphere that provides and decodes these non-verbal cues that have a spectrum of values. Some scientists have suggested that the deepest sense of identity, the emotional and social self, is created within the synaptic connections of right hemispheres.

The concern is that with personal and cultural adjustments to these digital, often one-way and non-subtle means of connecting with others — which are left hemisphere-dominant — adolescents also come to know themselves in very non-subtle ways. They focus on the text and miss the context.

Adolescents can seem so focused on a phone connection, so desperate to find themselves created in that communication that it suggests an internal emptiness, a lop-sided development of an inner sense of self — and perhaps even the brain itself — which creates a deep desperation for being connected. That's how urgent feeling empty can be.

What can be done? It's simple: Connecting with each other with both sides of the brain; having an actual, face-to-face conversation in real time.

The ways a deeper and more present sense of self is created: By joining with others in real time, face-to-face conversations that connect the teen to an authentic way of being. This means sending and receiving signals revealing their inner experience, their subtle sensations and their subjective mental lives.

Taking a TIME-IN

Take some “time-in” to consider reflecting on inner sense of who we are. When we then connect with others from that inner place, life begins to change. Even studies of the brain reveal that people who take time-in on a regular basis, who are present for life in a mindful way, can connect with others with more empathy and compassion.

Focus on the NON-VERBAL

Try to keep an eye on the important non-verbal forms of communication that most directly reveal how we feel inside. When we are aware of these signals sent from others, we can increase our sense of being connected in a deep, authentic and life-affirming way. These seven signals include:

- Eye contact
- Facial expressions
- Tone of voice
- Posture
- Gestures and appropriate touch

- Timing of response
- Intensity of response

When these seven non-verbal messages are sent and received from the important social and emotional centres of the brain, primarily on the right side, they give us a feeling of being seen and of being secure.

Our relationships create us, and supportive relationships create security and health in our lives. Living life with an emphasis on direct ways of connecting with each other, using both sides of the brain, in person or even on the Internet, may help us reclaim our deeply social selves and become more fulfilled in our lives.

Integration can be between us, and it can also be within us, such as when we link the differentiated right and left sides of the brain when we combine the power of linear, logical language with the contextual images of autobiographical reflections, or the integration of the upper and lower regions of the nervous system when we become aware of the body. In many ways, integration can be seen as the mechanism of harmony, of well-being, of health. And integration is what our digital age could, but rarely does, promote in our lives.

When we think of digitally disconnecting and inviting presence into our lives, we are creating the conditions of integration within and between. Even studies of wisdom can be seen as revealing how we integrate the many aspects of our inner intuition and our interpersonal dedication all within an unfolding life of meaning, compassion, connection, and equanimity which the Greeks called *Eudaimonia*.

CHALLENGING YEARS

The adolescent years can be challenging to navigate because in addition to creative exploration, they also involve risk and rebellion, taking unnecessary risks and endangering themselves and others.

If we as adults push back severely against these natural changes, rejecting adolescents as they tend to reject us, the result can be shutting down of all communication between the generations. The call is to increase empathetic understanding and respectful communicating – the challenge is to see the power and potential of the teenage brain and the emerging adolescent mind as assets rather than liabilities.

TEENAGERS ARE OFTEN MORE STRESSED THAN PARENTS PERCEIVE

In Canada, the large MEHRI (Milton and Ethel Harris Research Initiative, York University, Canada) study found that 90% of teens reported that they are either tired, stressed or feel nervous or anxious without a reason, all the time. That is how they perceived themselves.

Importantly, the study found that they are doing much worse on emotion-recognition tests compared to when they were 8 year olds. They perceived affective cues as negative, even when there was no reality behind it. For example, when they showed the pictures of neutral faces they perceived them as negative. Different systems in the brain become activated at different times. At one time it could be the limbic system where they perceive their emotions as too intense and deep and interpret in that way other people's behaviour too. However, this is natural at this age.

ADOLESCENTS NEED THE SUPPORT FROM ADULTS

The adolescent period is filled with features that often perplex not only adults, but teens themselves, but it is only through sensitive and supportive parenting an adolescent can grow to become a happy adult.

Adolescent brain goes through a process of massive reconstruction (remodelling process) - pruning and myelinisation means the brain becomes more differentiated and specialized and the connection between the neural circuits becomes coordinated and very fast. The huge processes that are happening inside teenagers' brains turn them into risk takers and sensation seekers. While acting without thinking is present in the early years of adolescence, what emerges is a strong drive to explore the world. There is an emotional spark at this time which also means that teenagers are capable of dedicating themselves towards a shared goal with their peers and even of sacrificing themselves in that process.

Parents can help direct this remodelling process and reduce stress - the key is keeping up with positive interaction and meaningful reflective dialogues, making children feel safe in home environments and helping children to engage in activities that nurture good, prosocial characteristics in them. As a result adolescents will manage their emotions better and will become confident and independent.

SENSITIVE ADULTS FORGE CLOSE RELATIONSHIPS WITH ADOLESCENTS

Adolescent brain-growth is defined by four traits: novelty seeking, social engagement, increased emotional intensity, creative exploration. Adults can perceive these as threats to the adolescent's safety – which they often are, and adults can also see them as threats to their attachment and happiness, as the adolescents tend to push adults away. However, if adults exhibit curiosity, openness, acceptance and love they can neutralise the hostility that adolescents would naturally exhibit.

Sensitive adults, who don't have to be parents, who talk to adolescents honestly, who can see their distress and do not belittle it, who understand their point of view and put theirs in a way that does not patronise – those people will stay close to their adolescents for the rest of their lives. Understanding does not mean going along with every idea or plan; it means starting with connection and then exploring together what might be the next steps.

INTERPERSONAL INTEGRATION

The outcome of being interpersonally integrated Siegel believes is the creation of more neural integration inside each of us. And that means to embrace each other's differentiated selves, to put time, energy and attention toward connecting with each other in reflective ways.

In a relationship, integration entails each person's being respected for his or her autonomy and differentiated self while at the same time being linked to others in empathic communication.

When we become parents, we want the best for our children. Fortunately, the scientific understanding of how children develop within families has grown to the point where we can now state what the essential aspects of healthy development are. For our exploration of parenting, let's begin with several foundational notions. The first is that the child will develop based on both the information in her/his genes and the experiences she or he has in her life.

Genes contain information that guides the growth of the cells of the body, including the basic cells of the brain, the neurons. How neurons link to each other in synaptic connections shapes the brain's structure. And this synaptic structure shapes how mental processes — like emotions, thoughts, memories and behavioural control — will be created. In this way, our genetic legacy we inherit from both parents shapes, in part, who we become and what our temperament is.

But **experience** also plays a direct role in how the neurons in the brain unfold, therefore also shaping how the mind functions. Experience can be defined as how energy and information stream through our lives — within our nervous system, including the brain, and between ourselves and other people and the larger world around us. Experience is energy flow. And we now know that all information rides upon patterns of energy flow, like the shapes of these words entering your eye. Photons come from the squiggles that are the words, hit the back of your eye, stimulate firing in your optic nerve, shape firing patterns in your visual cortex and then spread around to the linguistic centers and other regions to help create your experience of reading this entry. All of that is “experience.”

Experience means that neurons are firing and becoming active. And when neurons fire together, they can wire together. The location and the timing of that firing in the brain depends on the type of experience that is unfolding. And neuronal firing can activate genes so that proteins are produced and new connections among the firing neurons are established.

Communication is how we share energy and information flow with each other. How you communicate with your child shapes patterns in your child's brain and therefore can shape how the structure of his brain develops. Since relationships are the ways we communicate with each other, this means that relationships not only activate the brain, they shape the anatomical development of brain structure.

After examining tens of thousands of studies, it became clear that a simple principle of healthy living emerged. When we link the different aspects of our lives, we create something called integration. Integration is the linkage of differentiated parts of a system. For example, in your brain, you have a different left and right side. When the two sides can be specialized, or develop in unique ways, that is what we mean by differentiated. And then when we link these two differentiated parts — when they are allowed to be unique and specialized but then brought into connection — we create an integrated whole.

So, integration is not the same as blending together and making differences disappear. And integration is not the same as just having different things exist, but not be connected. When we link differentiated parts, we create the integration that enables “the whole to be greater than the sum of its parts.”

When a system is integrated, it functions optimally.

When a system is not integrated, it tends toward either chaos or rigidity, and sometimes even both at the same time.

But when a system, whether it is a brain or a family, is integrated, it has a sense of harmony. It is the most flexible, adaptive, energized and stable. So like a river, the central flow of integration is harmony; the two banks are chaos and rigidity. Chaos in a family might be when emotions are exploding out of control or when intrusive memories make it hard to hear what others are saying. Rigidity might be when people feel depleted or demoralized, depressed and lacking in vitality. These examples of chaos or rigidity can last for minutes or hours, and sometimes even days, weeks or months. When they are present, they suggest that the system is not integrated.

When different areas of the brain, like left or right or up and down, are then linked, optimal integration is created. This whole brain integration in turn creates optimal self-regulation and children develop emotional intelligence, social skills, attentional focus, behavioural flexibility, compassion and creativity. Integration in the brain is the basis for resilience.

For a parent, this view suggests that you can learn how to detect chaos and rigidity in your family and do something to create the differentiation and linkage that will make your family more integrated. And over time, the more integration you create with your child in your communication, the more integrated her brain will become. Integrative communication is when you honour differences and promote compassionate linkages.

You let go of your fixed, rigid expectations and come to see your child for who he actually is, rather than try to make him only what you want him to be. If he is shy and reserved but you wanted an outgoing social child, you accept him for who he is and support him developing from where he is coming from, not from your disappointment in him. And when integration happens like that, your child will “feel felt” by you, feel understood and accepted, and can become the best him that he can become. That is

created because your accepting his unique qualities and encouraging him to find his own inner strength will cultivate integration in his brain.

PART TWO: UNDERSTANDING ADOLESCENTS

"With all the problems our world faces today ... never before have we so desperately needed a way to think beyond our usual strategies to create innovative ways of sustainable living on our precious planet. My suggestion to you is that the power of the adolescent mind has just that spark of emotion and social drive, just that push to explore new solutions to old ways of doing things that may save life on our planet."
– D. Siegel (2014)

MISCONCEPTION ABOUT ADOLESCENCE

An adolescent is a young person in the process of developing from a child into an adult. The World Health Organization defines it as a period from 12 – 18 yrs.

However, according to neuroscience it is a period that runs roughly a dozen years into the mid-twenties, 12-24 yrs.

During adolescence the brain is busy remodelling itself, the body changes with the onset of puberty and a need for more independence with adults emerges.

The change between childhood and adulthood, the period called adolescence, is now seen as an extended time which individuals need to have some fundamental shifts in brain function that can empower them to leave the familiar, certain, and safe home nest to move out into the unfamiliar, uncertain, and potentially unsafe larger world. It is an incredible time of change that often fosters a lot of misconceptions such as: that teenagers are mindless because of hormones “raging,” their minds are out of control or they just need to “grow up”. Such ideas are spread without understanding the vital and natural changes in the brain during the adolescent period.

CHANGES IN THE ADOLESCENT BRAIN

The adolescent brain changes in two dimensions.

One is how it reduces the number of the brain’s basic cells, the neurons, and their connections, the synapses. The decreasing of neurons and synapses is called “pruning” and appears to be genetically controlled, shaped by experience and intensified with stress. The removal of our overall number of neurons and their connections reaches its peak during the remodelling period of adolescents – the excess connections are pruned away.

A second way the brain transforms is that it lays down “myelin”, a sheath covering the membranes among interlinked neurons. As a result the electrical flow among linked neurons is faster and more efficient.

Pruning and myelination help the adolescent brain become more integrated. Integration, the linking of different parts creates more coordination in the brain itself. As a result of the remodelling changes in the frontal areas of the cortex teens begin to become aware of themselves and to think about life in conceptual and abstract ways. The adolescent mind begins to consciously and creatively explore the deeper

meanings of life, of friendships, of parents, of school, of everything. Even the ability to reflect on our own personalities emerges during this time.

Engaging in reflective conversations with family members and friends will help expand on this new way of thinking about the world. Self-awareness is cultivated through interpersonal experience and the learning involves a focus on more complex concepts. (whereas fact-based and concrete way of thinking dominates in children during the elementary school years). Adolescents can approach problems in new ways – to think outside the box; abstract capacities and thinking strategies permit adolescents to tackle life’s challenges in more innovative ways – it is a golden age for innovation.

FOUR FACTORS SET UP IN ADOLESCENCE

Many parents approach their child’s adolescence with fear and trepidation. According to renowned neuropsychiatrist Daniel Siegel, however, if parents and teens can work together to form a deeper understanding of the brain science behind all the tumult, they will be able to turn conflict into connection and form a deeper understanding of one another.

Understanding how the teenage brain functions can help parents make what is in fact an incredibly positive period of growth, change, and experimentation in their children’s lives less lonely and distressing on both sides of the generational divide. It is important for parents to understand the essence of adolescence. The changes in the remodelling brain during the teen years ignite four qualities in the mind:

1. *The emotional spark of increased emotional intensity,*
2. *social engagement,*
3. *novelty-seeking and*
4. *creative exploration.*

These four factors, set up during adolescence, help the brain grow and stay healthy and integrated even as we move through the rest of our lives.

CHANGES IN THE TEEN BRAIN

Two fundamental changes in the teen brain can explain the finding that though the adolescent body is generally stronger and healthier than at other times of life, teens are actually three times more likely to have a serious or fatal yet preventable injury during these second dozen years of life. Studies reveal that the changes in two systems in the brain—the reward system and the appraisal system—are likely the cause for these behaviours that are not just acts of impulsivity.

Research suggests that during adolescence the baseline level of dopamine is lower (dopamine is the chemical involved in the reward circuitry of the brain) but its release in response to experience is higher and this can explain why teens may report a feeling of being “bored” unless they are engaging in some stimulating and novel activities.

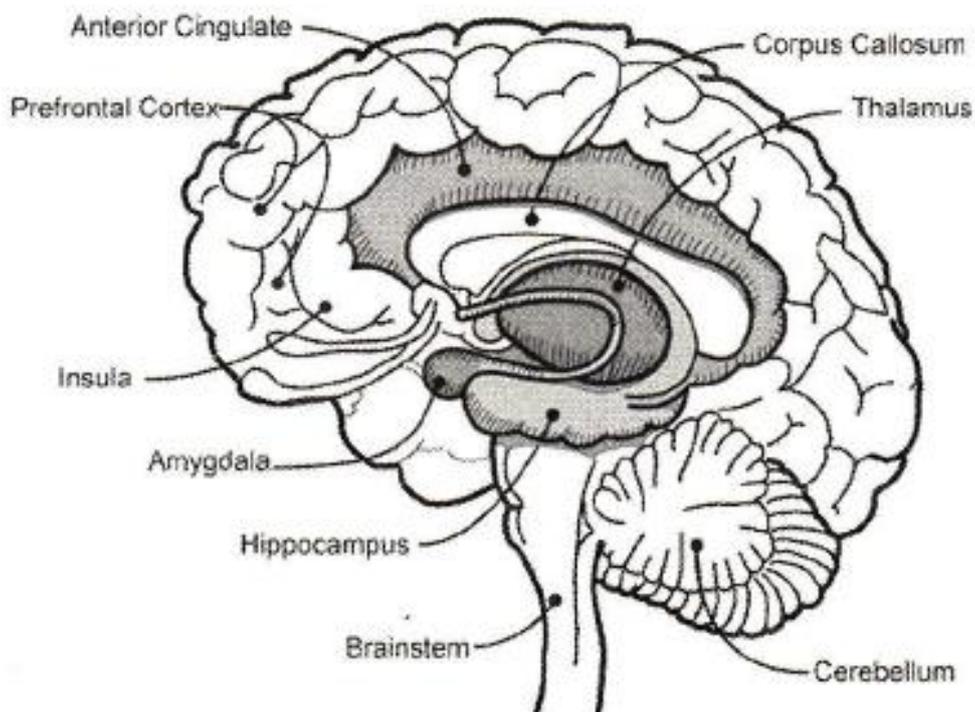
This means that the individual will be driven to escape baseline boredom to release dopamine with novel experiences. Novelty is one of the best ways to create that important sense of reward—and thrilling, risky behaviours can enhance that release. Drugs and activities like gambling involving addiction also release dopamine, and this is why the adolescent period is the most likely time an addiction will develop in our lives.

Hyperrationality

Another brain change that supports the exploration needed to leave the nest but that also enhances dangerous activities is a shift in the appraisal circuitry of the brain that evaluates the PROS and cons of a choice before enacting a behaviour. Scientists call this “hyperrationality” which involves an overemphasis on the PROS and a de-emphasis on the cons.

The myth that teens simply don’t know about dangers leads parents to inform, scare, or simply try to curtail their behaviour. But studies suggest that it is not a teen’s lack of knowledge or awareness, it is hyper-rational thinking that gets the individual to concentrate on the upside of a choice and to ignore the meaning of the downside.

THE MODEL OF THE BRAIN

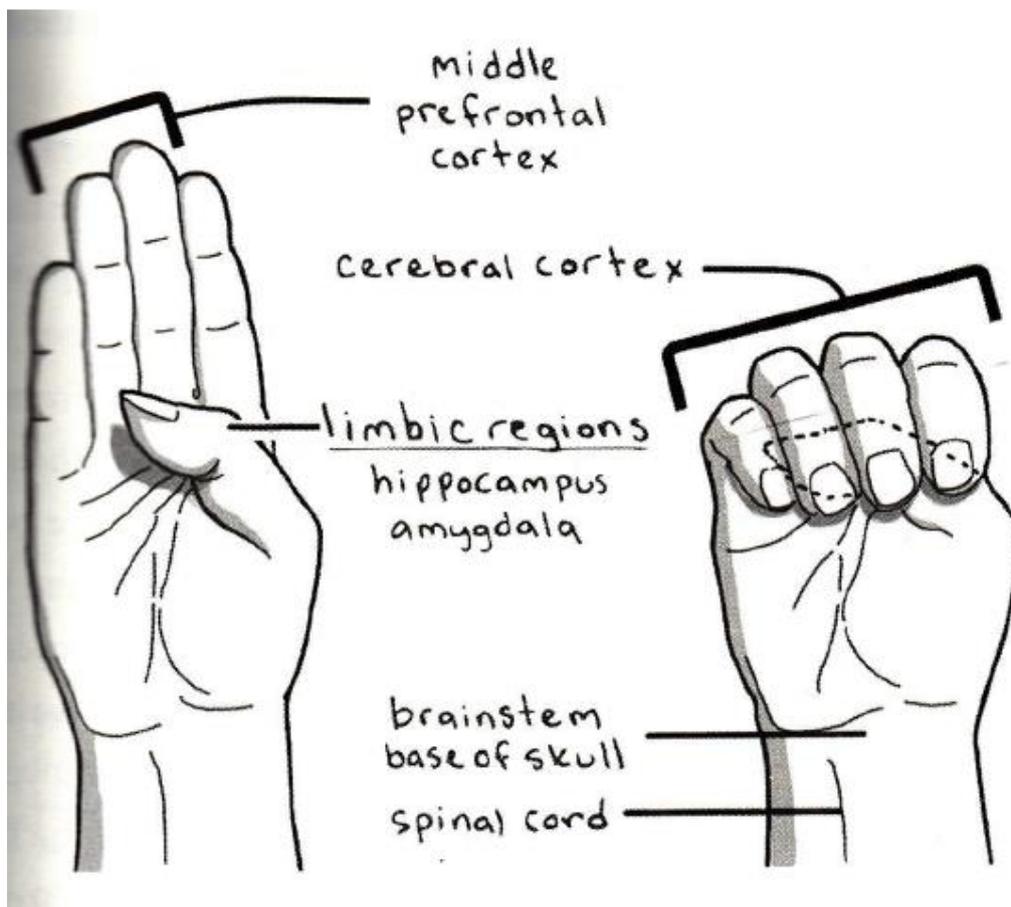


The brain stem and the cerebellum are part of the “hindbrain” and regulate basic processes like heart rate and states of alertness. Connecting the two sides of the brain is a band of tissue called the corpus callosum. The amygdala and hippocampus, which are part of the old mammalian region called the limbic area, form the “midbrain” and help with functions such

as emotional balance and memory processes. The cortex, also known as the “forebrain”, makes representations or images of things. The front-most part of the cortex is the prefrontal cortex, which coordinates and balances the functions of many areas by linking input from the cortex, limbic area, brainstem, body, and social interactions. The insula is a circuit that connects bodily processes to the prefrontal area for self-awareness. Daniel J. Siegel, M.D., *The Developing Mind*, 2nd edition, copyright 2012 by Mind Your Brain Inc.

THE HAND MODEL OF THE BRAIN – AND “FLIPPING THE LID”

The brain in the palm of the hand (see image below) is a model that depicts the major regions of the brain: cerebral cortex in the fingers, limbic area in the thumb, and brainstem in the palm. The spinal cord is represented in the wrist. (D. Siegel, 2012.)



Teenager’s increased emotionality and interest in peers can become disruptive to life at home. The extreme form of this is when teenagers become agitated and “flip their lids” – this can happen to anyone, but in early adolescence we are especially prone to being this way under certain conditions, as for example, when our parents interrupt us when they know we busy, or when a friend does not call even though she said she would. If we put the hand model together and then suddenly lift up our fingers, we will see the anatomic way we can symbolize how we

lose the integrative role of the prefrontal cortex. Without the calming influence of that cortical region, sudden outbursts of limbic lava and bursts of reactivity – the ancient reactions of fight, flight, freeze, or faint – can emerge suddenly, sometimes without warning. These are our early, primitive, subcortical reactions to threat. The lower brain areas can become active without our conscious mind's knowing what is stirring deep inside the brain.

Especially in adolescents, the prefrontal cortex is vulnerable in managing the subcortical world and this is why such emotional reactions can erupt. The prefrontal cortex is the frontal area of the brain enables many functions, such as balancing emotions, planning for the future, having insight and empathy. This region behind the forehead connects all the parts of the brain in the skull to one another and links those functions to what is going on in the body (signals from the heart, intestines, muscles). Then those connected signals are woven together with the input from other people. That is a lot of integration, linkages of different parts. So as adults we need to give respect to the remodelling adolescents are going through.

WHAT DOES INTEGRATION MEAN FOR THE BRAIN?

Integration is at the heart of both interpersonal neurobiology and Dr Daniel Siegel's mindsight approach. Defined as the linkage of differentiated components of a system, integration is viewed as the core mechanism in the cultivation of well-being. Awareness can shape the connections in the brain toward integration. In an individual's mind, integration involves the linkage of separate aspects of mental processes to each other, such as thought with feeling, bodily sensation with logic.

For the brain, integration means that separated areas with their unique functions, in the skull and throughout the body, become linked to each other through synaptic connections. These integrated linkages enable more intricate functions to emerge—such as insight, empathy, intuition, and morality. A result of integration is kindness, resilience, and health.

POSITIVE INTERACTION AND SELF-REFLECTION BUILDS INTEGRATION IN THE BRAIN

Take a look at your hand model of the brain. Put your limbic-thumb area over your brainstem-palm area. Those are the lower parts of the brain that generate emotion and reactivity and reward drive, among other things. Now put your fingers over your thumb, and take a look at the middle two fingernails. This is the prefrontal region. Notice how when you lift up your fingers-cortex and put them back down, you can see how this prefrontal-fingernail area is connected to the cortex; it sits on top of the limbic-thumb, and also connects directly to the brainstem-palm. In addition, signals from the body itself – from muscles and bones, from the intestines and heart – all come up to this prefrontal region too. This prefrontal region also makes maps of what is going on inside other people's nervous systems – it maps the social world. It is this prefrontal area that creates maps/representations of others for empathy, maps of oneself and others for morality, as well as a mindsight map of oneself for inner insight.

To sum up, five separate areas of information flow are coordinated and balanced by the prefrontal region: the cortex, the limbic area, the brainstem, the body and the social world. When these separate sources of information flow are linked together, we call that “integration”. And integration is what creates the master functions of self-awareness, reflection, planning, decision making, empathy and even morality – thinking about the larger social world.

When the prefrontal region achieves a new state of being remodelled, those important functions become more dependable and stronger. Integration can now happen more consistently and reliably. Brain, body and social world are woven together into one whole by the prefrontal cortex. Knowing about how this prefrontal remodelling happens can help us as adolescents and as adults not only understand better what is going on inside the brain but to do something about it that is constructive. **We can cultivate the growth of the integrative fibres of the prefrontal cortex – positive interactions with others and self-reflection are two ways to increase prefrontal integration.**

ATTACHMENT IN ADOLESCENCE

Adolescent attachment formation is a complex developmental consideration. Several important trends emerged from adolescent attachment research:

1. The assessment of adolescent attachment is markedly different from that of infants and young children

The Strange Situation experiment by Mary Ainsworth (see Appendix 2) and/or other separation/reunion assessment protocols are not applicable to the adolescent population. Rather, the recollections and manner in which the adolescent conceptualizes and speaks about their close attachment relationships appears to have greater relevance when attempting to assess attachment formation in adolescents.

As would be expected, secure attachment in adolescence is associated with a range of positive individual and social indicators of adjustment while insecure attachment is closely associated with internalizing disorders, externalizing disorders, personality disorders, and social problems.

It seems clear that adolescents who demonstrate insecure attachment are frequently in the most desperate need of a positive, safe, close experience with a consistent adult figure.

2. Adolescents need their parents as a secure base

While there is a natural progression towards increased autonomy in adolescence, parents should still be relied upon as a secure base.

The maintenance of a strong parent-child bond in adolescence depends largely upon the dyad's ability to successfully negotiate disagreements regarding autonomy. Parents need to understand, accept, and promote an adolescent's march towards autonomy in an age-appropriate and safe manner. Excessively authoritarian and/or rigid expectations; or excessively permissive parenting approaches with adolescents should be avoided.

Parenting style not only impacts attachment formation, but it also is related to the experience of virtually all major internalizing and externalizing disorders of adolescence. Hostile, inattentive and inconsistent parenting approaches can arguably be even more damaging to the adolescent who seeks autonomy. Adolescents continue to need limits; their parents should continue to be alert to their whereabouts and their stories.

3. Secondary attachments in adolescence

While the attachment relationship the adolescent has with their parents is reflected in their *internal working model* or their expectations and beliefs about relationships and themselves in relationships, these representations are open to modification and change through experience.

Adolescence is characterized by a rapid expansion in relationship networks. Most notably, adolescence represents a phase of development in which an individual's range of attachment figures is thought to expand dramatically to include friends and romantic partners (secondary attachment figures).

Understanding the extent of an adolescent's close attachment network, the quality of each close relationship needs to be understood and also implications upon the adolescent of a rupture of these relationships. New positive relationships and experiences may help an adolescent modify maladaptive ways of relating to others.

ADOLESCENTS HAVE A STRONG NEED TO BELONG

“Humans have a fundamental need to belong. Just as we have needs for food and water, we also have needs for positive and lasting relationships,” says C. Nathan DeWall, PhD, a psychologist at the University of Kentucky. “This need is deeply rooted in our evolutionary history and has all sorts of consequences for modern psychological processes.” The need to belong is strong in young people too.

THE PAIN OF SOCIAL REJECTION



A broken heart is not be so different
from a broken arm

Researchers have found surprising evidence that the pain of being excluded is not so different from the pain of physical injury. Rejection also has serious implications for an individual's psychological state and for society in general. Social rejection can influence emotion, cognition and even physical health. Young people are particularly sensitive to rejection.

SOCIAL REJECTION ACTIVATES SAME BRAIN REGIONS INVOLVED IN PHYSICAL PAIN

Naomi Eisenberger, PhD, at the University of California, Los Angeles, Kipling Williams, PhD, at Purdue University, and colleagues found that social rejection activates many of the same brain regions involved in physical pain (Science, 2003). To study rejection inside an fMRI scanner, the researchers used a technique called Cyberball. In Cyberball, the subject plays an online game of catch with two other players. Eventually the two other players begin throwing the ball only to each other, excluding the subject. Compared with volunteers who continue to be included, those who are rejected show increased activity in the dorsal anterior cingulate and the anterior insula — two of the regions that show increased activity in response to physical pain, Eisenberger says.

THE SAME IS TRUE WHEN BREAKING UP FROM ROMANTIC PARTNER

University of Michigan psychologist Ethan Kross, PhD, and colleagues scanned the brains of participants whose romantic partners had recently broken up with them. The brain regions associated with physical pain lit up as the participants viewed photographs of their exes (*Proceedings of the National Academy of Sciences*, 2011).

EXCLUSION CAUSES A CASCADE OF CONSEQUENCES

Researchers have found that social rejection increases anger, anxiety, depression, jealousy and sadness. It reduces performance on difficult intellectual tasks, and can also contribute to aggression and poor impulse control, as DeWall explains in a recent review (*Current Directions in Psychological Science*, 2011).

DIFFERENT REACTIONS WHEN REJECTED

Some people when rejected react with anger and lashing out. If someone's primary concern is to reassert a sense of control, he or she may become aggressive as a way to force others to pay attention. That can create a downward spiral. When young people act aggressively, they're even less likely to gain social acceptance.

What causes some people to become friendlier in response to rejection, while others get angry? According to DeWall, even a glimmer of hope for acceptance can make all the difference. In a pair of experiments, he and his colleagues found that students who were accepted by no other participants in group activities behaved more aggressively — feeding hot sauce to partners who purportedly disliked spicy foods,

and blasting partners with uncomfortably loud white noise through headphones — than students accepted by just one of the other participants (*Social Psychological and Personality Science*, 2010).

Some people when their sense of belonging and self-esteem has been thwarted, instead of reacting aggressively may try to reconnect. They may actually become more sensitive to potential signs of connection, and they tailor their behaviour accordingly. “They will pay more attention to social cues, be more likable, more likely to conform to other people and more likely to comply with other people’s requests,” Kipling Williams.

REJECTION CAN TURN TO EXTREME VIOLENCE

When ostracized people sometimes become aggressive and can turn to violence. In 2003 Leary and colleagues analyzed 15 cases of school shooters, and found all but two suffered from social rejection (*Aggressive Behavior*, 2003).

EFFECT OF REJECTION ON PHYSICAL WELL BEING

Physically, too, rejection takes a toll. People who routinely feel excluded have poorer sleep quality, and their immune systems don’t function as well as those of people with strong social connections, he says.

EFFECTS OF CRONIC REJECTION

When human beings are chronically rejected or excluded, the results may be severe. Depression, substance abuse and suicide are not uncommon responses. “A lot of times, these are things they don’t want to talk about” - in that case, psychologists can help people talk through their feelings of exclusion”, DeWall says. (*Social Psychological and Personality Science*, 2010).

POSITIVE INTERACTIONS RELEASE OPIOIDS FOR A NATURAL MOOD BOOST

The pain of non-chronic rejection may be easier to alleviate. Researchers say, the rejected should seek out healthy, positive connections with friends and family. That recommendation squares with the neural evidence that shows positive social interactions release opioids for a natural mood boost, Eisenberger says. Other activities that produce opioids naturally, such as exercise, might also help ease the sore feelings that come with rejection. (*Science*, 2003).

SOCIAL EXPERIENCES LITERALLY SHAPE THE WIRING OF OUR BRAINS

What was generally found in research is that our interpersonal connections shape our neural connections. Humans are profoundly social creatures and our social experiences literally shape the wiring of our social brains.

PLASTICITY OF THE BRAIN

The plasticity of the brain means that it can change at any age, open itself up to different approaches, access different areas, always increasing its power.

FOCUS OF ATTENTION CHANGES THE BRAIN

Science has clearly shown that how we focus our attention will grow our brains in specific ways. For example, if we spend a lot of time focusing our attention on learning a musical instrument - that will encourage those activated parts of our brain to grow. The focus of attention changes the structure and function of the brain throughout life, no matter our age.

When we focus on external objects in the world, we are harnessing only our physical-object perceptual system, but we can also focus on inner subjective world – this means seeing our own mind and seeing the mind of others. Not seeing the mind of others can lead to treating others without respect and empathy.

By focusing on internal experiences we can develop our skills to see and shape our inner personal world and our interpersonal life. By focusing and becoming aware of the mind, choosing to cultivate respect and compassion in our interaction with others, we can stimulate the activity of the brain in new ways.

APPENDIX 1: EXERCISES IN REFLECTIVE CONVERSATIONS

What happens in a family, with friends, at school, and even in the culture of our communities and larger society, can shape the way the brain develops. How can you create integration in your relationship with others? This is done by reflection.

You can reflect on your inner mental life – that means you sense and are aware of the sensations of the body, you feel your feelings, think your thoughts, remember your memories. Whatever arises in your subjective experience, you let it enter awareness and simply be present as it emerges. That is inner reflection.

But we can also reflect on the inner world of others and our connection with them. We can engage in reflective dialogue or conversation that focuses on the inner experience of everyone in the communication. In reflective conversations each person can share what they are feeling, thinking, remembering, hoping, dreaming, believing, or perceiving. These conversations connect us to one another so that we can feel felt and seen – so that we can feel authentic and real.

Reflective conversations make life meaningful and enable us to feel a part of something larger than our isolated sense of self. Showing respect and being kind to one another are essential ingredients. Another important aspect of reflective conversation is that we observe patterns in how we are communicating and connecting with one another.

Studies of the brain clearly show that reflection, inward or in communication with others, stimulates the activation and development of the prefrontal cortex towards its integrative growth. When we attune to another person and allow our own internal sensations to be shaped by that other person's feelings, we create "resonance". When we resonate with someone we come to feel their feelings at the same time as we become more aware of our own. This awareness includes our bodily sensations as well as our own emotions. We become more self-aware.

When we tune in to the inner life of another, we can create compassionate communication, one filled with empathy and caring. This connection is the essence of a healthy, supportive relationship filled with mutual respect, kindness and compassion. Reflective conversations make it possible to join with others from the inside out.

Learning to be more reflective can help anyone, regardless of age, develop a more integrated brain.

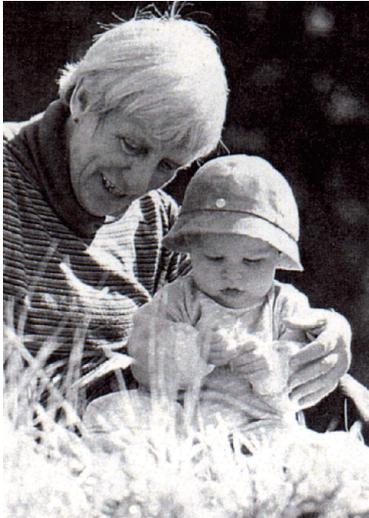
Learning how to relate to others in meaningful ways using reflective conversations can help adolescents become more resilient to life's changes and challenges.

EXERCISE:

1. To what extent are you able to hold such a conversation – a lot, medium, little?
2. Give examples.
3. Think of a person in your life who you feel brings out the best in you. Let the way you interact fill your awareness.
Now think of another person who brings out the worst in you. Reflect on the nature of your communication with that person.
And now compare the two patterns you have in each of these relationships. Reach out to the person who brings out the best in you. See if you can find some time to simply express to them your gratitude for your relationship. Being grateful is a powerful source of reinforcing the positive experience we have in life. Sharing that gratitude with another person is a powerful way of amplifying the positive interpersonal connection.
Now imagine how you might try to improve the relationship with the person who brings out the worst in you. What would you do differently? How might you communicate with this person in a way that would be more in line with reflective conversation and integration?
4. Think of a relationship in which a rupture has occurred, where there is disconnection between you and the other person may be in need of repair. When you repair a rupture in a relationship, it means making a move towards the person and reconnecting with them. If you have an open rupture with friends or family members, think of ways you might go back and reconnect with them. One effective way to begin is by making a statement about your interest in connecting again; this can break the ice and set things in motion. When you are ready, you can check in with the other person and see if this is a good time to speak with him or her about what is going on. You can state that you'd like to reconnect. Listen to what is being said, don't judge. Being open to the other person is essential to let the person feel felt and for you to truly understand what might be going on. One of the hardest elements may be to let go of the notion that you are right and the other person is wrong. Listen, take in the other person's perspective, and realize that understanding each other is the road to reconnection. When it is time, you can share in a non-judgemental way your own experience, using "I" language like "I felt that.." or "I thought that.." rather than "you made me feel.." or "You didn't do.. Letting each person in the dialogue have space to express and be heard fully is essential. Be open to whatever arises in the conversation. There are no rights and wrongs in repair simply a sharing of each person's experience.

APPENDIX 2: ATTACHMENT AND THE STRANGE SITUATION

“GOOD ATTUNEMENT NOW, GOOD ATTACHMENT LATER” – IF WE SHOW THEM PLENTY OF LOVE, BABIES WILL GET ATTACHED TO US AND WE TO THEM



John Bowlby’s follower, Mary Ainsworth went on to develop in 1978, a method (known as the ‘Strange Situation’) for assessing how well attached an individual infant is to her mother or caregiver.

This method is still commonly and internationally used.

Ainsworth’s study demonstrated that the sensitivity of the mother to the baby, as assessed in the home at six months of age, predicted secure attachment of the baby at twelve months.

Sensitivity or attunement is defined as responsiveness to the baby’s special needs, moods and signals, whatever these might be.

Infants become attached to a number of people, including their grandparents. The nature of the attachment depends upon the relationship between the child and caregiver.

Ainsworth’s classic experiment to measure attachment at one year of age:



A baby plays beside her mother, occupying herself with toys on the floor, for 3 minutes in an ordinary room strange to the baby. A stranger, a woman comes in; sits for a minute; talks with the mother a minute; tries to engage the baby a minute. Then the mother leaves. She returns a few minutes later.

How does the baby react on reunion with her mother?

Three main types of responses were identified:

1. Securely attached babies are those who freely greet their mothers on reunion, labelled as group **B**.
2. Babies who avoid or ignore predominantly mothers on reunion are labelled avoidant group **A**.
3. Babies who mix anger and rejection, with some attempts to contact the mother are called resistant or ambivalent, group **C**.

Attachment:

An emotional tie binding

The majority of babies are securely attached; both A and C babies are said to be insecurely attached.

AINSWORTH'S THE STRANGE SITUATION TECHNIQUE

The procedure consists of a series of episodes involving collaboration between the experimenter and mother. Throughout the infant's behavior is recorded either on video tape camera, or by an unseen observer sitting behind a two-way mirror.



1. The infant and his mother are brought into a comfortably furnished laboratory playroom and the child has an opportunity to explore this new environment

2. Another female adult, whom the child does not know, enters the room and sits talking in a friendly way, first to the mother and then to the child.

3. While the stranger is talking to the child the mother leaves the room, unobtrusively, at a prearranged signal.



4. The stranger tries to interact with the child.

5. Mother returns and the stranger leaves her together with the child.

6. Mother then goes out of the room leaving the child there alone.



Each of these separate episodes lasts for three minutes at the most, but less if the child becomes very distressed. The video record is scored in terms of the child's behaviour directed towards the caregiver:

- Seeking contact.
- Maintaining contact.
- Avoidance of contact.
- Resistance to contact.

7. The stranger returns and stays in the room with the child.

8. The mother returns again.

Children with secure attachment: In homes, the mothers of these children with secure attachment were very sensitive and responsive to the calls of their children, being available whenever they needed them. Bowlby: An individual who has experienced a secure attachment from the beginning of his life "probably has a model of representation of his attachment figure as someone available, responsive and attentive."

This bond is of vital importance for the later development of a healthy personality.

Children of anxious / ambivalent attachment: In their homes, the mothers of children of anxious or ambivalent attachment behaved inconsistently, being sensitive and affectionate with their children in some cases but cold and insensitive in others. These patterns of behavior make children feel insecure about their mothers being really available when they need it or not.

Children of avoidant attachment: The mothers of these children are relatively insensitive to the requests and needs of their children. The children seem very insecure and in some cases very worried about the proximity of their mother, crying intensely when the mother leaves. Ainsworth's overall interpretation states that, when these children enter the Stranger's Situation, they understand that they do not have the support of their mothers and react in a defensive way by acting indifferently. As they have received many rejections in the past, they try to deny that they need their mothers to face their frustrations.

Later, after conducting various studies and observations, another type of attachment was added, **the disorganized** one. Children exhibit a confusing mix of behaviors and may seem disoriented. They may resist or directly avoid their parents. In these cases, the parents have surely served as a source of comfort and, at the same time, as a source of fear, leading to disorganized behavior.

CONSEQUENCES OF THE TYPE OF ATTACHMENT

The type of attachment that is created between the child and the primary caregiver is not only relevant during childhood; It also has important consequences when the child reaches adolescence and adulthood. The type of attachment affects the way in which individuals perceive themselves and other people, and determines to a large extent their relationships.

- In general, individuals with secure attachment are warmer, more stable, and tend to have more satisfying relationships. They usually have a coherent vision of themselves, they believe that they deserve to receive love and they have no problem trusting other people.

- Individuals with anxious / ambivalent attachment feel more insecure at the time of relating, but, at the same time, they have a desire for intimacy.
- Finally, individuals with avoidance attachment are also insecure for relationships, but they tend to avoid them and are detached from other people.

The representation models of the type of attachment represent oneself, others and interpersonal relationships. They are constructed from the interactions of bonding with the caregiver or primary caregivers and the emotions that the child feels from those interactions.

The interactions and associated emotions are internalized mentally and create expectations for the following interactions ("internal working model").

Generational transmission is not inevitable. For example, the establishment of a satisfactory relationship, or the experience of motherhood, could lead to a reworking of this model. It is possible that, if a person has been rejected by their parents during their childhood, do not treat their children in the same way so that they can become people with a sense of identity and high self-esteem.

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