THE DEVELOPMENT OF EMPATHY AND
THE RELATION TO DELINQUENCY

2017 CHILDREN’S LAW INSTITUTE

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US Alliance to End the Hitting of Children
Researchers found that infants under the age of three who do not form strong bonds with their mothers or fathers are more likely to be aggressive, defiant, hyperactive, and educational problems. In a study of 14,000 US children, 40 percent lack strong emotional bonds -- what psychologists call 'secure attachment' -- with their parents that are crucial to success later in life, according to a new report. The researchers found that these children are more likely to face educational and behavioral problems.
More on this research: http://stopspanking.org/2014/12/15/how-hard-will-he-have-to-work/

*Making an effort to feel positive: insecure attachment in infancy predicts the neural underpinnings of emotion regulation in adulthood*, Christina Moutsiana, 2014


Research: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4263234/

Sample N = 54

This is fascinating research on how early secure attachment predicts long-term emotional regulation into adulthood, and in particular a person’s ability to have a positive neurochemical response to positive experiences. In other words, an ambivalent attachment inhibits the brain’s ability to fully experience pleasure.

This study evaluates the quality of attachment between the 18-month old child and his/her mother using a gold standard measure, the Ainsworth’s Strange Situation Procedure. They researched these children, testing them for mental health problems revisiting them at age 5, 8, 13, 16 and 22. They also looked at
Are children “attached” to their parents?

- My parents understand me
- My parents expect too much of me (reversed scoring)
- My parents trust me
- I have a lot of arguments with my parents (reversed scoring)
- I disobey my parents (reversed scoring)
- My parents treat me fairly
Do children have secure friendships?

Figure 3: Percentage of students who reported having high quality peer relationships by grade and gender

- Students in my class enjoy being together
- Most students in my class are kind and helpful
- Other students accept me as I am
- When a student in my class is feeling down, someone else in class tries to help
- Students in my class treat each other with respect
Are children “connected” to their teachers?

- I feel that my teachers care about me as a person.
- I feel that my teachers accept me as I am.
- I feel a lot of trust in my teachers.
- My teachers are interested in me as a student.
- My teachers listen to how I would like to do things.

Figure 2: Percentage of students who reported having a high quality relationship with their teachers by grade and gender.
The 2009-10 HBSC sample includes 436 Canadian elementary and high schools.

Participants in the 2009-10 Canadian HBSC study were 23,193 students in grades 6 to 10 from across the country. The sample was approximately 48% male, with an average age of 13 years, 10 months; 27% of students lived in single-parent households. With respect to race, 72% of the respondents identified themselves as White or of Western European decent, 6% identified as North American Aboriginal (Métis, Inuit, Dene, First Nations), 6% identified as East or South East Asian, 3% identified as South Asian, and 13% identified as either Black, Hispanic, Middle Eastern, mixed race, or other race. Participants lived in 436 communities where average household income was $68,409, with an average of 62% of the working age population employed (employment-to population ratio).

Conducted every 4 years in 40+ countries in partnership with the WHO Regional Office, Europe
**Self-organization** in the developing brain occurs within relationship with **another brain**.

A. Schore

How do we cultivate empathy?

Foundation for Experiencing Empathy

- The neurodevelopmental capacity to:
  1. Feel physically calm (arousal)
  2. maintain nurturing relationships
  3. rely upon relationships while under stress

Ability to experience the feeling of “You & Me”
Neurodevelopmentally Informed Interactions

- Supports **Self Regulation** via Co-regulation
- **Sensory** Sensitive
- Emphasizes the **Relational Reward** System of the Brain
Self Regulatory Equipment Drives PHYSIOLOGICAL Arousal

Patterned, repetitive, pleasurable, respectful, somatosensory experience within the context of relationship builds self-regulation.
Effects of Alcohol: Optimal Brain

NeoCtx = 12
Limbic = 8
DI = 6
BS = 4
2.0

NeoCtx = 10
Limbic = 6
DI = 6
BS = 4
1.6

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Effects of Alcohol
Neglect and Trauma Brain

NeoCtx = 10
Limbic = 6
DC = 8
BS = 6

1.1

NeoCtx = 8
Limbic = 4
DC = 8
BS = 6

0.86
Function is STATE Dependent
Dr. Dan Siegel, author of “The Whole Brain Child” describes a tantrum as a child’s brain being in distress. In a New York Times article Seeing Tantrums as Distress, Not Defiance, he describes “During those early years, the ability to coordinate and balance your own subcortical source of emotion is dependent on a caregiver’s response to you,” he says. We freak out, they freak out. Our ability to stay tuned in to them literally helps their brains grow.
Attitude About Naughty Children

- Mother’s hostile attributions about infant's intentions signal risk for maltreatment
- 23% Scored 5 on scale of 0-5
- If Hostility Score = 5 mother is 2X more likely to abuse child as toddler

Someone who is angry is someone who doesn't know how to handle their suffering. They are the first victim of their suffering. You are actually the second victim. Once we can see this, compassion is born in our heart and anger evaporates. We don't want to punish any more, but instead we want to say something or do something to help them suffer less.
## Escalation is Predictable

<table>
<thead>
<tr>
<th>Adaptive Response</th>
<th>REST</th>
<th>VIGILANCE</th>
<th>FREEZE</th>
<th>FLIGHT</th>
<th>FIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predictable De-escalating Behaviors</strong> (behaviors of the teacher or caregiver when a child is in various states of arousal)</td>
<td>Presence Quiet Rocking</td>
<td>Quiet voice Eye contact Confide Clear simple directives</td>
<td>Slow sure physical touch &quot;invited&quot; touch Quiet melodic words Singing, humming, music</td>
<td>Presence Quiet Confidence Disengage</td>
<td>Appropriate physical restraint Withdraw from class Time!</td>
</tr>
<tr>
<td><strong>Predictable Escalating Behaviors</strong> (behaviors of the teacher or caregiver when a child is in various states of arousal)</td>
<td>Talking Poking Noise Television</td>
<td>Frustration, anxiety Communicate from distance without eye contact Complex, compound directives Ultimatums</td>
<td>Raised voice Raised hand Shaking finger Tone of voice, yelling, threats Chaos in class</td>
<td>Increased or continued frustration Noise yelling Chaos Sense of fear</td>
<td>Inappropriate physical restraint Grabbing Shaking Screaming</td>
</tr>
<tr>
<td><strong>Regulating Brain Region</strong></td>
<td>NEOCORTEX Cortex</td>
<td>CORTEX Limbic</td>
<td>LIMBIC Midbrain</td>
<td>MIDBRAIN Brainstem</td>
<td>BRAINSTEM Autonomic</td>
</tr>
<tr>
<td><strong>Cognition</strong></td>
<td>ABSTRACT</td>
<td>CONCRETE</td>
<td>EMOTIONAL</td>
<td>REACTIVE</td>
<td>REFLEXIVE</td>
</tr>
<tr>
<td><strong>STATE</strong></td>
<td>CALM</td>
<td>ALERT</td>
<td>ALARM</td>
<td>FEAR</td>
<td>TERROR</td>
</tr>
</tbody>
</table>
“Males may require comparatively lower levels of both genetic and environmental risk to reach a threshold for the emergence of antisocial behavior…. Ultimately, the pattern of findings produced in this study suggests that the use of corporal punishment may exacerbate genetic vulnerabilities in
Sensory Processing Assessment

- Touch
- Proprioception (sense of position and movement of our limbs and trunk, the sense of effort, the sense of force, and the sense of heaviness)
- Vestibular (sense of movement)
- Auditory/Listening
- Vision
- Taste and Smell
The findings come from a national survey of more than 1,150 families with children between 2 and 8 years old. The team found a relationship between the content children are exposed to and their executive function, an important facet in learning and development. This was especially true among children in families she identified as “high risk”—in families living in poverty or families whose parents have little education, for example. Yet even kids in high-risk families who watched educational television saw increases in executive function, the researchers found.
It's an innovative alternative to the traditional desk that incorporates movement. Pinckney Elementary is moving minds through movement.
The final analysis included 16 randomized controlled trials, 2 nonrandomized preintervention–postintervention control-group designs, 7 uncontrolled preintervention–postintervention studies, and 1 case study.
Somatosensory (SS) Regulation

7- to 9-year-old children who run around and play for at least 70 minutes a day show improved thinking skills, particularly in multitasking, compared to children who aren’t as active. Hillman, Pediatrics, 2014


Charles Hillman, Pediatrics, 2014
Positive interaction stimulates neural development necessary to move from co-regulation to more autonomous forms of self-regulation
Self-Regulation
A Bottom Up Approach

- **Regulate** – lower brain
- **Relate** - midbrain
- **Reason** – higher brain

Build in regulation when calm

![Graph showing level of arousal over time of day](image-url)

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Response in the brain to effective mirroring and attunement within relationship that mitigates reactivity of the lower brain and supports growth through the entire network of the brain.

RELATIONAL REWARD SYSTEM
GROUP EXERCISE ON THE EXPERIENCE OF ATTACHMENT

The Feeling of “You and Me”
Co-dysregulation: Distressed child and anxious, reactive parent

Child

Parent

Time

Hear  See  Grab  Plead  Jiggle  Shake  Yell  Disengage  Self-sooth

Terror

Fear

Alarm

Alert

Calm

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Cortical Modulation

Mature

Developing/ Neglect

Cortex

Limbic

DE

BS

Cortex

Limbic

DE

BS

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### Table: Developmental Stage and Brain Areas

<table>
<thead>
<tr>
<th>Ages</th>
<th>30 ← 15</th>
<th>15 ← 8</th>
<th>8 ← 3</th>
<th>3 ← 1</th>
<th>1 ← 0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developmental Stage</strong></td>
<td>Adult</td>
<td>Adolescent</td>
<td>Child</td>
<td>Toddler</td>
<td>Infant</td>
</tr>
<tr>
<td><strong>Primary secondary Brain Areas</strong></td>
<td>NEOCORTEX</td>
<td>SUBCORTEX</td>
<td>LIMBIC</td>
<td>MIDBRAIN</td>
<td>BRAINSTEM</td>
</tr>
<tr>
<td><strong>Cognition</strong></td>
<td>Abstract</td>
<td>Concrete</td>
<td>“Emotional”</td>
<td>Reactive</td>
<td>Reflexive</td>
</tr>
<tr>
<td><strong>Mental State</strong></td>
<td>CALM</td>
<td>ALERT</td>
<td>ALARM</td>
<td>FEAR</td>
<td>TERROR</td>
</tr>
</tbody>
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Bruce D Perry, MD, PhD © 2010

Function, Developmental Stage, and Attachment is STATE Dependent
Why Punishment Fails

- Makes people mad (activates stress response)
- Eventually loses its effectiveness
- Erodes relationships with our kids (Starves RR system)
- Makes kids more self centered (chronic arousal)
- Traumatized kids associate punishment with serious threat

Physical Threat  Other Punishments  Rewards

Alfie Kohn, PhD
“Children Do Well When They Can”

- Doing well is always preferable
- A child is challenging because of lagging skills and unsolved problems
- **Solving problems and teaching skills**
  
  ...and managing arousal!

Ross Greene, PhD

Collaborative Problem Solving, Dr. Ross Greene; http://
www.livesinthebalance.org/
Necessary for development of the knowledge that certain affective states are tolerable. Because they don’t last for ever. They get better.

Gottman, Masters of Love: Science says lasting relationships come down to – you guessed it – kindness and generosity. The Atlantic, June 12, 2014

High arousal: Elevated heart rate, active sweat glands, heightened blood flow

Rupture & Repair

- Rupture is inevitable
- Repair is acknowledgement of the disconnection and the attempt to reconnect
- Abandon assigning (and thus avoiding) blame or relying upon authority
- Trust the rupture & repair process

(Schore, 2001)
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High arousal: Elevated heart rate, active sweat glands, heightened blood flow
In the happiest of our childhood memories, our parents were happy too.

- Robert Breault

Mutual Enjoyment VS Approval
Can you recognize a bid for connection?

http://stopspanking.org/videos  Chris Ulmer, Special Ed Teacher

Chris Ulmer, Special Education Teacher
Facebook: https://www.facebook.com/specialbooksbyspecialkids/videos/897982523637062/?pnref=story
- Powerlessness
- Being Mocked/Judged
- Violence
- Rage
- Personal Safety
- Sociopathy
- Chaos
- Feeling unseen

FEAR inhibits our own EMPATHY for our children.

WHAT IS YOUR AROUSAL LEVEL?
Developing our own Resiliency...

### Relational Reward
Developing a healthy sense of relational reward is the most important way to build resilience. These questions help clarify if your connection with others is sufficiently nourishing.

- I have good friends who support me.
- I have mentors or someone who shows me the way.
- I feel secure in my close relationships.
- I am empathetic to others.
- I trust my close friends.
- My role as a caregiver/provider is important.
- I feel like I belong in my community.
- I am lovable.
- I regularly reach out those I trust for comfort when I’m distressed.
- I can ask for help.
- It is OK if some people do not like me.

### Sensory Reward
These questions help clarify if you are able to enjoy healthy sensory reward in a way the consistently restores your sense of wellbeing. We may rely too heavily on sensory reward to feel better, due to problems with self-regulation and/or our

<table>
<thead>
<tr>
<th>Advanced Mind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our advanced mind develops best when our bodies feel good and our relationships nourish us. These are the conditions that help us to develop the most human part of our brain that feels empathy toward the world and ourselves. It is our &quot;big picture&quot; thinking. When this part of our brain is engaged, we can tolerate life’s difficulties more easily, and stay connected to others even if we’re suffering.</td>
</tr>
</tbody>
</table>

- I practice mindfulness or meditation.
- I am creative.
- I communicate effectively with others.
- I try many different ways to solve a problem.
- I enjoy learning and seek out new knowledge.
- I am open to new ideas.
- I can usually find something to laugh about.
- I am able to say no.
- I express my emotions.
- I am flexible.
- My life has meaning.
- I am a friend with myself.