

## Understanding Educational Issues for Adoptive Children: The Brain Science, Psychology and the Vital Conversations with Schools (Kent County Council Adoption Support Team)

### Presentation notes by Dr Margot Sunderland

A staggering 80% of children showing behavioral problems at the age of five go on to develop more serious forms of anti-social behavior 1(*Mental Health of Children and Adolescents in Great Britain (Office of National Statistics 2004)* 2 (*Sainsbury Centre for Mental Health 2011*)

On average it takes a child 10 years to receive help for a mental health problem  
*The Centre for Mental Health 2015*

Half the people with mental health problems in the UK had their first symptoms by the age of 14  
*No Health without Mental Health 2011*

#### So a nonsense:

"Let's just crack on with the curriculum and make these troubled children try harder"

#### Where in the brain is capacity for good behaviour, social skills, passion for learning and ability to manage stress well?

The frontal lobes – emotional, social and cognitive intelligence - so impacted by relationship experiences for better or worse that they are called the 'social organ'

- Ability to learn,
- Ability to concentrate
- Good Impulse control
- Emotional regulation
- Empathy
- Ability to reflect
- Emotional and social intelligence.

#### INFANTS ARE OFTEN HUGELY EMOTIONALLY DYSREGULATING FOR THEIR PARENTS

Under fours can have a need every 20 seconds- There are important emotional regulatory or explorative events

- To show you her plastic dinosaur for the fifth time
- To soothe her when she cries because her fairy doll has broken
- To say 'wow!' again when she shows you how she can hop like a frog
- To pick her up and give her a cuddle when she hurts her knee on the toy car
- To help her be the one who switches off the cold tap when you brush your teeth
- To get your help in trying to turn a key in the front door lock
- To get you to be delighted for the sixth time on the spider crawling up the bathroom wall.
- To listen to her story for the umpteenth time about how the naughty puddle made her slip that morning

Parents who have securely attached children are able to think about behaviour in terms of underlying mental states so we must offer this to looked after children - through mental state talk

#### Offering looked after children, secure attachment in school settings

When we are consistently and repeatedly emotionally responsive to children then **top-down brain pathways**...calm the reptilian part of our brain and its primitive impulses of flight and  
*Cozolino, L.J. (2006) The Neuroscience of Human Relationships, Attachment and the Developing Social Brain. London: W.W. Norton and Company*

#### The Genetically Ingrained Emotional Systems Deep in the Old Mammalian Part of Our Brain

RAGE

FEAR

PANIC/GRIEF (those in red – high levels of stress hormones)

ATTACHMENT

SEEKING

PLAY (those in black anti- anxiety and anti-aggressive chemicals)

(*Jaak Panksepp 1998*)

#### The Biochemical Basis of Secure Attachment

- **Oxytocin**
- **Opioids**
- **Prolactin**
- **GABA**
- **Benzodiazepines**
- **(brain's natural valium)**
- **(plus others)**

When opioids and oxytocin are optimally activated in the child's brain we do not want to fight (*Anti- anxiety/ anti- aggression molecules*)

#### Hence the importance of attachment aware schools

#### Effective stress regulatory systems are not established in the brain of many troubled children

Those children destined to be the most troublesome offenders in teenage years already distinguished at age 3 by levels of aggression 10 times higher than the most peaceable 30 toddlers *Richard Tremblay (University of Montreal)*

The most violent adolescents did not become more violent in their adolescent years; they were already very violent at age 6.

*Philos Trans R Soc Lond B Biol Sci. 2008 Aug 12; 363(1503): 2613-22. doi: 10.1098/rstb.2008.0030. Understanding development and prevention of chronic physical aggression: towards experimental epigenetic studies. Tremblay RE.*

## NEGLECT

Some children have so few [positive] relational experiences that they have [major developmental delay] in the capacity to be socially appropriate, empathic, self-regulating and humane. By the time they reach age 10, they have only had the number and quality of positive social interactions that a typical 5 year old gets. (Bruce Perry 2006)

### Key intervention to heal brain and mind: EMPATHY

School staff need to be trained to offer adopted children empathic responses

Empathic listening leads to good vagal tone....

Children/ Teenagers, better able:

- To learn
- To use life well
- To concentrate
- To enjoy relationships
- To be kind to others

Gottman, J, Katz, L, Hooven, C (1996) *Parental Meta-Emotion Philosophy and the Emotional Life of Families: Theoretical Models and Preliminary Data. Journal of Family Psychology* 1996, Vol. 10, No. 3, 243-268

### Intervention for developmental delay in the classroom

Repeated positive relational experiences (Perry 2008) He suggests that school staff record number of positive interactions with relationally deprived children, to ensure no child who needs this is being overlooked

### Cognitive tasks with relational regulatory breaks (Louise Bomber) in the classroom

- Sensory Play
- Water play
- Sensory Play with Jelly
- Calm Boxes
- (All these must be adult accompanied)

**A key intervention having a dramatic impact on the brain's frontal lobes is attachment play.**

Communicating key psychological messages

- "You have my full attention"
- "I delight in being with you"
- "You are delightful"

**The number of brain connections are significantly higher after experiencing the enriched environment of attachment play - Barbro B. Johansson and Pavel V. Belichenko (2001)**

*Environmental Enrichment*

Also physical relational play- neurogenesis so repair of brain cell death due to toxic stress

Two key brain fertilisers triggers from attachment play vital for frontal lobe functioning

BDNF ( brain derived neurotrophic factor)

IGF1 ( insulin-like growth factor 1)

Gunnell D1, Miller LL, Rogers I, Holly JM; ALSPAC Study Team. Association of insulin-growth factor I and insulin-like growth factor-binding protein-3 with intelligence quotient am to 9-year-old children in the Avon Longitudinal Study of Parents and Children Pediatrics 20 Nov 116( 5) 681-

Panksepp, J.et al (2003) 'Modeling ADHD-type arousal with unilateral frontal cortex damage and beneficial effects of play therapy', Brain and Cognition

Burgdorf J et al (2010) Uncovering the molecular basis of positive affect using rough-and-tumble play in rats: a role for insulin-like growth factor I. Neuroscience. 2010 Jul 14;168(3):

**A Key resource offering a wealth of ideas for attachment play /relational play in the school setting with one to one time with key attachment figures**

**Dr Sunderland's DVDS "Best Relationship" series also with brain science explained (available on Amazon)**



**Insecurely attached children without effective stress regulatory systems in the brain cannot manage the stress of playgrounds**

**Children on the autism spectrum (a secure base in the school settings is even more important)**

**Reduced cortical functional connectivity in:**

- a) Temporal lobe visual cortex (face expression processing and social behavior)
  - b) Ventromedial prefrontal cortex, key in in emotion and social communication and theory c mind
  - c) Parietal lobes key for spatial functions in terms of oneself in space and in the environme
- They also need attachment aware schools and home environments

## THE HEALING OF TRAUMA

**Attachment aware schools should also be trauma aware schools**

**Children and teenagers need to do harming things to calm themselves down or just feel normal**

- Self harm
- Over eat/over sleep

- Swear at people all the time
- Destroy things
- Do unsafe things from social networking sites
- Get abused...again!
- Attack people
- Abuse drugs/alcohol
- Get pregnant
- Sex addiction

**With child trauma - minor stressors can elicit full-blown emergency reactions**

**THE HPA axis (Hypothalamus- pituitary- adrenal axis ( Megan Gunnar)**

*Stress physiology and developmental psychopathology: Past, present, and future*  
*.Doom JR, Gunnar MR. Dev Psychopathol. 2013 Nov;25(4 Pt 2):*

**Teach them in schools about the burglar alarm in their brain (amygdala) and to ask for emotional regulation when they need it**

**Schools supporting emotional regulation at the beginning of the school day so that children can be settled to learn**

Use of feeling faces and staff on hand 9-9.30 to be able to regulate children who have indicated through feeling faces that they are dysregulated

### **Communication by Impact**

A quick reference one-page cover story for each child in their file

History of trauma, loss and attachment- so we can think and process communication by impact – how they are making us feel what it was like for them (transference and projection)

“If we just see behavior ... with no reference to the context of [the child’s] life we do terrible violence to the facts of what has happened to him” (Professor Mark Solms)

### **Option to go deeper to help memory re-consolidation**

I’m just going to do a quick drawing because I think it might help us to understand what happened a bit more. I’m thinking life has been so hard for you - too hard TOO many cruel shocks. I’m remembering before your step dad moved out – little Casey (you were only 4) had so many shocks: Dad hurting you and then watching him hurt your little brother and not being able to stop him. No wonder you saw red when Emre laughed at you and tripped you up But grownups get things wrong, is there anything in the picture you want to change to make it feel more right for you...

**The question we must ask is not “Why is he behaving like that?” but rather “ What has happened to him?”**

**Connecting with the child/teenager, empathic listening, enables them to develop stress regulating systems in their brain**

**Resilient Teenager studies ( Book :Out of the Woods )**

“The resilient kids observe other people very carefully, and think of relationships — as if they were greatly important. They pay attention to how they act in relationships, and to the effect their actions on other people.

“They were interested in psychological experience, and their ideas about themselves and other people were discerning and thoughtful”

The contrast-group kids never accord relationships the scrutiny the resilient kids do. They seldom recognise themselves as the common denominator in all of their connections; and the *process* of relationships the way they work – seems not interest them at all. *Hauser et al ( 2006)*

So schools supporting the child’s psychological thinking

Use of therapeutic story triggers and strengthens the part of the frontal lobes to do with the capacity for psychological thinking

Coherent narrative to make sense of all this and Therapeutic Life story work

### **Therapeutic story develops capacity for psychological thinking**

*Annu Rev Psychol. 2011;62:103-34. doi: 10.1146/annurev-psych-120709-145406. The neurobases of social cognition and story comprehension. Mar RA. (metaling network composed the medial prefrontal cortex, posterior cingulate, and bilateral temporal parietal junction)*

### **Use of sandplay – therapeutic conversations**

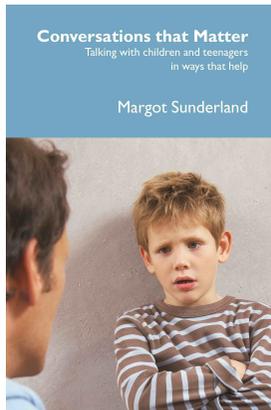
Children offered facility to symbolise their feelings so they don’t have to fall back on behaviour their feelings. So staff trained in facilitating sandplay therapy ([www.childmentalhealthcentre.org](http://www.childmentalhealthcentre.org)) for one day courses

Ben speaks of his pain at living with a single parent depressed Mum

“Mum gets stuck under the quick sand Sad is lonely. Sad had got to be deep deep and a bit scary too..I need a deeper, much deeper sand for lonely. So you see, Mum and I don’t really talk. I want to say to Mum,” Please don’t sleep all the time.”

“The trouble is I sometimes get buried in Mum’s quick sand too”

The capacity for therapeutic conversation is key to healing for lots of practical ideas for having such conversations see :



### From too much loss/ traumatic loss to Violence

Children like Charlie age 6 - His father had died, whilst in his car on a mobile phone to his mother...

He had become very aggressive in school. The school were thinking about expelling him... "opponent forces" are released in the brain...namely high levels of ACETYLCHOLINE - leaving you very irritable at best and very aggressive at worst. Comforting can bring levels back to normal.

### The biochemistry of un mourned loss

When there is a withdrawal of opioids in the brain (when you are coming off a person or heroin- it has the same effect) then what are known as opponent forces are released in the brain. These opponent forces involve the release of a chemical called acetylcholine.

After the withdrawal of opiates, acetylcholine very strongly and completely washes over the brain, flooding the upstairs brain. It can make people very angry, hostile, and irritated – unless they get help with their grief, from a person who is good at comforting and from whom they accept comfort.

The comforting of grief by key attachment figures in school will release opioids and oxytocin in the brain – these block this toxic chemistry of acetylcholine. This is why it is vital for children who are suffering from loss to receive comfort

### The power of music

Meta- analysis of over 400 studies on the impact of music on brain biochemistry

Music brought cortisol levels down more effectively than anti- anxiety drugs

Opioids, oxytocin, dopamine

Warm lights – Oxytocin Uvnas- Moberg

*Trends Cogn Sci. 2013 Apr;17(4):179-93. The neurochemistry of music.*

Chanda ML1, Levitin DJ

### Green space lowers cortisol levels

*Int J Environ Res Public Health. 2013 Sep 2; 10(9): 4086-103.*

*Green space and stress: evidence from cortisol measures in deprived urban communities. Roe JJ, Thompson CW, Aspinall PA, Brewer MJ, Duff EI, Miller D, Mitchell R, Clow A.*

### Benefits of emotional recovery from stress offered by green space and 'soft fascinat in such things as butterflies, bugs and long grasses

*Br J Sports Med. 2013 Mar 6*

*The urban brain: analysing outdoor physical activity with mobile EEG.*

*Aspinall P, Mavros P, Coyne R, Roe J.*

### Green play settings: as good as medication for ADHD children

*Coping with ADD: The Surprising Connection to Green Play Settings," by Andrea Faber Ta Frances E. Kuo; and William C. Sullivan*

*Environment and Behavior, Vol. 33, No. 1, January 2001*

*Children with attention deficits concentrate better after walk in the park.*

*Taylor AF, Kuo FE. J Atten Disord. 2009 Mar;12(5):402-9.*

### Discipline

#### Choices and consequences

*Parenting through Love and Logic*

(Foster Cline)

*Building the Bonds of Attachment*

(Dan Hughes)

How to Talk So Kids Will Listen and Listen So Kids Will Talk (Adele Faber; Elaine Mazlish)

How to Talk So Teens Will Listen and Listen So Teens Will Talk Adele Faber and Elaine Mazlish)

#### Choices and consequences

Child refuses to help tidy their bedroom

Adult: Ok you have a choice here, you can tidy your bedroom and then go to play in the pa we can stay at home until you tidy your bedroom. Can you let me know when you have de

Child: I'm not tidying my room

Adult :Shame you made a bad choice this time because it means that you will have to mis going to the park and stay in. Hope you make a better choice next time.

Child: I hate you

Adult: I can understand that. You would far rather just go out and play and not do the tidyi But that's not how things go in life. You hate me when I need to get you to learn something this.

**For references and a far fuller account: see: What Every Parent Needs to Know Mar; Sunderland ( Dorling Kindersley)**

#### [www.childmentalhealthcentre.org](http://www.childmentalhealthcentre.org)

(one day trainings in child counselling skills/therapeutic conversations/sandplay therapy/therapeutic life story work )

#### [www.artspsychotherapy.org](http://www.artspsychotherapy.org)

MA in Child Psychotherapy

Diploma in Chlld Counselling  
Certificate in Therapeutic Play

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