

Cuddling, Consciousness, and Cognition: The Significance of Emotional Engagement on Development and Learning

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The first
relationship—
mutual
regulation



**“One and one
make not two
but one.”**

~~~Ulanov

# MIND

~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*~\*

. . .an embodied and relational process that *regulates* the flow of energy and information

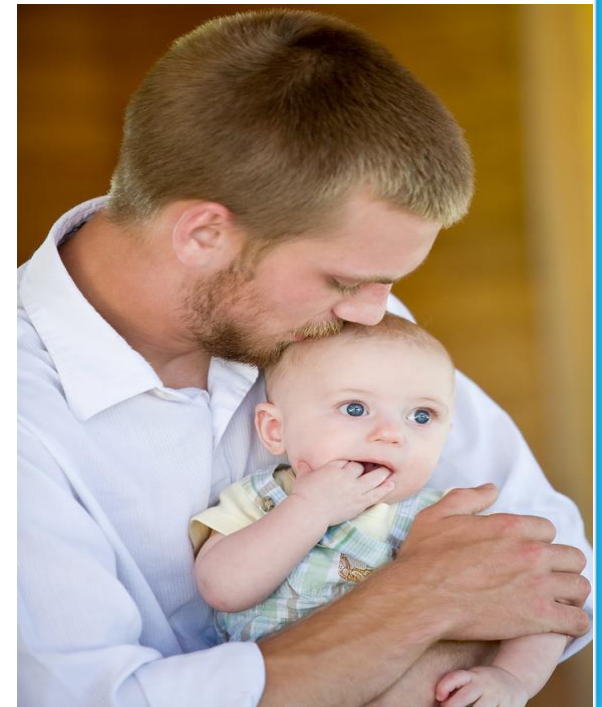
# Brain. . .



the embodied neural *mechanism*  
that shapes the flow of energy and  
information

# RELATIONSHIPS

...the patterns of interaction between two or more people that involve the *sharing* of energy and information flow



Round and round the garden  
Goes the teddy bear  
One step two step  
Tickle under there

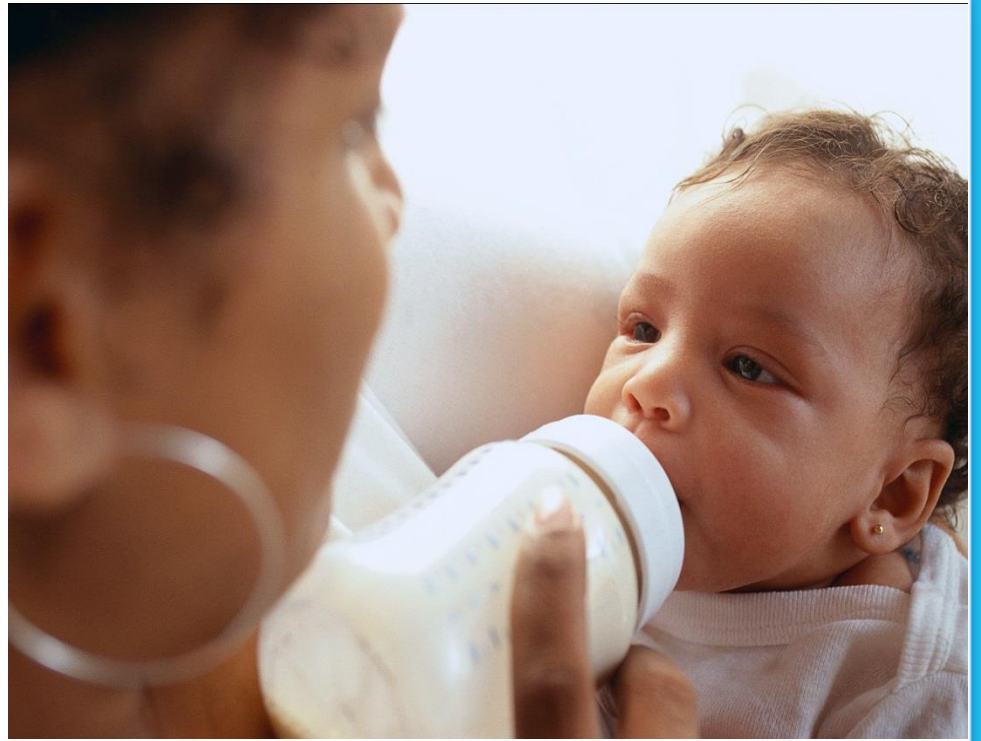
From Becky Bailey's *I Love You Rituals*



Viewing faces with direct gaze influences how infants process and react to them.



It's about *what*  
we say **AND**  
*how* we say it.



**KAPLAN**  
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All higher mental  
functions are  
internalized  
social relationships.



~ ~ ~Lev Vygotsky

# S E A L

***Stimulus*** (any sensory provocation)



***Emotion*** (positive or negative)



***Attention*** (positive emotions drive executive functions—  
negative emotions drive survival)



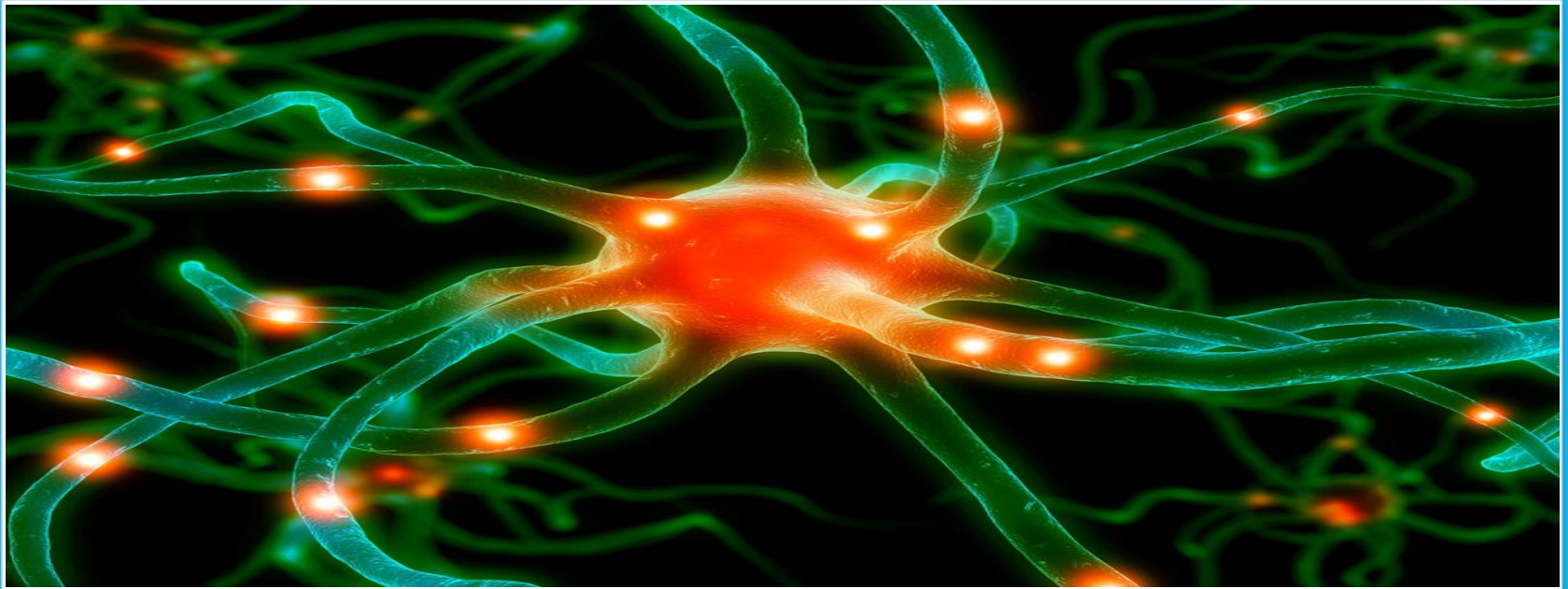
***Learning*** (the response to the attentional variant)

(adapted from Robert Sylwester's *A Biological Brain in a Cultural Classroom*)

Twinkle twinkle little star  
What a wonderful child you are  
With big bright eyes  
And nice round cheeks  
A talented person from head to feet  
Twinkle twinkle little star  
What a wonderful child you are

From Becky Bailey's *I Love You Rituals*





- ❖ Oxytocin
  - ❖ Serotonin
    - ❖ Dopamine
      - ❖ Cortisol



Implicit  
Memory



# Explicit Memory

Nature attends closely to  
the details.

~~~Jerome Kagan


Epigenesis . . .

the process in which experience
alters the regulation of gene
expression

There was a wonderful woman
Who lived in a shoe
She had many children
And she knew exactly what to do
She held them she rocked them
She tucked them in bed
I love you, I love you
Is what she said

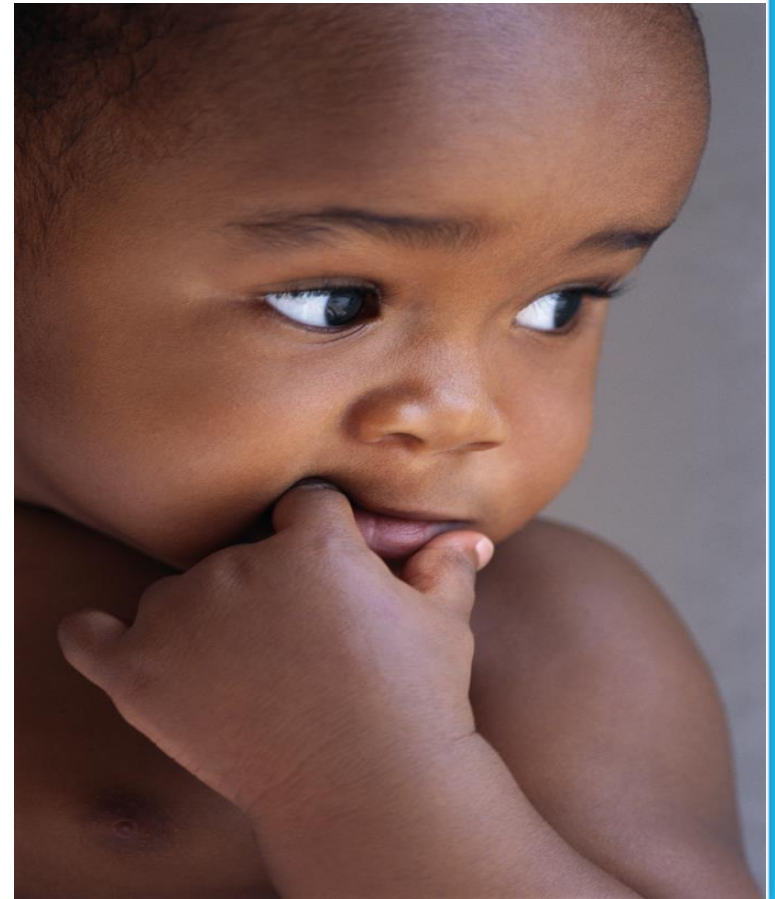
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SECURE ATTACHMENT

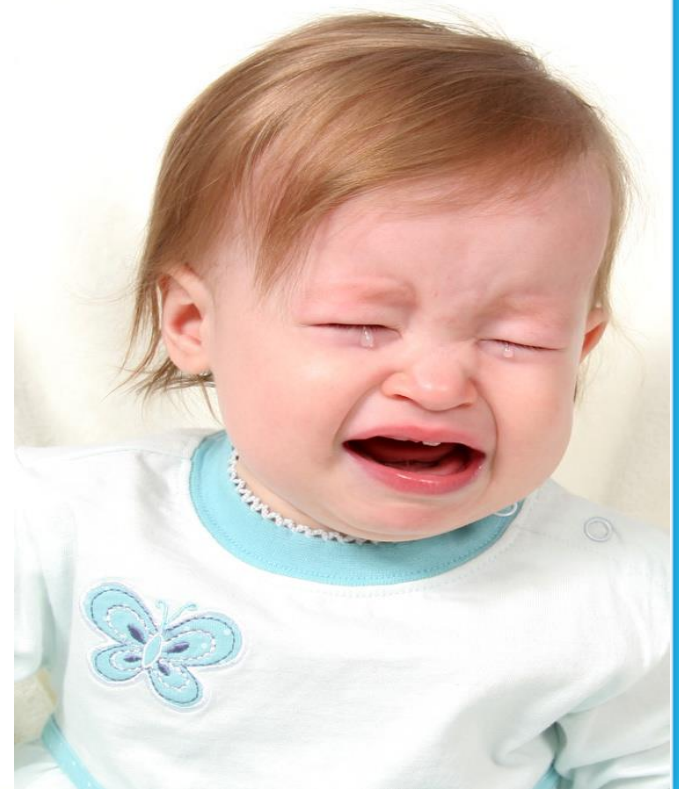
AVOIDANT ATTACHMENT





ANXIOUS ATTACHMENT

DISORGANIZED ATTACHMENT



Nothing without joy!!!

****Loris Malaguzzi*