



Enhancing Attachment Security: Clinical & Neurobiological Perspectives

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Overview

- ❖ Attachment theory in a nutshell
- ❖ Attachment theory: Affect and cognition
- ❖ Secure attachment and the brain
- ❖ Priming and memory
- ❖ Psychotherapy and priming
- ❖ Secure base priming: What it is and how it works
- ❖ Can repeated priming alter attachment style in a lasting way?

Attachment Theory in a Nutshell

- ❖ Attachment theory is a developmental life-span theory that attempts to explain how secure attachment develops and is maintained in infants / children and helps both children and adults survive temporary bouts of emotional distress and help them reestablish hope, optimism and emotional equanimity.
- ❖ It also explains how various forms of attachment insecurity develops and interferes with emotion regulation, social adjustment and mental health.
- ❖ According to Bowlby (1982), the development of an attachment orientation in childhood is based on many encounters and interactions with caregivers, which gradually create a mental network of relatively stable expectations and concerns.

Attachment Theory in a Nutshell

- ❖ Attachment styles are not diagnoses, but descriptions of behavior patterns.
- ❖ Attachment patterns are very stable - 80% continuity over 30+ yrs.
- ❖ Attachment patterns are fairly predictable based on the parent's attachment status - ~70% predictability when assessed pre-birth.
- ❖ Attachment patterns help us get into the mind of others.
- ❖ Rates of secure attachment are fairly consistent cross-culturally.
- ❖ Attachment theory is based on ethology. Attachment to a stronger, wiser caregiver optimizes survival.
- ❖ The instinct to attach is built into the hardware of the organism.
- ❖ It's not whether we attach, it's the quality of the attachment.

What's So Great About Attachment Security?

- ❖ **Children** with secure attachment engage in more elaborate make-believe play, display greater enthusiasm for tasks, are flexible and persistence in problem solving, have higher self-esteem, are socially competent, are cooperative with peers, are liked by peers, are empathic, have closer friendships and have positive social skills.
- ❖ **Adults** assessed as securely attached are happy, adaptively regulate their emotions, have stable close relationships, are flexible, are attuned to others, are compassionate, altruistic, and empathic, and more accepting of differences.
- ❖ **Parents** assessed as having secure attachment tend to imbue secure attachment in their children.
- ❖ **Couples** who are both assessed with secure attachment tend to seek out each other for comfort and caring, recognize signals for comfort and caring in their partner, provide comfort and care to their partner, accept comfort and caring from their partner when offered and utilize self-soothing skills when the partner is unavailable.

Attachment Theory and Affect

- ❖ Attachment theory may be thought of as a theory of affect regulation.
- ❖ If we think of regulating affect on a continuum from down-regulating to up-regulating:
 - ❖ *Securely attached people are flexible and adaptable to the needs of the situation - up-regulate when needed and down-regulate when needed.*
 - ❖ *Insecurely attached people tend to either habitually down-regulate or up-regulate.*
- ❖ The narratives of securely attached adults (AAI), suggest that they are more conscious of their emotions, can represent them through language, and therefore maintain cognitive clarity and coherence.
- ❖ Insecurely attached adults tend to regulate their emotions in ways that dramatically decrease cognitive control and coherence.

Attachment and Cognition

- ❖ The cognitive aspect of attachment (working models) refers to our beliefs about our own worthiness and the safety of others.
 - ❖ *“Am I the kind of person who is worthy of receiving care?”*
 - ❖ *“Can I trust that my attachment figure(s) will provide care when needed?”*
- ❖ These working models are developed and maintained through interactions with specific attachment figures in childhood and beyond (Priming).
- ❖ Working models are recalled automatically - primarily through implicit memory processes which guide thought and emotions and ultimately manifest in behavior.
- ❖ Attachment models may also be recalled and described explicitly, such as in psychotherapy or the Adult Attachment Interview.

Secure Attachment and the Brain

- ❖ Current neuroscience studies have revealed that rather than one particular brain structure, there are areas are functionally related to attachment processes.
- ❖ **Affective:** cerebellum and VTA (positive affect) and post-central gyrus; middle temporal, inferior parietal areas (social emotion processing, and emotional experience)
- ❖ **Cognitive:** Medial and prefrontal cortex (higher order cognitive processes including attentional control, emotion regulation, and appraisal) and hippocampus (memory) and parietal lobe (social and sensory attention and processing)
- ❖ **Behavior:** Supplementary motor area and supramarginal gyrus (areas linking reward and motivation).
- ❖ Canterbury and Gillath (2013) found SB priming activates areas of the brain that release dopamine (neurotransmitter), vasopressin and oxytocin (neuro-peptides).

Relationship Satisfaction and the Brain

- ❖ Acevedo, Aron and colleagues (2012) @ Stonybrook conducted fMRI studies of men and women in long-term, satisfying, stable relationships and found that greater relationship satisfaction was positively correlated with activation in several neural regions, including:
- ❖ The ventral tegmental area (reflecting reward and motivation);
- ❖ The orbitofrontal cortex (associated with the evaluation of rewards);
- ❖ The anterior insula (associated with empathy);
- ❖ The inferior frontal gyrus (associated with the mirror system);
- ❖ The bed nucleus of the stria terminalis (associated with stress control); and
- ❖ The prefrontal cortex (associated with affective regulation).
- ❖ Greater marital satisfaction was also associated with decreased activation of the subcallosal cingulate gyrus, an area whose high activity is implicated in severe depression.
- ❖ These findings highlight key neural sites that may mediate the link between relationship quality with psychological and physical well-being and health.

Priming and Memory

- ❖ Priming is a form of implicit memory where the exposure to one stimulus influences one's response to another stimulus
- ❖ For example: When primed with the word "NURSE" a person will more quickly unscramble the word: RTODCO
- ❖ Priming typically usually occurs without focused attention.
- ❖ Two classic priming experiments:
 - ❖ *Mommy and I are One (Subliminal Psychodynamic Activation) (Silberman, 1985): Ameliorated symptoms of depression.*
 - ❖ *Patience (Bargh, 1996): Reduced interrupting & rudeness*

Attachment and Priming

- ❖ Demands of the care-taking environment, throughout childhood, creates the context for the development of attachment patterns in children and these patterns persist into adulthood.
- ❖ Caregivers can be parents, grandparents, siblings and other care providers.
- ❖ These direct interactions prime and organize the developing brain.
- ❖ Priming can also occur as a result of observing the interactions of others - between caregivers and siblings and between caregivers.
- ❖ The child acts in ways that also support and maintain caregiver behaviors.
- ❖ This mutual adaptation process can also occur in long-term adult relationships.
- ❖ The brain is very adaptive, but doesn't automatically distinguish between healthy and unhealthy adaptation - it just adapts.

Psychotherapy and Priming

- ❖ Psychotherapy is an encounter with someone with already-established and reinforced self / other expectations and affect regulation strategies.
- ❖ The therapist's interactions with the patient will either confirm / maintain or give the patient an experience that contradicts expectations / responses.
- ❖ Repeated interactions with the therapist may change working models and facilitate the development of new affect regulation strategies.
- ❖ Each interaction is an opportunity for the patient to reappraise working models or learn new affect regulation strategies.
- ❖ These repeated experiences can strengthen secure attachment neural circuits, build confidence in self / others and facilitate well-being.

Secure Base Priming

- ❖ Can people with insecure attachment, temporarily behave more like people with secure attachment when primed with secure base stimuli?
- ❖ Shaver and Mikulincer (2001): *Attachment theory and Intergroup Bias: Evidence that Priming the Secure Base Schema Attenuates Negative Reactions to Out-Groups*
- ❖ They hypothesized that having a secure base could change how a person appraises threatening situations into more manageable events without activating insecure attachment type behaviors such as avoidance, fear, or preoccupation.
- ❖ Since then, they and other researchers have positively correlated secure base priming with increased self-esteem, compassion, altruism, mood, positive attitudes towards novel stimuli, reduced death anxiety, distortions of body image and decrease in symptoms of PTSD.

Semantic Networks & Nodes

- ❖ The idea behind both subliminal and supraliminal priming manipulations is that stimuli associated with a sense of security enters a semantic network and creates a process of spreading activation that touches upon affective as well as semantic nodes, thereby creating a sense of security similar to that which might be evoked by supportive attachment figures.
- ❖ A semantic network is a set of traces, concepts or nodes that are linked or related to one another to create a coherent knowledge set.
- ❖ Bird may include the mental image of: wings, can fly, feathers and may even be connected to other nodes, such as chicken or eagle
- ❖ Secure attachment may include - mother, holding, safety, love, affection....
- ❖ Insecure attachment may include - father, distant, anger, disapproval....
- ❖ Semantic networks can be descriptive as well as affective.

Schemas: Availability & Accessibility

- ❖ Attachment style activation is governed by cognitive principles of schema availability (i.e., the presence in mind of cognitive representations of attachment relationships) and accessibility (i.e., the ease with which attachment representations spring to mind).
- ❖ These cognitive principles are closely intertwined. The more often a schema is activated, the more accessible it and its elements become in response to relevant environmental cues in the future.
- ❖ Global attachment style represents an individual's most well-rehearsed and therefore most chronically accessible attachment schemas.
- ❖ Information processing will be biased by whichever schema is activated at a given point in time—hence the priming effects.

Priming Attachment Security

- ❖ Secure attachment schemas can be created / strengthened in people with insecure attachment through implicit (not-conscious) and explicit (conscious) methods (Mikulincer & Shaver, 2001).
- ❖ Successful methods include 1) Name of a security-providing attachment figure, 2) Words associated with the sense of security (e.g., love, hug, affectionate), 3. Images representing secure attachment, and 4) Guided imagery concerning the availability and supportiveness of real or imagined attachment figures.
- ❖ These techniques *temporarily* activate secure attachment mental representations and the positive emotions associated with them.
- ❖ Security priming has shown to increase: positive perceptions of self and others, pro-sociality, compassion, intergroup openness, and increased sexual intimacy. Priming has also been linked to reduced psychiatric symptoms.

Secure Base Priming Study

- ❖ How many priming experiences does it take to sustain the benefits of secure base priming?
- ❖ What does it take to change or establish a habit? Approximately 66 repetitions (18-254) (Lally, et. al, 2010).
- ❖ Brain asymmetry studies (Davidson, 2012) show that 60 days of meditation changes the relative activation of the PFC from right-dominant to left-dominant.
- ❖ Why can't SB Priming do the same?

Secure Base Priming Program

- ❖ What are the effects of SBP on attachment style and mood over time?
- ❖ Need to agree to participate in research study to use priming exercises.
- ❖ It is not psychotherapy or counseling or a medical intervention - but rather a brain-training exercise.
- ❖ Fill out a brief demographic questionnaire.
- ❖ Pre-tests: ECR-Short (12 items) and WHOTO.
- ❖ Each training day consists of a pre-mood and post mood scale.
- ❖ One priming exercise a day.
- ❖ Words, Images, Guided Imagery Exercises

Comfort

Embrace

Love

Support













Secure Base Guided Imagery

- ❖ Please think about a relationship you currently have or had in the past which you have found that it was relatively easy to get close to the other person and you felt comfortable depending on the other person. In this relationship you didn't often worry about being abandoned by the other person and you didn't worry about the other person getting too close to you.
- ❖ Now, take a moment and try to get a visual image in your mind of this person. What does or did this person look like? What was it like being with this person? You may want to remember a time you were actually with this person. How did you feel when you were with this person? How would you feel if they were here with you now?
- ❖ Please spend a few minutes thinking about the person you visualized and how they make/made you feel safe, secure and comforted.
- ❖ **If you are having difficulty identifying a person in this exercise, complete the following alternative exercise.**
- ❖ Imagine yourself in a problematic situation that you can not solve on your own, and imagine that you are surrounded by people who are sensitive and responsive to your distress, want to help you only because they love you, and set aside other activities in order to assist you.

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More References: <http://www.securebasepriming.org/home/studies>

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