Psychotherapy from an Attachment Theory Perspective

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Goals of Lecture

- Overview of infant attachment theory
- Adult attachment
- Affect regulation and attachment theory.
- Internal working models of self and others.
- Emotion, feelings and attachment
- Mirror neurons, empathy and attachment.
- Secure base priming
- Psychotherapy from an attachment and neurobiological perspective
- Assessing attachment (time permitting)

Why a new theoretical paradigm?

- Attachment theory is about close relationships.
- People often come to psychotherapy to talk about their close relationships.
- Psychotherapist/patient relationships is a close relationship.
- Attachment theory is an attempt to explain how secure attachment develops and how it helps people survive temporary bouts of pain discomfort, doubts and distress and help individuals 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.

Enter the Brain

- Proliferation of research based on scanning technology in the past 20 years.
- Although therapists are always working with brain functions, we either have never had training in the neurosciences or have not been interested in that area of science.
- The brain is changing throughout life.
- Although it changes most exponentially in the first 18 years, it is continually changing in response to the environment.
- Brained-based psychotherapy.

Neurobiology of attachment

- First two years of life: Attachment relationships help the immature brain use the mature capacities of the parent's brain to develop critical mental functions that are to important to interpersonal functioning.
- Experience-dependent development
- Attachment patterns are stable over time and seem so difficult to change (implicit memory).
- Identify those capacities of the brain that need strengthening or changing in order to improve interpersonal functioning.
- Prefrontal Cortex: Body maps, reflective function, empathy, response flexibility, social cognition, autonoetic consciousness, emotion regulation.

Attachment Theory

- Bowlby proposed that human evolution favored "the environment of evolutionary adaptiveness" – genetic selection favored attachment behaviors because it increased the likelihood of offspring protection and provided a survival advantage.
- He borrowed the concept of "behavioral system" concept from ethology that emphasizes behavioral patterns that lead to predictable outcomes and optimizes reproductive fitness.

Attachment Theory

- He coined the term, attachment behavioral system, which is in essence an innate motivational drive that insures protection and survival. It is different from the Freudian concept of drives, which was more related to physiological needs (feeding). Children are thought to become attached whether they are fed or not by a particular caregiver.

- Children will even become attached to abusive caregivers, so it can't be simply driven by pleasure seeking. Although proximity to a stronger and wiser caretaker is the underlying motivation, the attachment behavioral system is responsive to the types of interactions it experiences in reality – not fantasy.

Attachment Theory

- The system can flexibly respond to the environment.

- This helps us understand different attachment patterns researchers have identified.

- Those interactions contribute to the creation of generalize templates or implicit memories that form the basis of "the how" of interactions with others as the child develops and expands his/her interactions with other potential attachment figures in life.

Attachment Theory

- Bowlby felt that both emotions and cognitions were strongly associated with attachment.

- Emotion: When an infant feels distress, proximity to it's caretaker become the means to reducing that stress.

- Cognitive: Attachment relationships create the building blocks of representations of self and others. Am I the kind of person people will respond to? Are others likely to respond to my needs?

Behavioral Systems

- Each system has a particular aim or goal.
  - Attachment: felt security
  - Exploration: Learning about the environment
  - Caregiving: Promoting others safety and welfare.
- Each has primary behaviors or strategies to achieve those goals.
  - Attachment: Seeking proximity
  - Exploration: Venturing out in the world
  - Caregiving: Expressing concern and support towards others

Attachment Behavioral System

- The goal is "felt security" which terminates the behavioral system.
- Psychologically:
  - Security can allow a person to resume exploration, experience being cared for, appreciate feeling loved and valued.
- Physiologically:
  - Reduce cortisol, adrenaline and other stress hormones
  - Increase neuropeptides such as oxytocin and vasopressin
  - From a sympathic to parasympathetic state

Attachment Behavioral System

- How ones goes about achieving "felt security" is based on experience
- People learn to alter strategies based on the demands of the environment
- And in doing so form generalized beliefs or expectations about achieving those goals (or not) in the future
- Bowlby called these expectations internal working models.
- Part of behavioral system's neural wiring
- Observed in the way a person thinks about self and others, their emotional reactions to situations, and how they manage emotions behaviorally.

Primary and Secondary Strategies

- Strategies for achieving goals can be conceptualized on a continuum from hyper-activating to deactivating strategies
- Primary strategy is to seek proximity to attachment figure (activation of ABS). When the goal is met, ABS deactivates
- What if the primary strategy doesn't work?
- The child develops secondary strategies
- Hyper-activating strategies increase the possibility of achieving "felt security" up to a point. Chronic activation will actually lead to more subjective stress and alienate others.
- Extreme deactivating reduces the possibility of achieving "felt security" but also reduces the frustration of not achieving that goal.

Secure vs.. Insecure Attachment

- Secure attachment occurs when the child has a mental representation of the attachment figure being present, attentive and responsive when needed.
- Insecurely attached children lack such a representation.
- And depending on the response patterns of the caregiver when the attachment behavioral system of the child is activated (wanting proximity), you will see different patterns of insecure attachment.

Patterns of Attachment

- *"Happy families are all alike; every unhappy family is unhappy in its own way."*

Tolstoy's Anna Karenina, 1917

Who is an attachment figure?

- A caregiving figure who provides protection from danger or threat
  - Parents or parent figures
  - In adulthood, can be one's spouse or partner
- Humans form all types of attachment relationships throughout their life, but some are more significant than others. In the first few years of life when children are learning about relationships, their primary attachment figures are parents and caregivers; in adulthood, that is usually a spouse or significant other.

Function of Attachment Bonds

- ***Proximity Maintenance*** (separation protest; seeking proximity to attachment figure; resisting separations)
- Establishment of a ***Secure Base*** (Using attachment figure as a base from which to explore the environment)
- Using another person as a ***Safe Haven*** (turning toward attachment figure for comfort in times of threat)
- An infant derives comfort and security from a caregiver; wants to be with the caregiver (especially during times of stress); and protests when the caregiver threatens to become unavailable.
- Over time, separations become more manageable (self-soothing abilities; confidence that caregiver will return; secondary attachment figures)
- Expectations are developed over time through experiences with attachment figures and result in ***Internal Working Models***.

Bowlby's Central Proposition

- Beginning in early infancy, an innate component of the human mind -- called the "***attachment behavioral system***" -- in effect asks the question: Is there an attachment figure sufficiently ***near***, ***attentive and responsive***?

If the answer is yes…..

- …then certain emotions and behaviors are triggered, such as **playfulness**, **less inhibited**, **visibly happier** and **more interested in exploration**.
- In the Strange Situation, developed by Mary Ainsworth, these infants are distressed when the parent leaves the room, but eventual go back to playing with the stranger. When the parent returns, these infants are distressed (protest) but will quickly settle down and return to playing and exploration. These infants are *securely* attached.

## If the answer is consistently no…

- …a hierarchy of attachment behaviors develop due to increasing fear and anxiety (**visual checking**; **signaling to re-establish contact**, **calling**, **pleading**; **moving to reestablish contact**).
- If the set of attachment behaviors repeatedly fails to reduce anxiety (get the caregiver to respond appropriately) then the human mind seems capable of deactivating or suppressing its attachment system, at least to some extent, and defensively attain self reliance. This leads to detachment.
- In the strange situation, these infants seem to be not phased by the parent leaving and disinterested when the parent returns. But when their heartbeat is measured, they are indeed quite anxious. These infants are *anxious-avoidant*.

If the answer is inconsistently no…

- …the attachment behaviors described previously become exaggerated as if intensity will get the attachment figure to respond (which may or may not work). Like the dynamic between a gambler and the slot machine, the attachment figure will pay off or respond in sufficient frequency that the infant becomes **preoccupied** or **anxious** or **hypervigilant** about the attachment figure's availability.
- In the strange situation these infants are very distressed when the parent leaves the room, can't settle down after the parent leaves and can't settle down when the parent returns. These infants are *anxious-ambivalent*.
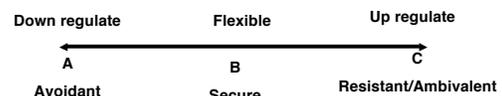
The Development of Attachment
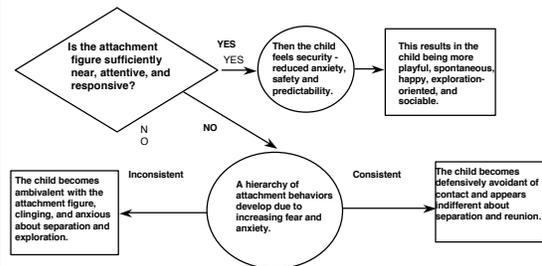
Attachment Categories

- Secure (B)
- Insecure
  - Resistant, ambivalent (C)
  - Avoidant (A)
  - Disorganized (Ds)

Continuum of Attachment

Down regulate   Flexible   Up regulate

A   B   C

Avoidant   Secure   Resistant/Ambivalent

Attachment disorganization

- Originally researchers described three categories (secure, anxious-avoidant and anxious-resistant) and a final category termed "can not classify." Main and Solomon looked more closely at these unclassifiable infants and found an interesting and consistent pattern that emerged. Some children were particularly ambivalent upon reunion with their attachment figure, both approaching and avoiding contact. Upon reunion some of these infants would walk toward their parent and then collapse on the floor. Others would go in circles and fall to the floor. Some would reach out while backing away.

Attachment disorganization

- These infants appeared to demonstrate a collapse in behavioral and attentional strategies for managing attachment distress. They didn't display an organized strategy for coping with attachment distress like the other categories (secure would cry and get soothed, avoidant would ignore the parent, resistant would cling), so these infants were termed, disorganized. Bowlby, in his book Attachment and Loss, (1969) described some children in their caregiver's arms as "arching away angrily while simultaneously seeking proximity."

Attachment disorganization

- When researchers asked why these children were both seeking protection from their caregivers while at the same time pulling away, they discovered that a large percentage of these infants were experiencing abuse by their caregiver. In other words, the person who was supposed to be a haven of safety for the infant was also the source of fear. Main and Hesse wrote that these infants were experiencing "*fear without solution*."

Attachment disorganization

- Another subgroup of disorganized infants, however, were not experiencing abuse by their caregivers, which the researchers found to be a curious anomaly. It was discovered that these caregivers had experienced abuse by their parents, but that abuse was still unresolved. It was discovered that when the infant was in need of protection, the caregiver became frightened (may turn away or make subtle frightening faces at the infant). It is believed that attachment disorganization occurs when a parent acts either frightening or frightened in response to the infants need for protection.

Parent-Infant Attachment Correspondence (3-way)

- **75% secure vs.. insecure agreement:** If a parent was secure as assessed by the AAI, there was a 75% chance that their child would be securely attached. This was true for insecure parents as well.
- **70% three-way agreement**: When taking into account all three organized categories (secure, dismissing, preoccupied), there was a 70% prediction of the attachment of the child based on the parent's attachment status.
- **Prebirth AAI show 69% three-way agreement:** When pregnant parents' attachment status was assessed, researchers were able to predict the attachment status of their children by age 12 months with 69% certainty.

Parent-Infant Attachment Correspondence (4-way)

- 63% four-way agreement. Which means that the researchers could predict with 63% certainty whether the infant will be secure, avoidant, ambivalent or disorganized, based on the attachment status of the parent (secure, dismissing, preoccupied or disorganized) using the AAI.
- Prebirth (similar to last slide) the AAI showed 65% predictability based on all four attachment categories.

What does these data suggest?

- The attachment status (or state of mind regarding attachment) of the parent, is going to have a direct effect on the attachment of the infant to that parent - as high as 75% predictability.
- Secure adults engender security in their children, dismissing adults tend to engender avoidant relationships with their children, pre-occupied adults engender ambivalent attachment in their children and adults with unresolved trauma or disorganization may act frightening or confusing with their children, causing disorganized attachment in their children.

What's so great about attachment security?

- Engage in more elaborate make-believe play
- Display greater enthusiasm,
- Are flexible and persistence in problem solving
- Have higher self-esteem,
- Are socially competent,
- Cooperative with peers
- Liked by peers
- Empathic
- Have closer friendships
- Have better social skills.
- Adults: happy, stable close relationships, flexible, compassionate and accepting of differences.
- What's not to like?

Attachment Terminology

Child Terms	Adult Terms
Secure/Autonomous	Secure/Autonomous
Anxious-Resistant	Preoccupied
Anxious-Avoidant	Dismissing
Disorganized/Can not classify	Unresolved/Fearful/ Can not classify

Is attachment a real and independent phenomenon?

- Attachment and temperament are separate phenomenon
  - Different attachment to each parent
  - Can be predicted pre-birth
  - Discontinuity
- Intelligence
  - Attachment status can not be predicted by IQ
- Disability
  - Attachment can be assessed in autistic infants
- Culture
  - Same rates of secure/insecure

Infant/Parent v. Pair Bonds

- Infant/parent there is one caregiver and one care receiver, whereas in adult pair bonds each person can be the caregiver or the care receiver.
- Infant/Parent doesn't include sexual/mating behavioral system.
- When infants approach their caregiver it's usually for stress alleviation. When adults turn towards one another they may be seeking comfort or sexual contact.
- Infants can't live without their attachment figure. Adults can live without their attachment figure.
- Infant attachment figures are usually related biologically. Adult pair bonds don't have biological connection.

Adult Attachment

- Longitudinal studies of infants observed in the strange situation.
- Relationship between adult attachment and infant attachment.
- Social psychologists studying interpersonal relationships (loneliness, couples, family functioning, group bias, etc.)

Adult Attachment Relationships

- Mary Ainsworth highlighted the function of the attachment behavior system in adult life, suggesting that a secure attachment relationship will facilitate functioning and competence outside of the relationship.

  - *"There is a seeking to obtain an experience of security and comfort in the relationship with the partner. If and when such security and comfort are available, the individual is able to move off from the secure base provided by the partner, with the confidence to engage in other activities."*

Who is an Attachment Figure?

- Four criteria
  - Proximity maintenance (the person you want to spend time with)
  - Safe haven (turn to when upset)
  - Separation distress (hate being away from)
  - Secure base (count on to be available when needed)
- Partners and parents the most common, not friends

Intimate Relationships

- Emotion regulation is a core feature of intimate relationships
- The primary source of "felt security" based on the perception that the attachment figure is accessible and responsive.
- Maintaining proximity to him/her is the primary strategy for achieving it.
- Large body of observational and physiological studies that have documented the calming effect of proximity to an attachment figure.

Process of Attachment Formation

- Pre-Attachment
  - Sexual attraction, romantic interest draws partners together into flirtatious and arousing interactions.
  - Increase in selective proximity seeking
- Attachment in the making
  - Beginning to fall in love
  - Physical contact at highest
  - Start to show safe haven behavior - increased proximity and comfort seeking when anxious or stressed.
  - Repeated physical and verbal intimacy strengthens attachment bond.
  - Prefer partner as source of comfort and anxiety alleviation over other sources.

Process of Attachment Formation

- Clear-cut attachment
  - Habituation to each other
  - No longer as aroused to each other's presence
  - Less sex, and less urgent needs of physical contact
  - Sufficiently reliant on one another that separations are distressing
  - Begin to use each other as bases of security
- Goal corrected phase
  - Mental representations of each other can suffice for actual physical interaction
  - Attention is redirected toward previously neglected friendships, work obligations, and so forth
  - Fewer overt displays of attachment behavior
  - Interactions between partners take on a more mundane, less passionate quality

Who-To Questionnaire

- Proximity-seeking function:
  - Who is the person you most like to spend time with?
  - Who is the person you don't like to be away from?
- Safe haven function:
  - Who is the person you want to be with when you are feeling upset or down?
  - Who is the person you would count on for advice?
- Secure base function:
  - Who is the person you can always count on?
  - Who is the person you would want to tell first if' you achieved something good?

Caregiving System

- For children, parents are usually the primary providers of protection, support, and security.
- For adults, partners are called upon to provide protection, support and security.
- How parents respond affect how children develop
- How the partner responds affects the quality and stability of the relationship.
- How caring system develops will determine whether or not its expressed as compassion, loving-kindness and generosity
- The goal of the caregiving system is to reduce other people's suffering through loving contact (proximity), protect them from harm (safe haven), and foster their growth and development (secure base)

Caregiving Components

- Sensitivity (awareness of signals)
- Responsiveness (appropriate response)
- Cooperation (setting aside own needs for other)
- Empathic stance (by taking the others perspective in order to help him or her effectively reduce suffering and distress or pursue growth and development)
- Encouragement (managing own separation anxiety for the sake of the other)
- Acknowledging differences (needs, reactions, experiences, perspective)

Secure Attachment

Adult Attachment Development

- Secure adults have mastered the complexities of close relationships sufficiently well to allow them to explore and play without needing to keep vigilant watch over their attachment figure, and without needing to protect themselves from their attachment figures insensitive or rejecting behaviors (Shaver & Clark).

Secure Adult Patterns

- Highly invested in relationships
- Tend to have long, stable relationships
- Relationships characterized by trust and friendship
- Seek support when under stress
- Generally responsive to support
- Empathic and supportive to others
- Flexible in response to conflict
- High self-esteem

Preoccupied Attachment

Adult Attachment Development

- **Preoccupied**: What begins with attempts to keep track of or hold onto an unreliable caretaker during infancy leads to an attempt to hold onto partners, but this is done in ways that frequently backfire and produce more hurt feelings, anger and insecurity.

Preoccupied Adult Patterns

- Obsessed with romantic partners.
- Suffer from extreme jealousy.
- High breakup and get-back-together rate.
- Worry about rejection.
- Can be intrusive and controlling.
- Assert their own need without regard for partner's needs.
- May have a history of being victimized by bullies.

Dismissing Attachment

Adult Attachment Development

- **Dismissing**: What begins with an attempt to regulate attachment behavior in relation to a primary caregiver who does not provide, contact, comfort or soothes distress, becomes defensive self-reliance, cool and distant relations with partners, and cool or hostile relationships with peers.

Dismissing Adult Patterns

- Relatively un-invested in romantic partners.
- Higher breakup rate than pre-occupied.
- Tend to grieve less after breakups (though they do feel lonely).
- Tend to withdraw when feeling emotional stress.
- Tend to cope by ignoring or denying problems.
- Can be very critical of partner's needs.
- May have a history of bullying.

Disorganized Attachment

Adult Attachment Development

- **Unresolved/Disorganized/Fearful**: What begins with conflicted, disorganized, disoriented behavior in relation to a frightening or frightened caregiver, may translate into desperate, ineffective attempts to regulate attachment anxiety through approach and avoidance.

Disorganized Adult Patterns

- Introverted
- Unassertive
- Tend to feel exploited.
- Lack self confidence and are self conscious.
- Feel more negative than positive about self.
- Anxious, depressed, hostile, violent.
- Self defeating and report physical illness.
- Fluctuates between neediness and withdrawing.

Insecure Attachment & Psychopathology

- Insecure attachment is not the same as psychopathology, rather it is thought that insecurity creates the risk of psychological and interpersonal problems.
- Dismissing: leads to deficits in social competence, conduct disorders, may have higher rates of schizophrenia.
- Disorganized: higher rates of dissociation, PTSD, attention and emotion dysregulation problems, and borderline personality disorder.
- Pre-occupied: high rates affective disorders, particularly anxiety and substance abuse.

Emotions and Feelings

Recent Findings from the Neurosciences

The Brain is Wider than the Sky

THE BRAIN is wider than the sky,
  For, put them side by side,
The one the other will include
  With ease, and you beside.

The brain is deeper than the sea,
  For, hold them, blue to blue,
The one the other will absorb,
  As sponges, buckets do.

The brain is just the weight of God,
  For, lift them, pound for pound,
And they will differ, if they do,
  As syllable from sound.

Emotions and Feelings

- Due to improved scanning techniques, we have been able to literally peek into the brain and learn more about how cognition, affect and behavior all intersect.
- In particular, the cognitive and affective neurosciences have made great advances in the areas of affect and the brain.
- Scientists such as Damasio, Davidson, Ekman, LeDoux, Panksepp have revolutionized our feelings and thoughts about emotion.
- The following emotion/feeling theory was put forth originally by William James, in the late 1800's.

What are Emotions?

- Unlearned reactions to events that cause a change in state of the organism.
- Packages of solutions handed down by evolution to assist organisms to solve problems or endorse opportunities.
- The purpose of emotions is to promote survival with the net result being to achieve a state of wellbeing.
- Doesn't need to be felt
- 3 types of emotions: Primary, Background and Social.

Primary Emotions

- These are the emotions which tend to come to mind when we typically discuss emotion. They include: fear, anger, disgust, surprise, sadness and happiness.
- These emotions, and the stimuli that cause them are clearly identifiable across cultures and even across species.

Background Emotions

- "These emotions, as the label suggests, are emotions that we are not consciously aware of, except that they may contribute to a 'mood' we experience."
- "I imagine background emotions as the largely unpredictable result of several concurrent regulatory processes engaged within the vast playground that our organisms resemble."
- "The ever-changing result of this cauldron of interactions is our 'state of being', good, bad or somewhere in between. When asked "how we feel," we consult this "state of being" and answer accordingly."

Social Emotions

- These include: sympathy, embarrassment, shame, guilt, pride, jealousy, envy, gratitude, admiration, indignation and contempt.
- We can often observe the nesting principle in social emotions. Damasio gives the example of contempt. Here, the expression of the emotion will usually be accompanied by the facial expression used principally to signify 'disgust'.

Emotionally competent stimulus

- It is an event or situation that can trigger an emotion in the organism
- Some are handed over by evolution
- Some are made competent by personal experience
- Some may be made competent by culture.
- Can be external or internal or mental
- Is there a emotionally neutral object?

Emotion Process

- Sensory input.
- Appraisal or evaluation stage but not necessarily conscious.
- Source points: Amygdala source point for fear. Social emotions, such as sympathy or embarrassment or shame - VMFC. Different trigger points for different emotions.
- Execution of emotion: The brainstem or hypothalamus is the machinery which causes changes in the body.

What are feelings?

- Occurs when a person becomes consciously aware of the fact that they are in the process of experiencing emotion.
- Occurs in the prefrontal cortex, which has a region that is specifically dedicated to body mapping.
- Similar to a sense – smell, hearing, sight, touch and taste.
- Feelings reveal to us the state of the organism at any particular point in time.
- Feelings allow us to make decisions about how to respond to emotions; they allow us the opportunity to make a choice.

What are Feelings

- Feelings are mental readouts of the process of emoting. They are a knowing of the body state in reaction to certain stimulus or situation.
- The ability to take stock - connect object to emotion.
- Feelings reveal (lift the veil) of the state of the organism when it is in the process of reacting to an emotionally competent stimulus.
- Feelings have the possibility of revealing "good for life" and "not-good for life" states.

How this Relates to Psychotherapy

- Secure attachment results in adaptive affect regulation:
  - Connected with body
  - Can represent emotion with feeling
  - Flexible in response strategies
  - Empathic toward emotion in others
- Insecure attachment results in affect dysregulation.
  - Hyperactivation and/or deactivation strategies that may interfere with any or all of the functions above.
- Attachment informed psychotherapy is going to focus on the process of emoting, it's representation in the mind as feeling and developing new affect regulation strategies.

Secondary Strategies and Well-being

- The affect regulation strategies that many of our clients learned in childhood don't ultimately result in feelings of well-being, but more frustration and distress.
- A preoccupied client's dependency on their partner to soothe their fears of loss and neediness through clinging or preoccupied anger ultimately drives their partners away, producing even greater feelings of loss and anxiety.
- A dismissing client's over-reliance on independence and apparent devaluing of closeness to deal with their fears of intimacy, only leads to greater feelings of loneliness.

Focus of Intervention

- Connecting with the body is critical.
- Understand the difference between emotion and feeling
- Learn what events are emotionally competent
- Slow down process - involve cognition to consider possibilities (response flexibility)
- Develop emotion identification strategies.
- Develop calming strategies when overwhelmed
- Here/now or core consciousness

Bowlby and Anger

- Anger is a normal response to separation
- An attempt to gain the attachment figure's attention
- Not intended to destroy or damage the relationship
- Anger of hope - Looking toward a better future
- Anger of despair - Anger so intense that it alienates or injures a partner

Anger of Hope

- Expressed in moderation
- Restoration of positive mood afterwards
- A sense of optimism that one will be understood and other will reform (change)
- Change is possible without aggression
- Forgiveness is likely regardless
- Expression results in "felt security"

Anger of Despair

- Correlated to insecure attachment
- So intense that it alienates or injures a partner
- Becomes destructive to a relationship
- Can even lead to violence or death

Avoidant Attachment & Anger

- Tend to ignore problems that may contribute to anger
- Suppress anger either consciously or unconsciously
- Express hostility and hatred indirectly (either consciously or unconsciously)
- Can become angry and aggressive as a means to push away others wanting greater intimacy
- Have difficulty identifying emotions in self and others
- Controlling of others
- Bullying of others
- Protecting and soothing own vulnerability

Preoccupied Attachment & Anger

- Use anger to get attachment needs met
- Often ruminate about angry situations
- Can experience long periods of anger
- Can be intrusive and controlling to reduce internal anxiety
- Expresses anger directly, but can be hostile and aggressive in response to actual or perceived abandonment
- Can't differentiate anger from other emotions
- Reactive to anger in others
- Vulnerable to interpreting other's emotions as anger
- Can be highly emotional, ambivalent and unstable
- Anger can be an expression of fear of abandonment

Disorganized Attachment & Anger

- Can be the most disregulated form of attachment
- Collapse of emotional and cognitive strategies that can lead to dissociation
- High correlation to extreme anger expression and violence
- Correlated to diagnoses of anxiety, depression and PTSD
- Related to childhood abuse and unresolved abuse in caregiver's childhood/past
- Can be an expression of terror (flashback/implicit memory of trauma)

Mirror Neurons

Understanding Ours and Other's Minds

Ours and Others Minds

- How do we understand the mental states of others?
- Theory of mind, mentalizing, reflective function, seeing the world from the others point of view; mind reading, figuring out what someone is up to, etc.
- Take this process for granted most of the time.
- Social cognition: Awareness and interpretation of social stimuli based on our knowledge of the rules that govern social interaction within the cultural context

Intersubjectivity

- Intersubjectivity is the sharing of meaning between people
- The problem of intersubjectivity: if I have only access to my own mind, which is a very private entity I can only access, how can I possibly understand the minds of other people? How can I possibly share the world with others, how can people possibly share their own mental states?
- Behavior, mental representation (verbalizing) are ways to understanding
- Mirroring is another way - less conscious, more automatic and more efficient

Mirror Neurons

- Parma Italy Neuroscience Research Lab - Giacomo Rizzolatti
- Cells in the ventral premotor cortex and inferior parietal cortex of the rhesus monkey brain
- Fires when the monkey performs goal-oriented hand and mouth actions
- Also fires when observing those actions in other monkeys
- Key to not only understanding the intentions of others, but also the mental states underlying those intentions

Marco Iacoboni - Teacup Experiment

- The test subjects are shown three video clips involving the same simple action: a hand grasping a teacup.
  - No context for the action, just the hand and the cup.
  - The subjects see a messy table, complete with cookie crumbs and dirty napkins-the aftermath of a tea party, clearly.
  - Shows a neatly organized tabletop, in apparent preparation for the tea party.
- In all three video clips, a hand reaches in to pick up the teacup. Nothing else happens. The only difference is the context.

Marco Iacoboni - Teacup Experiment

- When the subject is observing the grasping scene with no context at all, mirror neurons are the least active
- They are more active when the subject is watching either of the context scenes
- They are most active when watching the neat scene. Why? Because drinking is a much more fundamental intention for us than is cleaning up.
- Solid empirical evidence suggests that our brains are capable of mirroring the deepest aspects of the minds of others-intention (at the fine-grained level of a single brain cell).
- Effortless process. No need to draw complex inferences or even think about it. Instead, we use mirror neurons.

Mirror Neurons and Empathy

- The word empathy comes from the German, *Einfuhlung*, which means literally, "*feeling into*"
- Theodore Lipps in 1903 suggested the perception of an emotional gesture in another directly activates the same emotion in the perceiver, without any intervening labeling, associative, or cognitive perspective-taking processes
- This is exactly how the MNS is hypothesized to function!

Mirror Neurons and Empathy

- Different types of empathy
  - Emotional: state matching; increases with familiarity, similarity and salience; self-other distinction (bottom up process)
  - Cognitive: no state matching; self-other distinction; perspective-taking (top down process)
  - Contagion: state-matching; no self-other distinction; AKA vicarious emotional transfer (vicarious trauma)
  - Sympathy: feeling sorry for other's situation, not necessarily emotional state; self-other distinction; no state matching
- Early studies suggest that the MNS is more involved in the process of emotional empathy (feeling other's emotions) rather than cognitive empathy (imagining another's perspective)

Mirror Neurons & Emotion

- Subject perceives the emotional state of the object
- Subject's MNS simulates (activates similar motor and emotion neural processes) that mental state in the subject
- Subject's body changes in response to emotional state
- Subject notices a change in the physical state of the body
- Subject labels that change - "anger, sadness, fear, etc."
- Subject has represented the emotion with feeling
- Is this me or you I am feeling?

"Is this me or you I am feeling?"

- In Secure-Secure dyads, mirror neurons efficiently facilitate the social interactions between individuals.
- In Insecure-Secure and Insecure-Insecure dyads, mirror neurons can create problematic dynamics that impair social interactions and adjustment.
- Therapists are in the unique position to use their MNS to work with attachment dynamics of clients.

Mirror Neurons & Psychotherapy

- Each member of the dyad is likely to experience each other's emotional reactions without necessarily a mental representation of the process
  - Dismissing attachment: the therapist is likely to experience the disavowed emotional state of the client
  - Preoccupied attachment: the therapist is likely to experience the expressed anger, or unexpressed/not represented emotional states (e.g., fear, grief, anxiety)
  - Disorganized attachment: vicarious traumatization, disavowed fear, grief and anger

Mirror Neurons at Work

- Therapist's mirror neurons reading non-verbal cues of emotion in patient.
- Simulates that state in the therapist.
- Therapist body mapping neurons in prefrontal cortex notices a change in the state of the body.
- Therapist's prefrontal cortex labels with feeling.
- Therapist's RF asks, "Why am I a feeling this?"
- Therapist's RF decides that therapist's MNS is picking up client's non-verbal emotions (Projective Identification).
- Therapists brings awareness into therapy.

Stimulating Mirror Neuron Activity in Others

- Imitation helps children with autism engage in more emotionally meaningful interactions (Sally Rogers @ UC Davis).
- Brooke Ingersoll in Oregon has developed an intervention program with autistic children where this reciprocal imitation process helps to facilitate more social behavior.
- When the therapist imitates her/his patients, he may activate their mirror neurons, which in turn may help the patients to see the therapist, literally.

Using Attachment Theory and Brain Science…

…to develop secure attachment in clients.

Secure-base Priming

- The idea of creating a secure base in psychotherapy sounds good, but is this a real concept or just another variation of the therapeutic alliance?
- Researchers in adult attachment have been able to empirically test the notion that creating a secure base experience for individuals may temporarily alter an individual's inner working models of others and therefore change behaviors or emotional states.
- The idea of "secure base priming" has been gaining attention in the adult attachment literature. Mario Mikulincer and Phil Shaver examined the effects of secure base priming on intergroup bias.

Secure-base Priming

- They hypothesized that having a secure base could change how a person appraises threatening situations into more manageable events without activating insecure attachment-like behaviors such as avoidance, fear, or preoccupation.
- They utilized a series of well-validated secure base priming techniques that have appeared to create in insecure subjects a sense of security one would find in individuals who would might otherwise be assessed as having a secure attachment style.
- These techniques were quite creative and had powerful effects on subjects.

Priming Techniques

- Subliminal
- Visualization of prototypical positive attachment experience.
- Visualization of real positive attachment experience.
- Negative feed back reduces the impact of secure base priming

Secure-base Priming

- In all of these studies, those subjects exposed to secure base priming acted in the experimental condition similar to securely attached individuals who did not receive priming but were nevertheless exposed to similar conditions assessing intergroup bias.
- The authors suggest that secure base priming enhances motivation to explore by opening cognitive structures and reducing negative reactions to out-group members or to persons who hold a different world view. The observed effects of secure base priming may reflect cognitive openness and a reduction in dogmatism and authoritarianism.

Secure-base Priming

- Other similar studies have found that secure base priming will have a positive effect on cognitive and affective states. Although these studies are not meant to be applied to clinical situations, they have powerful implications for the clinical setting.
- Aspects of the psychotherapy process are similar to these descriptions of secure base priming and through that process clients may begin to change their internal representations of self and others or attachment status.

Tasks of attachment-informed psychotherapy according to Bowlby

- Create a safe place, or secure base, for client to explore thoughts, feelings and experiences regarding self and attachment figures;
- Explore current relationships with attachment figures;
- Explore relationship with psychotherapist as an attachment figure;
- Explore the relationship between early childhood attachment experiences and current relationships;
- Change internal working models of self and others
- Find new ways of regulating attachment anxiety (i.e., emotional regulation) when the attachment behavioral system is activated.

Attachment Informed Psychotherapy with the Brain in Mind

- Past, present and future orientation (autonoetic consciousness)
- Develop empathy, mind-sight (social cognition)
- Develop ability to observe self (self-reflection)
- Manage emotions (emotion regulation)
- Respond flexibly to conflict (response flexibility)
- Address unresolved loss and trauma
- Work with what is in the room
  - Rupture and repair: use the natural separations and ruptures in therapy to help the client develop more adaptive ways of coping with attachment distress.

Does the therapist need to be secure?

- Ideally, yes (or at least earned-secure).
- Secure models of attachment result in an open, flexible, and non-defensive approach to attachment related issues.
- This in turn translates into approaches to others that are open, receptive and collaborative. These characteristics are likely to facilitate a positive therapeutic alliance.

Therapist insecurity

- Studies report poorer therapeutic alliance with therapists assessed as insecure.
- Insecure therapists tend to intervene in such a way that fails to challenge the client's customary affect regulation strategy.
- Insecure therapists report more problems in their therapy with clients.

Therapist insecurity

- Anxious therapists (preoccupied) interpret ruptures in therapy as negative and tend to be less empathic because of their own anxiety about loss.
- Anxious therapists could also become activated by preoccupied clients.
- Dismissing therapists are likely to be overwhelmed by emotional reactivity of preoccupied clients.
- Dismissing therapists can miss the important emotional and relational issues of dismissing clients.
- Complimentary (activating/E with deactivating/D and vice versa) can be better than similar styles.

Therapist insecurity

- Disorganized therapists can have the most difficult time with clients - more likely to commit the most serious boundary violations. Their unresolved emotional reactions to trauma are likely to get activated by their clients unresolved trauma and loss.
- Complimentary (activating/E with deactivating/D and vice versa) can be better than similar styles.
- At least one secure person is ideal, especially if that is the therapist.
- Therapy and frequent consultation

Earned Security

"I had a weak father, domineering mother, contemptuous teachers, sadistic sergeants, destructive male friendships, emasculating girlfriends, a wonderful wife, and three terrific children. Where did I go right?"

– Jules Feiffer, illustrator and satirist

Earned Security

- A subset of persons rated secure on the AAI in spite of experiences in childhood that would ordinarily lead us to predict an insecure status.
- Research suggests that these individuals had positive relationship with a relative, close friend, partner or therapist which allowed them to develop out of an insecure status into secure.
- These individuals are almost indistinguishable from "continuous secure" except they have higher depression rates.

Earned Security

- What was it about these relationships that helped these individuals achieve security?
- These individuals found a secure base with someone who was securely attached themselves and who were sufficiently near, attentive and sensitively responsive.
- Insecurity grows out of relationships and therefore so can earned-security (Dozier).

Additional Slides

Assessment of Attachment

Assessment of Attachment

Interview approaches, self-report and clinical interview.

Assessing Attachment Status

- Interview approaches
  - Coherence - Main - Adult Attachment Interview
  - Reflective function - Fonagy
  - Adult Attachment Projective - George & West
- Self-report
  - Anxiety and Avoidance (Shaver - Experiences in Close Relationships-Revised)
  - Internal working models of self and others (Bartholomew-Relationship Status Questionnaire)
- Clinical interview

Adult Attachment Interview

- The Adult Attachment Interview is a 20-question interview that asks the subject about his/her experiences with parents and other attachment figures, significant losses and trauma and if relevant, experiences with their own children. The interview takes approximately 60-90 minutes. It is then transcribed and scored by a trained person (two weeks of intensive training followed by 18 months of reliability testing). The scoring process is quite complicated, but generally it involves assessing the coherence of the subject's narrative.

Definition of Coherence (Main)

"...a coherent interview is both believable and true to the listener; in a coherent interview, the events and affects intrinsic to early relationships are conveyed without distortion, contradiction or derailment of discourse. The subject collaborates with the interviewer, clarifying his or her meaning, and working to make sure he or she is understood. Such an subject is thinking as the interview proceeds, and is aware of thinking with and communicating to another; thus coherence and collaboration are inherently inter-twinned and interrelated."

AAI Questions

- The AAI begins with the interviewer introducing the general research area.
- There are 18 questions in total, and questions each have various related probes. The first question is an integrative one:
- *Could you start by orienting me to your early family situation, where you lived, and so on? If you could start with where you were born, whether you moved around much, what your family did for a living at various times.*

AAI Questions

2. I'd like you to try to describe your relationships with your parents as a young child. If you could start from as far back as you can remember.
3. I'd like you to choose five adjectives that reflect your childhood relationship with your mother. This might take some time, and then I'm going to ask you why you chose them.
4. Question 4 repeated for father.
5. Examples of adjectives for mother
6. Examples of adjectives for father
7. To which parent did you feel closest and why? Why isn't there this feeling with the other parent?

AAI Questions

8. When you were upset as a child, what would you do?
9. What is the first time you remember being separated from your parents? How did you and they respond? Are there any other separations that stand out in your mind?
10. Did you ever feel rejected as a young child? Of course, looking back on it now, you may realize that is wasn't really rejection, but what I'm trying to ask about here is whether you remember ever having felt rejected in childhood.
11. Were your parents ever threatening with you in any way - maybe for discipline, or maybe just jokingly?

AAI Questions

12. How do you think these experiences with your parents have affected your adult personality? Are there any aspects of your early experiences that you feel were a set-back in your development?
13. Why do you think your parents behaved as they did during your childhood?
14. Were there any other adults with whom you were close as a child, or any other adults who were especially important to you?
15. Did you experience the loss of a parent or other close loved one while you were a young child?
16. Have there been many changes in your relationship with your parents since childhood? I mean from childhood through until the present?

AAI Questions

17. What is your relationship with your parents like for you now as an adult?
18. How do you respond now, in terms of feelings, when you separate from your child?
19. If you had three wishes for your child twenty years from now, what would they be? I'm thinking partly of the kind of future you would like to see for your child.
20. Is there any particular thing which you feel you learned above all from your own childhood experiences? What would you hope your child might learn from his/her experiences of being parented?

Grice's Maxims of Discourse

- **Quality**: Be truthful and believable, without contradictions or illogical conclusions.
- **Quantity**: Enough, but not too much information is given to understand the narrative.
- **Relevance**: Answers the questions asked.
- **Manner**: Use fresh, clear language, rather than jargon, canned speech or nonsense words.

AAI Scoring

- **Secure:/autonomous (F):** Coherent and collaborative discussions of attachment-related experiences relationships.
- Valuing of attachment but seems objective regarding any particular event or relationship.
- Description and evaluation of attachment-related experiences is consistent, whether experiences are favorable or unfavorable.
- Discourse does not notable violate any of Grice's maxims.

AAI Scoring

- **Dismissing (Ds):** Not coherent.
- Minimizing of attachment-related experiences and relationships.
- Normalizing ("excellent, very normal mother"), with generalized representations of history unsupported or actively contradicted by episodes recounted, thus violating Grice's maxim of quality.
- Transcripts also tend to be excessively brief, violating the maxim of quantity.

AAI Scoring

- **Pre-Occupied (E):** Not coherent.
- Preoccupied with or by past attachment relationships or experiences, speaker appears angry, passive or fearful.
- Sentences often long, grammatically entangled or filled with vague usages where something is left unsaid (e.g., "dadadada"; "or whatever") thus violating Grice's maxims of manner and relevance.
- Transcripts are often excessively long, violating the maxim of quantity.

AAI Scoring

- **Unresolved/Disorganized (U):** Not coherent.
- During discussions of loss or abuse, individual shows striking lapses in monitoring of reasoning or discourse.
- Individual may briefly indicate a belief that a dead person is still alive in the physical sense, or that this person was killed by a childhood thought.
- Individual may lapse into prolonged silence or eulogistic speech.
- This speaker will ordinarily otherwise fit Ds, E, or F categories.

Examples: Secure

- **Which parent would you say you were closest to?**
- Oh I felt, closest to my mother
- **And why was that?**
- Uhm..[2 secs] simply because she was, she was there, uhm, you know, like I said when I, when I came home from school, she was there (*Uh huh*), uhm, you know, when I, when I, had a question or a problem, I knew I could talk with her, uhm…[3 secs], and , it's just, you know, I knew she really cared, and (*Uh huh*), and uhm, was interested. Even when my father was there he wasn't really there, you know, uhm, so-- (*I understand what you mean*) okay.

Examples: Dismissing

- **Which parent would you say you were closest to?**
- Uhm, I, early on, probably, my mom.
- **And why was that?**
- Eh, eh, I guess, during the very early years because, eh, she got stuck taking care of us, uhm later on it flipped around and I got probably closer to my Dad because eh, I guess--too much eh, time with my Mom.
- **What do you mean by too much time with your mom?**
- Eh uhm, I got, I guess, of, of, uhm-- kids get sick of their parents or what they do and, even though it may be quite proper, it's just that it's annoying and -- and you just get tired of them.

Examples: Preoccupied

- **Which parent would you say you were closest to?**
- Neither, and that's the case today. In fact, last week my son was sent to the principal's office and they called me at work to pick him up. I wasn't able to so I had to call my mother. I heard the judgment in her voice. I thought, another narcissist heard from. My son's father is self-absorbed just like them. Did I tell you that he abused me? Anyhow I had no choice but to call her, if his father got involved there would be another blowup, letters to his attorney and then I'd have to pay my lawyer. It's non stop. I am not sure if this answered your question.

The Clinical Interview and Assessing Adult Attachment Status

- A recent study examined how accurate clinicians are at assessing adult attachment. The results were not very promising.
- Assessing adult attachment via clinical interview alone is not very reliable. However, this doesn't mean that it's not possible. It just means that a method has yet to be developed.

Reflective Function (Fonagy, 2008)

- The human capacity to envision mental states in oneself and another, and to understand one's own and another's behaviors in terms of underlying mental states and intentions.
- Both an emotional and cognitive construct that is intrinsic to affect regulation and productive social relationships.
- Emotional: refers to the ability to recognize one's own emotional reactions, as well as those in others.
- Cognitive: understanding the intentions and underlying causes of reaction in the self and in others.

Reflective Function (Fonagy, 2008)

- Reflective function allows one to understand that one's own or another's behaviors are linked in meaningful, predictable ways to underlying and often unobservable, changing and dynamic feelings and intentions. The more a person is able to envision mental states in themselves and others (and know the difference), the more likely they person is to experience relationships as productive, intimate and satisfying. They are able to subjectively feel connected while feeling separate.

Reflective Function

■ The capacity to hold, regulate, and fully experience emotion. A non-defensive willingness to engage emotionally, to make meaning of feelings and internal experiences without becoming overwhelmed or shutting down.

■ HRF: includes neural capacities such as social cognition, autonoetic consciousness, awareness of and regulation of complex emotional states inherent in social relationships.

Adult Attachment Projective

■ Developed by Carol George and Malcolm West. This test consists of eight drawings (one neutral scene and seven scenes of attachment situations). According to the authors,

■ *"These drawings were carefully selected from a large pool of pictures drawn from such diverse sources as children's literature, psychology text books, and photography anthologies. The AAP drawings depict events that, according to theory, activate attachment, for example, illness, solitude, separation, and abuse. The drawings contain only sufficient detail to identify an event; strong facial expressions and other potentially biasing details are absent. The characters depicted in the drawings are culturally and gender representative."*

Adult Attachment Projective

■ Like the AAI, the subject's responses are recorded and transcribed and then scored based on the coherence of the responses. Authors use similar and different scales from the AAI coding process. According to the authors the AAP takes less time to administer and much less time to score, which makes it more useful for clinicians. Unlike the AAI, the AAP is geared toward clinicians as opposed to only researchers in attachment. For more information on the AAP see the references accompanying this presentation.

Self report measures

■ Social psychologist, Phil Shaver and his colleagues have studied the relationship between adult attachment and interpersonal relationships.

■ They deconstruct attachment into two continuums - anxiety and avoidance.

■ Securely attached individuals experience low anxiety and avoidance in relationships.

■ They also conceptualize attachment style in terms of dimensional qualities rather than distinct categories that you either belong to or not. For example, one can be slightly preoccupied or dismissing, or extremely preoccupied or dismissing.

■ Using their model one can generally be secure, but leaning toward preoccupied or dismissing.

Affective-Behavioral Dimensions

	Low Anxiety	High Anxiety
Low Avoidance	*Secure*	*Pre-Occupied*
High Avoidance	*Dismissing*	*Fearful*

Experiences in Close Relationships

■ Shaver, Fraley and colleagues developed a number of self-report measures that assess adult attachment.

■ His most recent scale, The Experiences in Close Relationships-Revised (ECR-R) is a 36 question scale that asks about close relationship experiences, thoughts and feelings.

■ Answers are based on a 7-point Likert scale from "not at all like me" to "very much like me."

Experiences in Close Relationships - R

- I'm afraid that I will lose my partner's love.
- I often worry that my partner will not want to stay with me.
- I prefer not to show a partner how I feel deep down.
- I feel comfortable sharing my private thoughts and feelings with my partner.

Self-report questionnaires

- Kim Bartholomew has also conceptualized adult attachment, but more in line with Bowlby's ideas.
- Like Shaver, she has created a two dimensional grid representing adult attachment based on internal working models of self and others - positive or negative.
- Her model may be understood as being cognitive in nature, whereas Shaver's model is more affective/behavioral.
- Here too, attachment style is viewed as dimensional rather than categorical.

Cognitive-Representational or Working-Model Related

	Positive Model of Self	Negative Model of Self
Positive Model of Others	*Secure*	*Pre-Occupied*
Negative Model of Others	*Dismissing*	*Fearful*

Relationship Status Questionnaire

- I find it easy to get emotionally close to others.
- I want to be completely emotionally intimate with others.
- I am comfortable without close emotional relationships.
- I worry that I will be hurt if I allow myself to become too close to others.