Mentalization
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Three Pillars of Evidence-Based Medicine

Mentalization

- Closely related to the term empathy, mentalizing refers to the process of thinking:
  - 1) about others' thoughts and feelings (acknowledging that others have a mind) and;
  - 2) reflecting on one's own thoughts and feelings (standing outside yourself to describe yourself).
Mentalizing?

A boy is enjoying a summer day at the beach. He spots something in the distance that captures his interest. Off he goes, straight toward the goal. But on the way he steps over everything in his path: blankets, newspapers, hands, feet, torsos.*


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You are going on vacation and inform your patient.

“So you want to get away from me, do you?”

“What leads you to believe that?”

“Oh, I just know. I know how you people operate.”

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• Asked by a research assistant why the girl in this picture is saying--

“Look, it’s a telephone,” a kindergartner responds, “because it’s a banana-phone.”

Mentalizing?

Asked why his six-year-old would jump into his (the father’s) Ford F-150, put it in neutral and roll down the driveway, a father responds: “‘Cuz he has bipolar disorder.”

Problems Mentalizing

- A teenager approaches his first day of high school with fear and trepidation: “I’m not going to school. No way! Everyone will make fun of me there.”

Mentalization: lecture organization

1) What is mentalization?
2) What are the neural structures subserving social cognition in general and mentalization in specific?
3) What are mirror neurons?
4) What are the stages of mentalization acquisition?
5) How does attachment relate to mentalization? How about drug use?
6) What are some ways to promote mentalization?

Fonagy’s Mentalization

Mentalization is a form of preconscious imaginative mental activity, namely perceiving and interpreting human behavior in terms of intentional mental states, for example:

- needs
- desires
- feelings
- beliefs
- goals
- purposes
- resources

Old School

- D.W. Winnicott (British Psychoanalyst)

“A sign of health in the mind is the ability of one individual to enter imaginatively and accurately into the thoughts and feelings and hopes and fears of another person; to allow the other person to do the same to us.”
Mentalization’s Conceptual Cousins

- Empathy
- Mindfulness
- Theory of Mind / Mindblindness (antonym)
- Emotional Intelligence
- Psychological Mindedness
- French: Pensée Opératoire / English: Alexithymia (antonym)

Definitions

- Psychic Equivalence: Mind = External Reality (like in a dream where the dreamer experiences everything as real)
- Pretend Mode: The ability to hold an "as if" stance, realizing that things are not always as they appear.

Components of Social Cognition

- Three Neural Systems of Social Cognition:
  - Social-Detection (AWARENESS)
  - Affect Regulation (MEANING)
  - Cognitive Regulation (REASONING)
Awareness

- Fusiform Gyrus (pink)
- Superior Temporal Sulcus (red line)
- Anterior Temporal Cortex

The Digimon Problem: an impediment to Social Awareness

- OR

Representative photomicrographs of 200 micrometer thick coronal section of the brain hemispheres from a control patient (A,C,E) and a patient with autism, showing either the entire hemisphere (A,B) or area 17 (C,D) and the fusiform gyrus (FG) (E,F)

Heider-Simmel 1944

Point-Light Walkers

QuickTime™ and a mini MOTION JPEG decompressor are needed to see this picture.

Affect / Arousal Regulation--assigning significance to social stimuli

- Amygdala--anxiety / emotional learning
- Hypothalamus--warmth/love
- Nucleus Accumbens--reward
- bed of the nucleus of the Stria Terminalis

Ekman Faces
- 1970's
- Fore Tribe of Papua New Guinea

Ekman Faces
- Angry
- Sad
- Fear
- Happiness
- Surprise
- Disgust
Amygdala / Emotional Hijacking

Cognitive Regulation / Reasoning

- Functions:
  - Inhibiting pre-potent responses (effortful control)
  - Mediating goal-directed behavior
  - Mentalizing (Perspective-taking / Theory of Mind Tasks)

- Structures:
  - Dorsomedial Pre-Frontal Cortex
  - Ventral Pre-Frontal Cortex
  - Anterior Cingulate Gyrus

Mentalizing: A Two Part System

- 1 Mirror Neuron System (immediate, nonconscious reading)
- 2 Fronto-corticol (declarative / explicit recognition "mentalizing proper")
Thoughts on Mirror Neurons

- Features:
  - They fire with visual AND auditory cueing
  - Empathy scores correlate with mirror neuron activity
  - They are mediated by intention...

- Two Flavors based on Intention:
  - Strictly Congruent—absolute mirroring (1/3)
  - Broadly Congruent—task completion (2/3)


Anterior Cingulate Cortex
Anterior Insula

Pain

The False Belief Test
Second-order Theory of Mind

- “Look, this banana is a phone!”


Explicit Mentalizing: Strange Stories, Computer Games with People

- Medial Pre-frontal Cortex (MPFC)
- Bilateral Superior Temporal Sulcus (STS)
- Temporal Pole (TP) adjacent to the Amygdala


Mirroring & Empathy at The Diner

- Imitation affects how we judge the person we’re interacting with.
- More likely to think of them as competent.
- More likely to project our thoughts/feelings onto a person who mimics our behavior.
- 50% Tip Increase with Imitation

More on Mirroring


MIRROR, MIRROR: therapy tips

1) Meet them where they are at: affectively/body posture.
2) Look for things that you enjoy about your patients; make psychological contact.
3) Reflect with them (dig deeper, more on this later)

Development of Mentalization

Stage 1: 6 months - 1 year
- 6mos: Animate objects self-propelled.
- 9mos: Rational, efficient actions based on clear goal.
Development of Mentalization

- Stage 2 (1 to 3 years)
  - Intentions versus Actual Outcome Understood (Baby Sign / Pointing)
  - Joint Attention / Teasing and Provocation of Younger Siblings
- Stage 3 (3 to 5 years)
  - Beliefs (Thoughts which have an impact on how feelings are understood)
  - Peer relationships (influencing and being influenced) become more important
- Stage 4 (5+ years)
  - Second Order Theory of Mind (beliefs about beliefs)
  - “White lie”
  - Mixed emotions better understood

Mentalization and The Good Life

- Small, but statistically significant correlation between SS Performance and Social Acceptance
- Data from the Rush Neurobehavioral Center Clinical Assessment of Children’s Social-Emotional Cognition Assessment Project (Rondout) showed:
  - No statistically significant correlation between VIQ or Pragmatic Judgement subtest of the CASL and Social Acceptance

Attachment & Mentalization

- Clinical Question: “How can one be a poor mentalizer, but still form strong attachments?”
Romance Turns off Mentalization!

- Mesocorticolic Activation (Dopamine release in the ventral tegmentum/nucleus accumbens) ➔ anterior hypothalamus ➔ release of oxytocin and vasopressin ➔

  Two System Shut-down:
  - System A
    - Responsible for attention and long-term memory.
    - Middle pre-frontal, inferior parietal, and middle temporal cortices in the right hemisphere.
  - System B
    - Responsible for negative affect, judgement of social trustworthiness, f/ed tasks, monitoring own emotion.
    - Temporal poles, parietal junction, amygdala, medial pre-frontal cortex.

Attachment & Mentalization

- Attachment Supports Mentalization
  - 1. Allows space for moderate levels of negative affect.
  - 2. Promotes interest in mentalizing.
  - 3. Parents demonstrate mentalizing by examining the thoughts and feelings of their children.

Borderline Personality Disorder

- Frantic efforts to avoid real or imagined abandonment.
- A pattern of unstable and intense interpersonal relationships w/ devaluation and denigration.
- Identity disturbance.
- Impulsivity in at least two potentially self-damaging ways.
- Recurrent suicidal behavior.
- Affective instability.
- Chronic feelings of emptiness, worthlessness.
- Inappropriate anger.
- Transient, stress-related paranoid ideation or severe dissociative bouts.
Reading the Mind in the Eyes

Guilt?  
Fear?  
Seductiveness?

The eye region can signal specific social information, such as guilt, fear or flirtatiousness and—one study of abused children could not read these expressions (which might predispose to certain PDs) while non-abused controls... 

Mentalization Based Treatment (MBT)

- Highly structured (ala DBT) MBT aims to promote mentalization and monitors for its appearance in:
  - distinguishing between appearance and reality
  - reflecting on mental states
  - monitoring thoughts, feeling, and language to give meaning
  - reasoning, using an appropriate knowledge base (where did you learn that?)
  - attending to primary themes without distraction from sub-dominant themes or emotional states

Short-term Mentalization and Relational Therapy (SMART)

- Generic
- 6-12 sessions
- Promote mentalistic parent-child interactions
SMART Family Psychotherapy

Seven Emphases of Short-Term Mentalization And Relational Therapy (SMART)

1) Identifying, highlighting, and praising examples of skillful mentalizing.
2) Sharing and provoking curiosity.
3) Pausing and searching.
4) Identifying preferred non-mentalizing narratives.
5) Identifying and labeling hidden feeling states.
6) Using hypotheticals and counterfactuals.
7) Therapists making use of the self.

Mentalistic Prescribing

- How do you feel?
- Are there ways in which you would like to think and feel differently?
- How might medications help you achieve these goals?
- Do you know about the benefits of the medications you are taking or that I am proposing?
- Are you familiar with the side-effects of the medications you are taking or that I am proposing?

Divergent Paths

1--The Traditional Medical Model: Your brain is damaged and I have a cure for what ails neural structures about which you know little.
2--More Mentalistic Model: Your thoughts and feelings inform what you do. If you experienced these with less intensity or more regulation, how might that impact your life?
Summary I

- Mentalizing is closely related to empathy, but emphasizes the cognitive component of reflecting on the thoughts and feelings of others and of one's self. Myriad brain structures/activities contribute to mentalizing.
- The discovery of mirror neurons helps us, as clinicians, reflect on how we think, feel and do as others. When we allow ourselves to imitate others, we feel better connected with them and them with us.

Summary II

- Deficits in the ability to mentalize involve disruption in social cognitive pathways and occur in disorders such as anxiety, depression, personality disorders, autism spectrum disorders, and schizophrenia.
- Helping our patients better mentalize allows them richer connections with others and a deeper, more meaningful understanding of themselves.

Questions

- Final Thought:
  - “Theory will cause me, unconsciously, when I do not expect it, to adopt a special listening... It is necessary to be passionate about theory so that in turn it can have an effect on us, and make us act without our knowledge.”

- Resources:
  - The Handbook of Mentalization-Based Treatment
  - The Social Neuroscience of Empathy