Using Theory & Clinical Observation to Generate Testable Hypotheses

A New Perspective on Post-natal Depression

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I. THEORY

Dynamic-Maturational Model of Attachment & Adaptation
Central unique feature of the DMM

The organizing function of exposure to danger.

• Regulate attention
• Organize the mind
• Organize behaviour
The DMM as a comprehensive theory of development & adaptation

From Bowlby
- Psychoanalytic
- General systems theory
- Evolutionary biology
- Cognitive information processing
- Cognitive neurosciences
- On-going integration of theories

From Ainsworth
- Naturalistic observation
- The Strange Situation as a standardized assessment
- The ABC patterns of attachment
- Empirical grounding of attachment theory
- On-going expansion of the model

DMM additions
- Epigenetics
- Neurobiology
- Temperament
- Sociobiology
- Developmental psychology
- Behavioral learning theory
- Piaget cognitive development
- Eriksonian development
- Social learning theory
- Theory of mind
- Cognitive psychology (Behavioral, Constructivist)
- Vygotsky - ZPD
- Transactional theory
- Family systems theory
- Vygotsky/Bronfenbrenner: Social ecology
DMM understanding of behavior as a complex interactive process

- Biology
  - Neurology
    - Psychology
      - Relationships
        - Context
Two sources of information

- COGNITION
  - Temporal order → causal attributions
  - Learning theory & contingencies

- AFFECT
  - Intensity → arousal
  - Anger, fear, desire for comfort
  - Fight, flight, or freeze
Cognitive information

- Inhibit that which leads to punitive consequences (danger)
  - Doing what you want
  - Showing negative affect (anger, fear, desire for comfort)

- Exhibit that which leads to desirable consequences (safety)
  - Doing what adults want
  - Showing positive affect
Affect

- Arousal, i.e., changed body state (feelings), motivates action
  - Comfort → continuing activity
  - Anger → aggression
  - Fear → escape
  - Desire for comfort → affectionate approach
  - Tiredness → no action
  - Sadness → no action
Intensity, Arousal, & Affect

- Mania & Pain
- Fear
- Anger
- Desire for comfort
- Alert & comfortable
- Bored
- Tired
- Sleep
- Depressed
- Unconscious
Intensity, Arousal, & Affect: Normative

- Anger
- Desire for comfort
- Alert & comfortable
- Bored
- Tired
Intensity, Arousal, & Affect: Severe Pathology

- Mania & Pain
- Fear
- Sleep
- Depressed
- Unconscious
Two Basic DMM Strategies

- **Type A**: Very COGNITIVE; little affect

- **Type C**: Little cognition; intense AFFECT
DMM Strategies in Adulthood

Integrated True Information

True Cognition
True Negative Affect

Distorted Cognition & Omitted Negative Affect
Distorted Negative Affect & Omitted Cognition

False Positive Affect
False Cognition

Denied Negative Affect
Denied True Cognition

Delusional Cognition
Delusional Affect

Integrated Transformed Information

Integrated True Information

B1-2 Reserved
B3 Comfortable
B4-5 Reactive
C1-2 Threatening/Disarming
C3-4 Aggressive/Feigned Helpless
C5-6 Punitive/Seductive
C7-8 Menacing/Paranoid

A1-2 Socially Facile/Inhibited
A3-4 Compulsively Caregiving/Compliant
A5-6 Compulsively Promiscuous/Self-Reliant
A7-8 Delusional Idealization/Externally Assembled Self

Psychopathy A/C

Delusional Cognition

Denied Negative Affect

Distorted Cognition & Omitted Negative Affect

False Positive Affect

Integrate True Information

Integrated Transformed Information
Types A & C are psychological opposites

- Type A: Reduce limbic arousal, increase repetition of sensorimotor sequences
- Type C: Increase limbic arousal, create unpredicted consequences

Mothers’ brain responses to own vs. unknown baby: Prefrontal cortex

**Type B**

![Image](image1.png)

**Type A**

![Image](image2.png)
Maternal Brain Response to Own Baby’s Crying Face

% BOLD signal change

- Secure
- Dismissing

Gyrus: R Nuc Acc, L Lingual, L Inf Frontal, R Insula, R Middle Frontal, L Postcentral Gyrus
Types A & C behave differently when faced with danger

- **Type A:**
  - Inhibits feelings
  - Does what others want
  - Blames self
  - Feels shame
  - Sometimes explodes with anger or fear
  - Has no explanation for explosive behaviour

- **Type C:**
  - Exaggerates anger and fear
  - Behaves vengefully and deceptively
  - Blames others
  - Considers the self innocent
  - Offers elaborate false reasoning
II. Clinical Observation

3-minute mother-infant interaction (CARE-Index)
Depression

- Affect: Low arousal, non-motivating affect
- Cognition: Low expectation that one’s behavior will have any effect (i.e., non-contingency between self & outcomes)
- Absence of strategic behavior of either an inhibitory or arousing sort;
Mother in Black

- Image removed for confidentiality of the dyad.
Red Hair

- Image removed for confidentiality of the dyad.
III. Developing an Hypothesis

Integrating information from several sources
Post-Natal Depression

- Increase in rates of PND, especially in middle class
- Compulsive strategy (performance?)
- Work, wife, and mother!
  - Women’s new roles
  - High rates of single parenting
  - Older mothers
  - Less childhood parenting experience
  - Isolation from other young mothers
  - Importance of mothers in early years
- All perfect, please!
- Dp A4- ?
Effect on Baby of PND

- Lack of perceived connection to mother
  a. No temporally contingent connection
  b. No affective connection (no attunement)

- No perception of existing unless
  a. Compulsive caregiving attracts the mother (A3)
  b. Exaggeration of affect attracts the mother (C+)
Treatment of PND

 Effects of CBT:
 a. Change semantic cognitions of failure (I can’t do it’) to cognitions of “I can do it.”
 b. Separate cognition from context
 c. Repair the compulsive performance strategy

 Effect of pharmacological treatment:
 a. Raise arousal to motivate positive activity
 b. Separate arousal from context
 c. Permit retention of failed compulsive performance strategy without low mood
A Functional Formulation of PND

- Crisis of:
  - New role requiring change in old roles
  - Old rules requiring high competence in all roles
  - Inattention to function of negative affect

- Resolution requires
  - Change in daily life priorities
  - Change in standards of performance
  - Attention to feelings as information
Outcomes if PND is assuaged, rather than resolved

- Mother’s strategy is repaired, not changed
- Context must then adapt
  - Spouse
  - Children
- Children may become caregivers
- Without adaptation, someone will become symptomatic
Appropriate Treatment of PND?

Opportunity for empirical comparisons of alternate interventions/treatments directed to different systemic levels.
Hypothesis

- Some cases of PND will be associated with a failing compulsive performance attachment strategy
- Effective treatment will address:
  - Self-defined standards
  - Interpersonal processes (affect & cognition)
- Treatment can be directed to:
  - Mother
  - Mother-baby dyad
  - Family
  - Community/culture
IV. Testing the Hypothesis

Multi-group, multi-method design
Integrating Theories of Change

- **Biology**: Genetic, epigenetic Tx
- **Neurology**: Pharmacological
- **Psychology**: Psychotherapies, CBT
- **Relationships**: Family Systems, Parent-infant work
- **Context**: Community Tx, Advocacy
Design

- 2-4 group comparisons
- Mother, dyad, sibs, family, community
- Pre-post treatment assessment
- Multi-method, multi-informant
  - AAI
  - Interaction (CARE-Index)
  - Symptoms checklists
  - Etc.
Monkey: Post-natal Psychosis

- Image removed for confidentiality of the dyad.
Intrusions of Forbidden Negative Affect

- Compulsive A strategy (A)
- Depression (Dp A)
- Extreme unmet need for protection & comfort
- Dp A [ina]
- Extreme alternation in arousal in context of irresolvable conflict
A Functional Formulation of Psychosis

- Crisis of:
  - Context requiring new behavior
  - Old context requiring old behavior
  - Impossibility to staying or moving forward
  - Engagement of extra-familial system to manage the crisis

- Resolution requires
  - Change in the past context to accommodate the new
  - Change in standards of performance
  - Attention to intrusions as information
For further reading on the DMM:


For other downloads, see

www.patcrittenden.com