

# 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

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## From Bowlby

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

## From Ainsworth

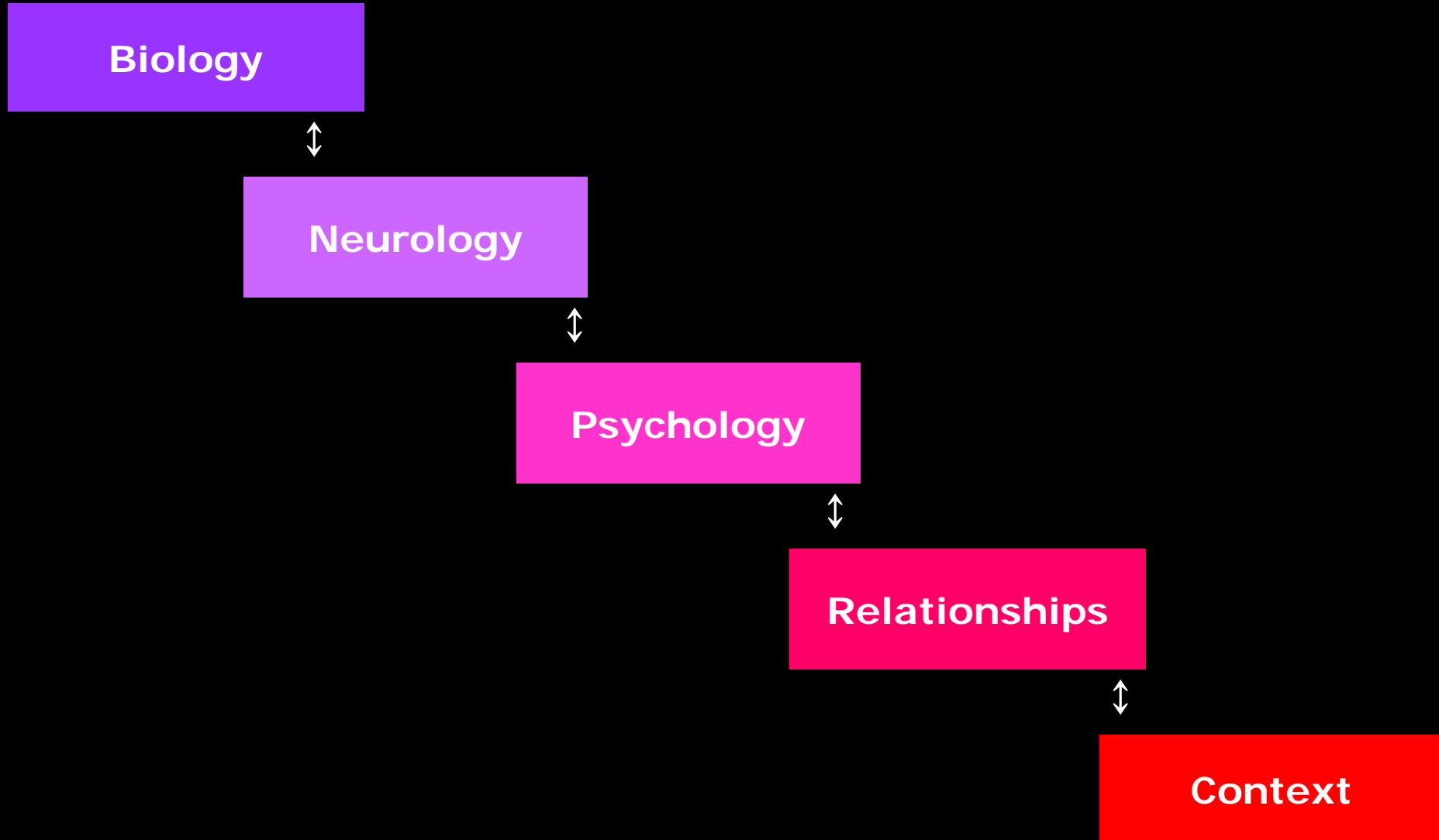
- ❑ Naturalistic observation
- ❑ The Strange Situation as a standardized assessment
- ❑ The ABC patterns of attachment
- ❑ Empirical grounding of attachment theory
- ❑ On-going expansion of the model

## 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

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# Two sources of information

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## □ COGNITION

- Temporal order → causal attributions
- Learning theory & contingencies

## □ AFFECT

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

# Cognitive information

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- ❑ 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

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- 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

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- Mania & Pain
- Fear
- Anger
- Desire for comfort
- **Alert & comfortable**
- Bored
- Tired
- Sleep
- Depressed
- Unconscious

# Intensity, Arousal, & Affect: Normative

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- Anger
- Desire for comfort
- Alert & comfortable
- Bored
- Tired

# Intensity, Arousal, & Affect: Severe Pathology

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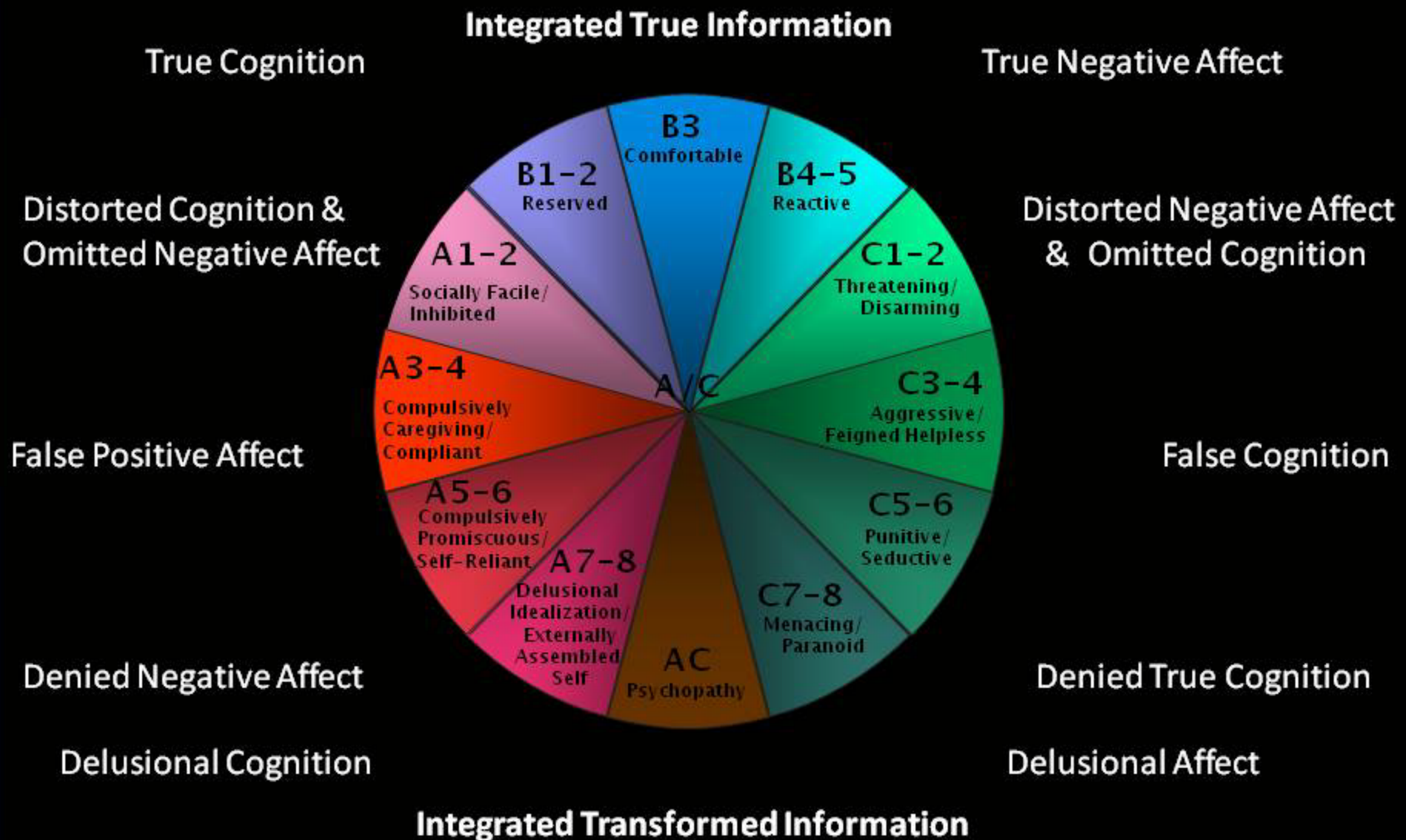
- Mania & Pain
- Fear
- 
- 
- 
- 
- Sleep
- Depressed
- Unconscious

# Two Basic DMM Strategies

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- **Type A**: Very **COGNITIVE**; little affect
- **Type C**: Little cognition; intense **AFFECT**

# DMM Strategies in Adulthood



# Types A & C are psychological opposites

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

# Strathearn, et al.

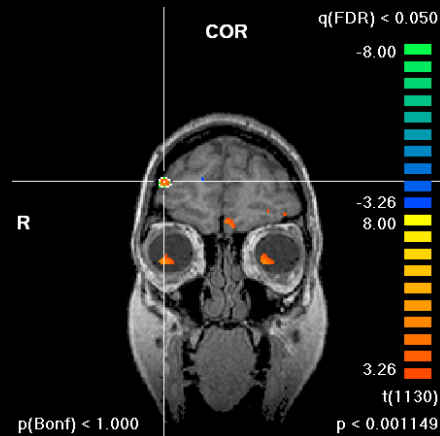
## DMM-AAI & fMRI data

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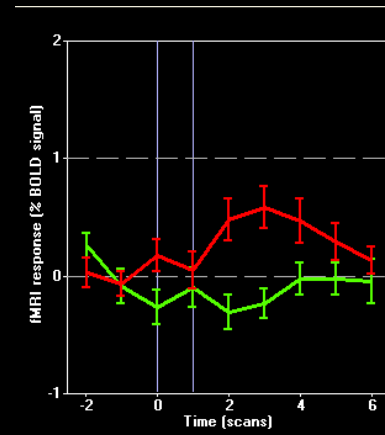
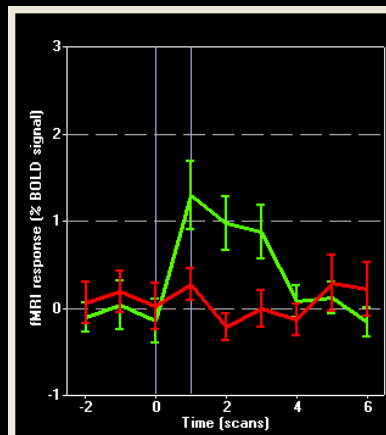
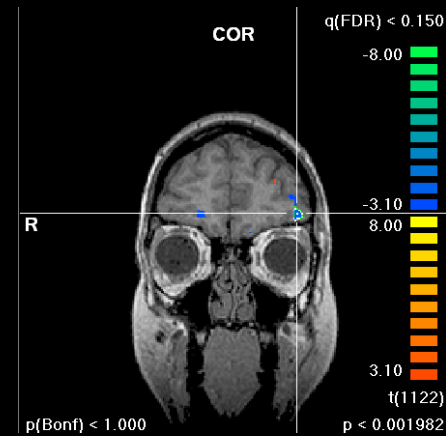
- ▣ Strathearn, L., Fonagy, P., Amico, J.A., & Montague, P.R. (2009). Adult attachment predicts mother's brain and peripheral oxytocin response to infant cues. *Neuropsychopharmacology*, 34, 2655-66.
- ▣ Shah, P. E., Fonagy, P. & Strathearn, L. (2010). Exploring the mechanism of intergenerational transmission of attachment: The plot thickens. *Clinical Child Psychology and Psychiatry*, 15, 329-346.

# Mothers' brain responses to **own** vs. **unknown** baby: Prefrontal cortex

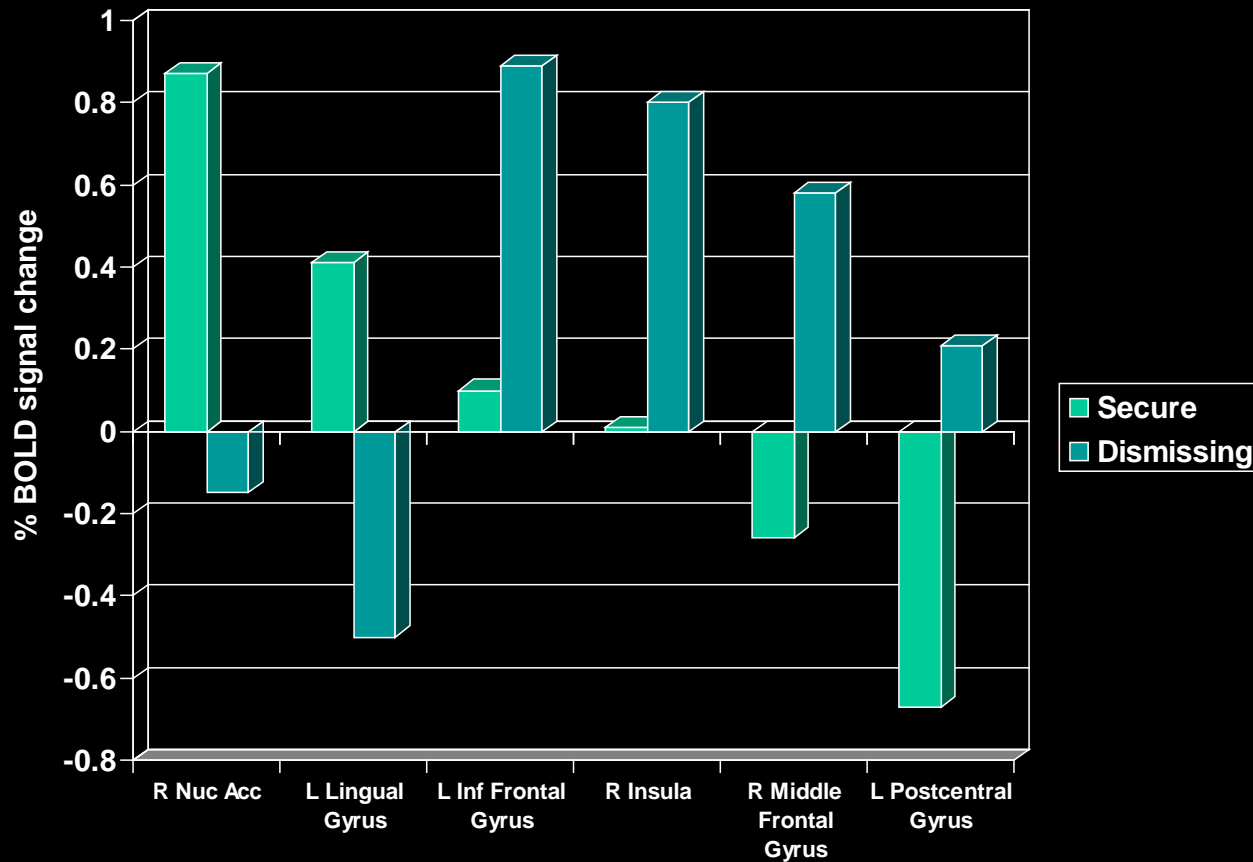
*Type B*



*Type A*



# Maternal Brain Response to Own Baby's Crying Face



# Types A & C behave differently when faced with danger

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## □ 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

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- ❑ 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

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- ❑ Image removed for confidentiality of the dyad.

# Red Hair

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- Image removed for confidentiality of the dyad.

# III. Developing an Hypothesis



Integrating information from  
several sources

# Post-Natal Depression

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- 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

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- ❑ 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

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- 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

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- 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

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- ❑ 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?

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

# Hypothesis

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- ❑ 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

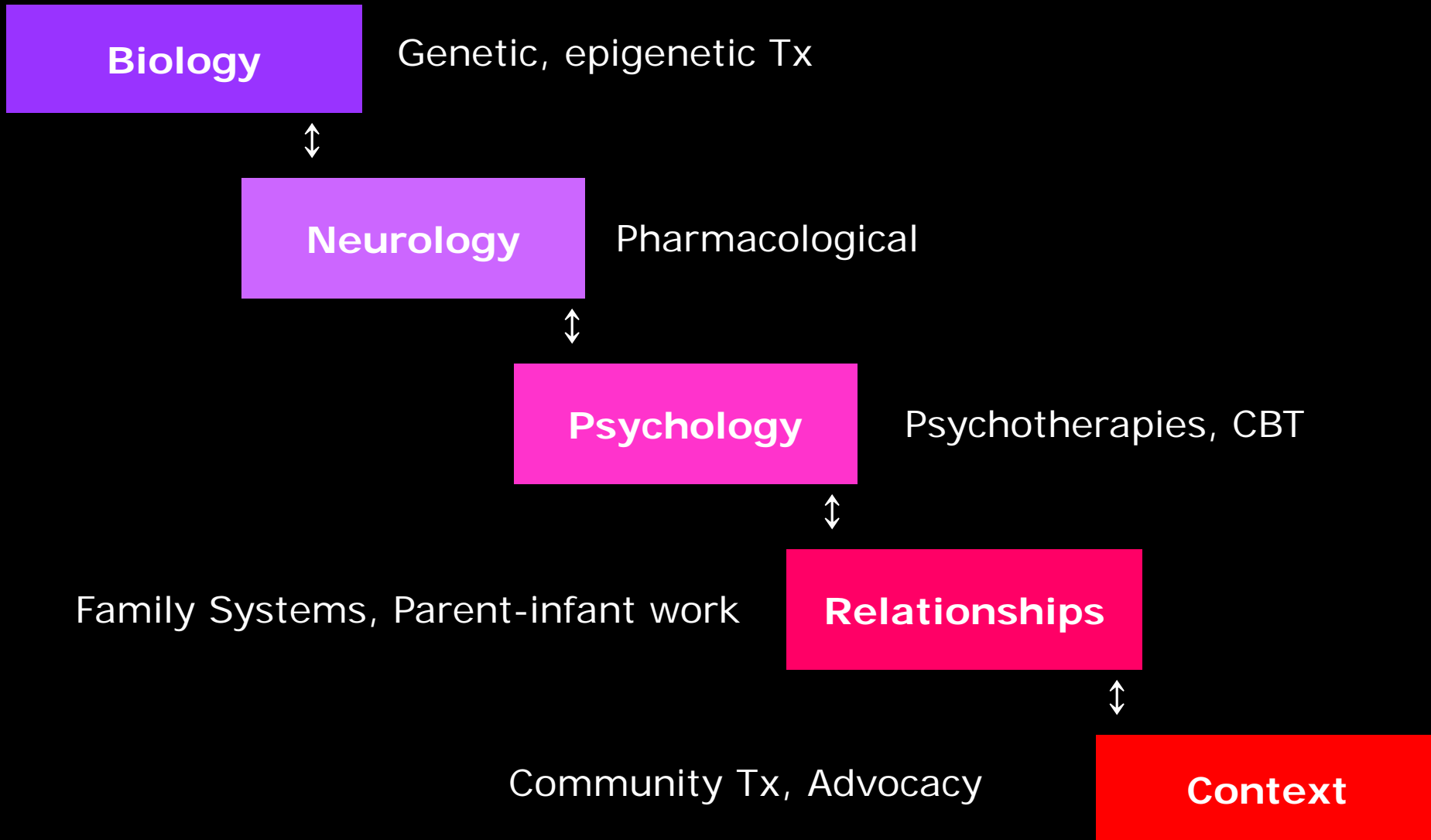
# IV. Testing the Hypothesis



Multi-group, multi-method  
design

# Integrating Theories of Change

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# Design

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- 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

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- 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

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- 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:

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- ❑ Crittenden, P. M. (2008). *Raising parents: Attachment, parenting, and child safety*. Collumpton, UK: Routledge/Willan Publishing.
- ❑ Special DMM issue of *Clinical Child Psychology and Psychiatry (CCPP)*, 15, 2010.
- ❑ Crittenden, P. M. (2006). A dynamic-maturational model of attachment. *Australian and New Zealand Journal of Family Therapy*, 27, 105-115.
- ❑ Crittenden, P.M., & Dallos, R. (2009). All in the family. *CCPP*, 14, 387-407.

For other downloads, see

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[www.patcrittenden.com](http://www.patcrittenden.com)