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# Disorganized Attachment in Adolescent Mother-Infant Dyads: Its Nature, Origins, and Developmental Consequences

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# Disorganized Attachment in Adolescent Mother-Infant Dyads

## Its Nature, Origins, and Developmental Consequences

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A Presentation to the  
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# With more than a little assistance from...

- Sandi Bento, Research Coordinator
- Carey Anne DeOliveira (CPRI, London)
- Heidi Neufeld Bailey (U of Guelph)
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- Anneli Sepa
- Mari Fransson
- Deanne Pederson
- and others, including *countless London area mothers and their babies*

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# Our Research Program - Overview

## Attachment - The First Relationship

Its origins in the first year and in the mother's  
childhood experience

and

its developmental consequences

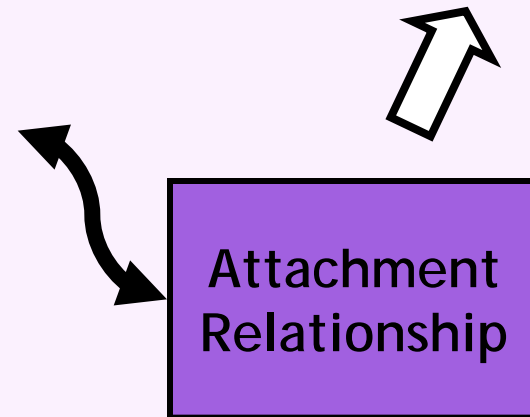


# Some Background to Today's Talk

## The Nature, Sequelae and Origins of Attachment



# The First Relationship



# Circle of Security

## Secure relationship

Parent Attending to the Child's Needs



Adapted from

© 2000 - Cooper, Hoffman, Marvin & Powell

# CIRCLE OF LIMITED SECURITY

## Child Miscuing

### Avoidant Relationship

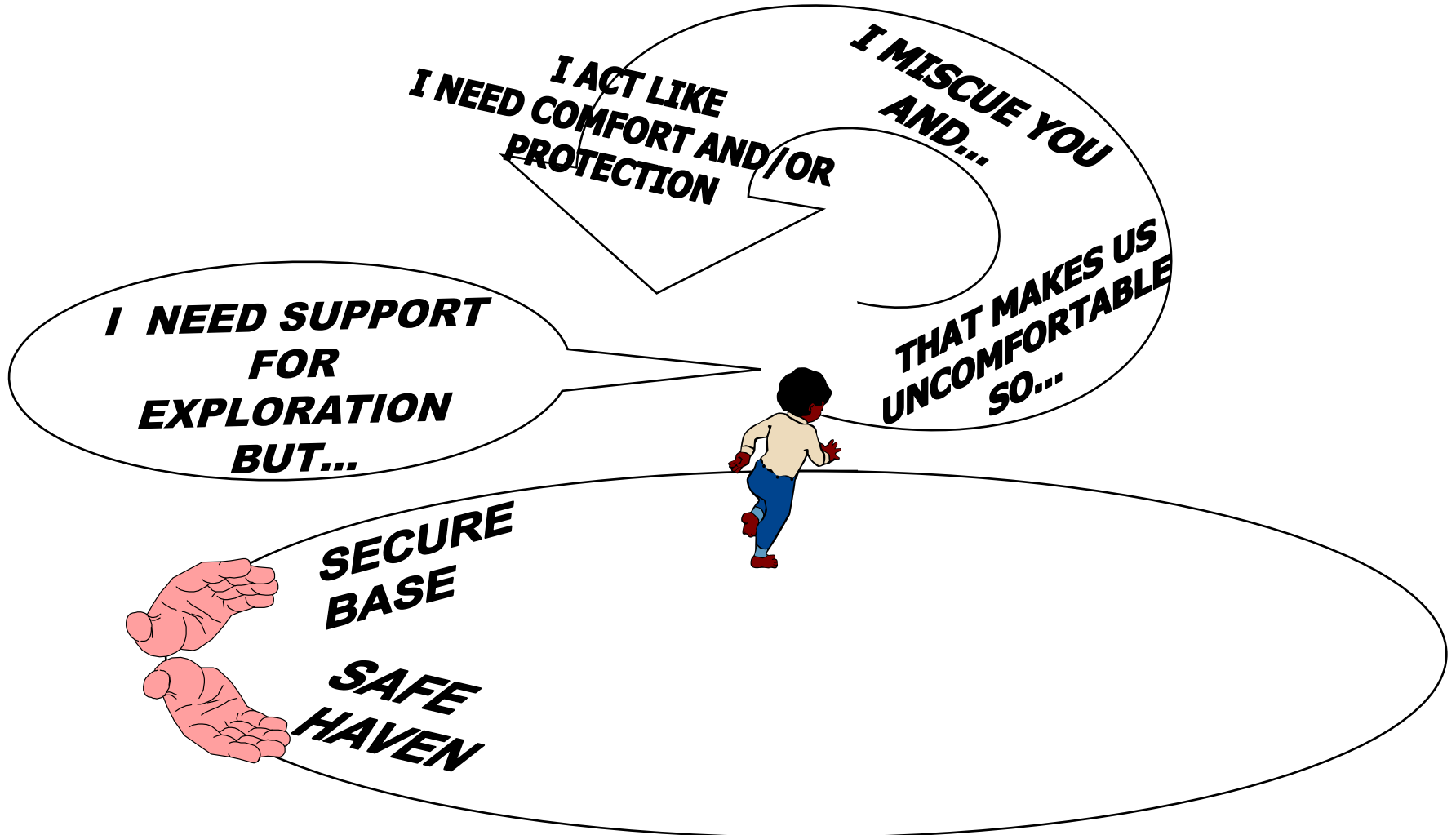




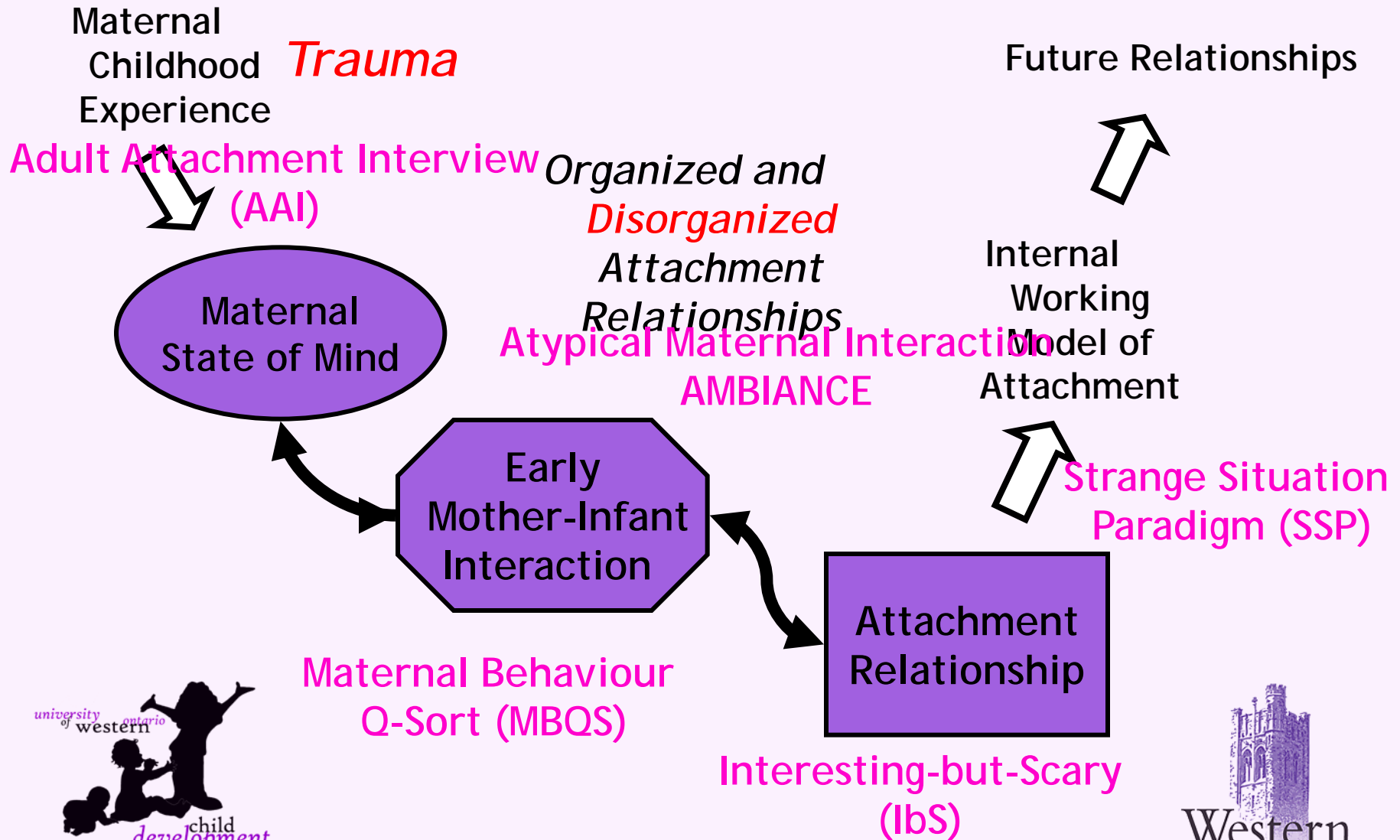
# CIRCLE OF LIMITED SECURITY

## Child Miscuing

### Ambivalent Relationship



# The First Relationship



# Disorganized Attachment Relationship

- First noticed in the Strange Situation in infants with a history of maltreatment
- Breakdown/absence of attachment system - no consistent or coherent strategy
- Unusual, conflicted, contradictory behaviour
  - Approach parent in odd ways
  - Move away from parent when upset or frightened
  - Freeze
  - Display fear of parent
- 15% in non-clinical samples; as high as 80% in at-risk samples
- Associated with maternal **Unresolved maternal state of mind** regarding attachment



# Sequelae of Disorganized Attachment

- Disturbances in affect regulation,
  - Externalizing behaviour problems in childhood,
  - Dissociative behaviour,
  - Disturbed interpersonal relationships in childhood and adolescence
  - Other...
- 
- Intervention **less successful** with Disorganized dyads



# Current Theories of the Development of Disorganized Attachment

## Main & Hesse (1990)

- Frightened/Frightening Behaviour
- Irresolvable conflict

## Lyons-Ruth (1999)

- Severely disrupted interaction and failure to repair
- Profound deficit in maternal interaction
- “Relationship diathesis”

Issues...



# Understanding Disorganization - Outstanding Issues

1. What are its developmental origins??
  - Irresolvable distress arising from atypical/anomalous **Atypical Maternal Interaction**, or
  - **Extreme insensitivity** - no basic scaffold
  - ....or both???
  - Need evidence beyond simple associations
2. Is Disorganization a breakdown or an absence of organized pattern??
  - Limited or pervasive impact on interaction??
  - Disorganization beyond the Strange Situation??

*Answers have important impact  
for development, intervention...*



# Western Adolescent Mothers Study

- 99 adolescent mothers and infants (18.4 years)
- Maternal Adult Attachment Interview: 6 months
- Home visits: 6, 12, 24 months
  - Q-sorts of mother and infant interaction
- University visits: 12, 24 months (and 4.5 & 11 years)
  - Attachment classification at 12 and 24 months
  - Videotaped play interaction
- And much else...
  - (including intervention program)



# An Overview of the Participants

- High Prevalence of Disorganization
  - Disorganized Relationship - 58%
  - Unresolved Maternal State of Mind - 37%
  - Abuse history - 52%
  - Maternal sensitivity - markedly low (MBQS- .12 @ 12 mo)
- Found strong correspondence between maternal AAI and StSit relationship classifications





# Results of the Adolescent Study



# 1. Disorganization and Substantially Atypical Maternal Interaction

## Objectives

- To identify particular aspects of Atypical Maternal Interaction associated with Unresolved representations and Disorganized attachment and
- To establish maternal Atypical Interaction as a mediator between disorganized state of mind and relationships

## Overview

- Maternal interview (6mos) - Adult Attachment Interview (AAI)
- Atypical Maternal interaction in play (12mos) - AMBIANCE
- Attachment (12mos) - Strange Situation (StSit)



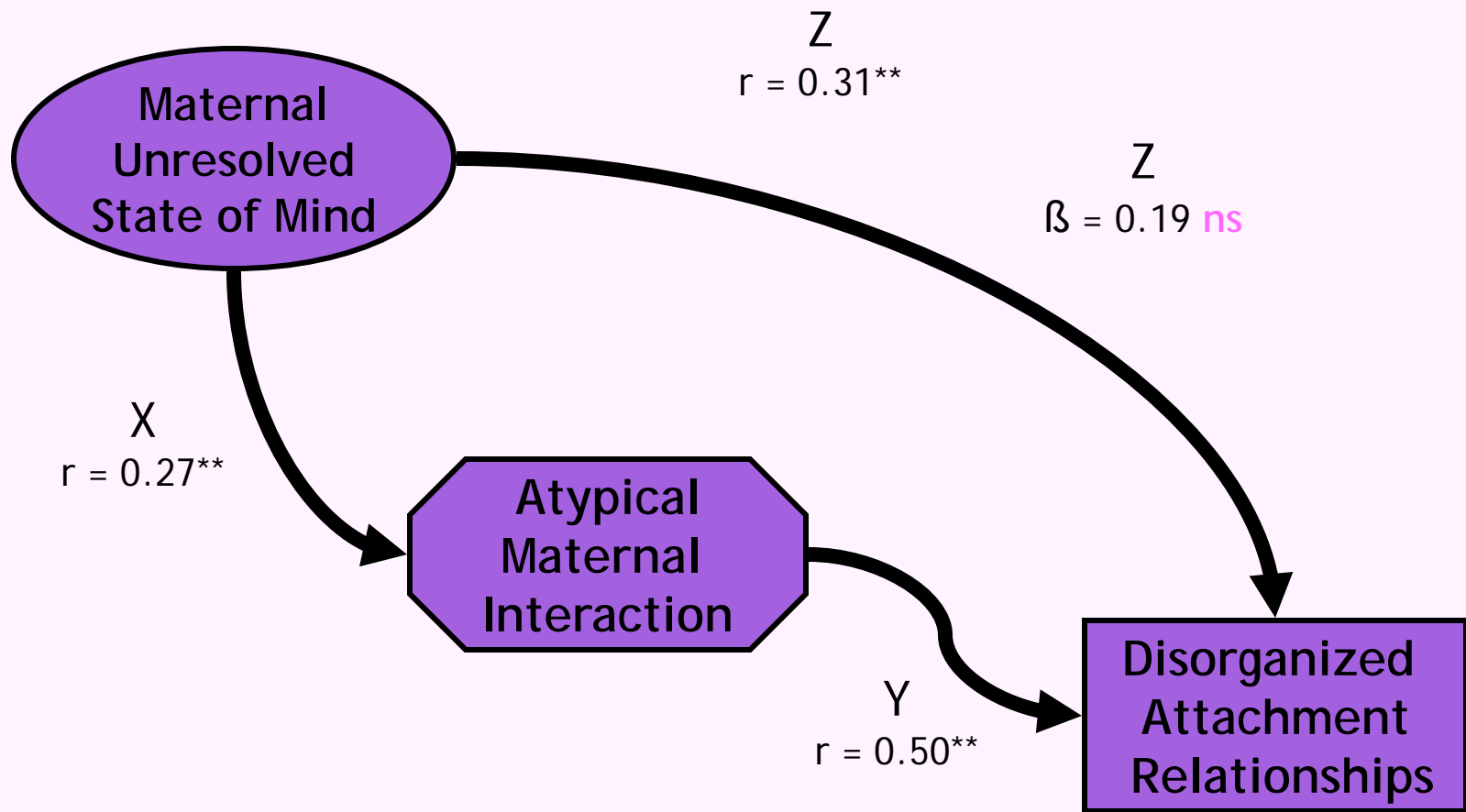
*Madigan, Moran, & Pederson  
Developmental Psychology, 2006*



# Results - Study 1

1. Association of **Unresolved/disoriented** maternal state of mind with **Disorganized** relationship ( $r = 0.31$ )
2. Association of **Atypical Maternal Interaction** with
  - Unresolved/disoriented state of mind ( $r = 0.27$ ) and
  - Disorganized attachment ( $r = 0.50$ )
3. Association of **Disorganized** rel'ship and 3 aspects of Atypical Maternal Interaction
  - Role boundary/confusion;
  - Fearful/disorientation;
  - Intrusive negativity
  - **NOT** Affective Communication Errors or Withdrawal

# Transmission of Disorganized Attachment via Atypical Maternal Behaviour



# Summary - Study 1

- Replication of key associations in hi-risk sample
- Identification of specific elements of **Atypical Maternal Interaction** most related to Disorganized relationships
- First evidence of statistical mediation by **Atypical Maternal Interaction**
- But ---- longitudinal evidence??



# Study 2 - Stability & Change: Disorganization & Atypical Maternal Interaction

## Objectives

- Very few longitudinal studies of attachment in early childhood
  - especially including Disorganization
- None linking changes in attachment to changes in maternal interactive behaviour

## Overview

- Attachment at 12 (StSit)& 24mos (**Interesting-but-Scary**)
- Atypical Maternal Interaction at 12 & 24-mos (AMBIANCE)
- Home observations at 6 & 24mo - Maternal Behaviour Q-sort (MBQS)

*Evans, Forbes, Moran, & Pederson  
Child Development, 2007*



# Results - Study 2



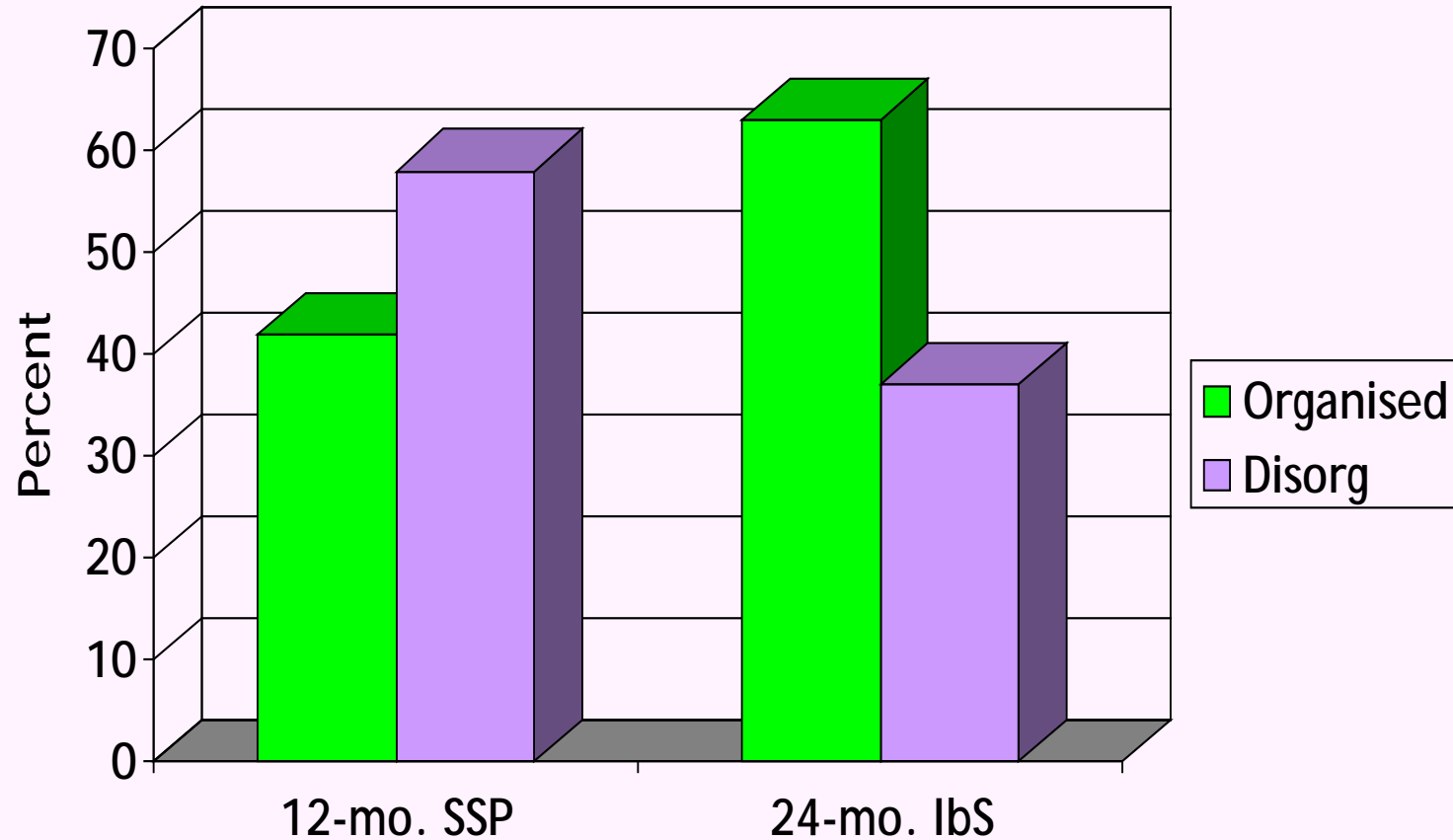
# 12- and 24-Month Attachment

		24-Month Attachment		
		Organized	Disorg	Total
12-Month Attachment	Organized	26	4	30 (42%)
	Disorg	19	22	41 (58%)
	Total	45 (63%)	26 (37%)	71

Clear stability in assessments of attachment between 12 (SSP) and 24 (lbS) months, but also much change...

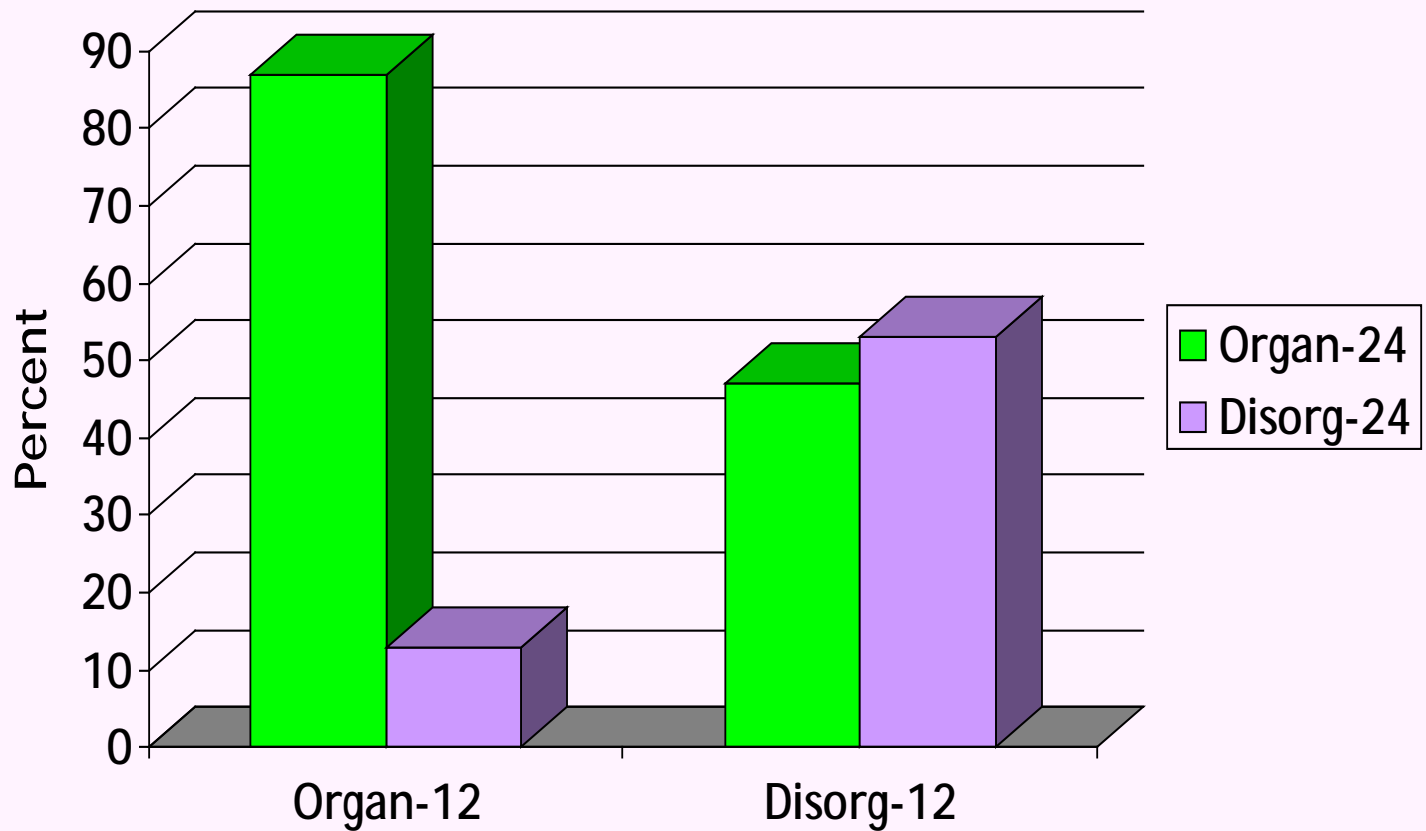


# Distribution of Attachment at 12- and 24-Months



Substantial drop in number of Disorganized relationships - 12 to 24 mon

# Changes in Attachment Between 12- and 24-Months



Organization is stable - Disorganization more likely to change

# Initial Results - Study 2

1. Statistical continuity in attachment across time - as theoretically predicted
2. Organized relationships unlikely to change; many Disorganized become Organized
3. Similar patterns for Atypical Maternal Behaviour

*Can parallel change in Atypical Maternal Interaction account for changes in Disorganized status from 12 to 24 mon???*



# Accounting for change in Disorganized status 12-to-24mon???

1. Regression analyses of continuous variables
  - 12-to-24mon change in Atypical Maternal Interaction predicts 12-to-24mos change in Disorganization
2. Difference Scores
  - 12-to-24mon Change in Atypical Maternal Interaction predicts 12-to-24mon change in Disorganization

Categorical analyses...



# Associations Between Attachment Disorganization and Atypical Maternal Interaction at 12- and 24-Months

ATTACHMENT	Maternal Interaction		
	Stable DisR	Stable NotDisR	DisR→NotDisR
Stable DisOrg	POS	NEG	
Stable Not-DisOrg	NEG	POS	
DisOrg→Not-DisOrg			POS

Above chance

Below chance

$\chi^2(9, N = 71) = 36.61, p < .001; \text{Kappa} = .39, p < .001.$

DisOrg - Disorganized  
DisR - Disrupted Maternal Interaction

Changes in Disorganization Map  
Changes in Maternal Atypical Behaviour

## Results - Study 2

1. Stable quality of maternal interaction associated with stability in relationship
2. Improvement in quality of maternal interaction associated with shift from Disorganized to Organized relationships
3. **But**....Indications that same was also true for quality of maternal sensitivity observed in the home, so...

# 3. Maternal Representations, Interaction in the Home and Attachment Relationships

## Objectives

- Exploration of key elements of attachment system
  - Seldom observed in same study in home
  - Never involving Disorganization and hi-risk sample

## Overview

- Maternal state-of-mind at 6mo (AAI), home observations at 12mo (MBQS), and attachment at 12 mo (StSit)
- Innovations in description, conceptual model and analyses



*Bailey, Moran & Pederson  
Develop & Psychopath, 2007*



# Results - Study 3





# Styles of Maternal and Infant Interaction

- Styles of Maternal Interaction
  - Sensitive/Insensitive
  - Disengaged
  - Non-Synchronous
- Styles of Infant Interaction
  - Interacts Harmoniously with Mother
  - Prefers Stranger
  - Sad/Withdrawn

# Results - Study 3

- Unresolved maternal state of mind and Disorganized relationships associated with:
  - (in)Sensitive and Disengaged maternal interactive styles (not non-synchronous) and
  - Basis for conducting mediational analyses...

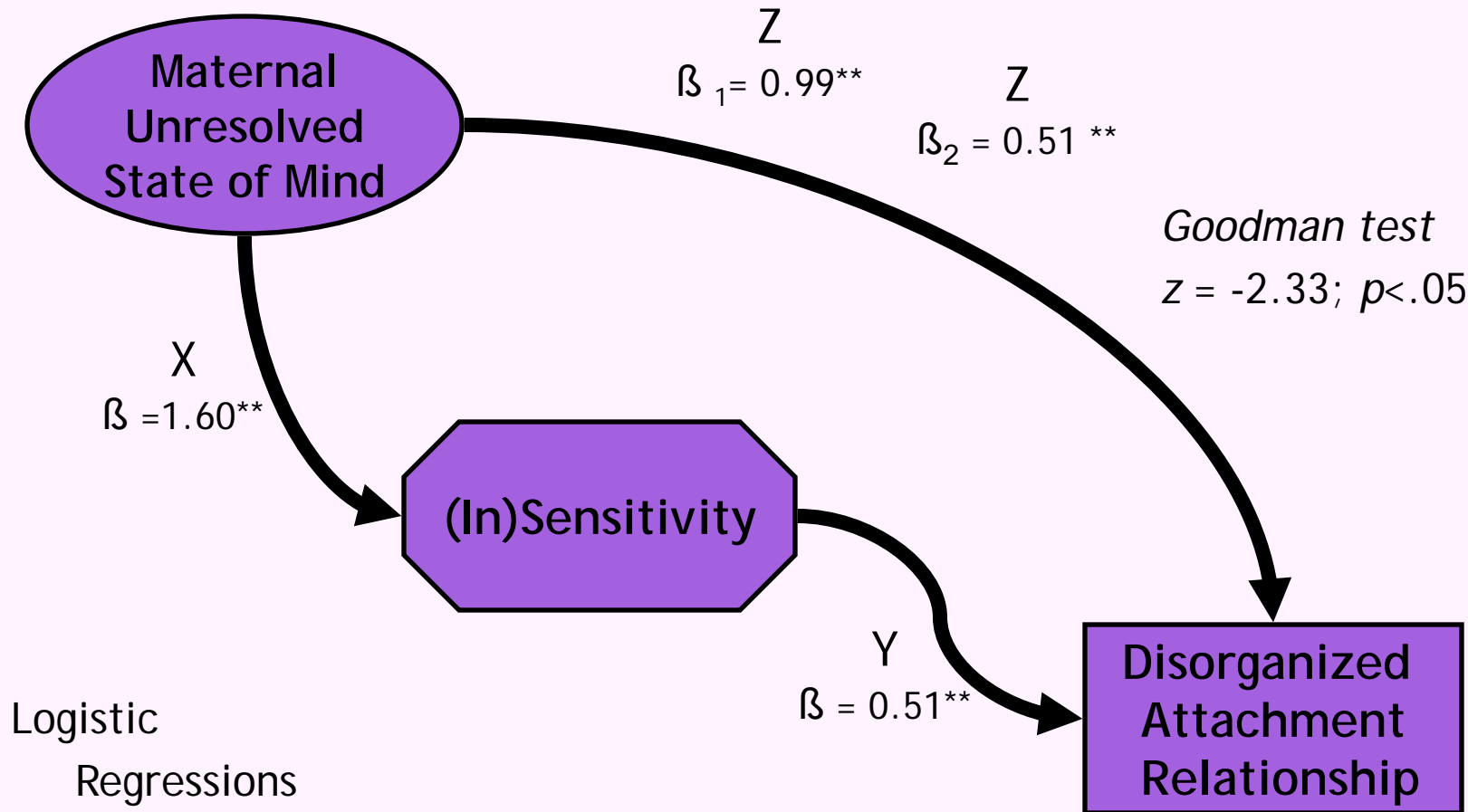


# Traditional Mediational Analyses

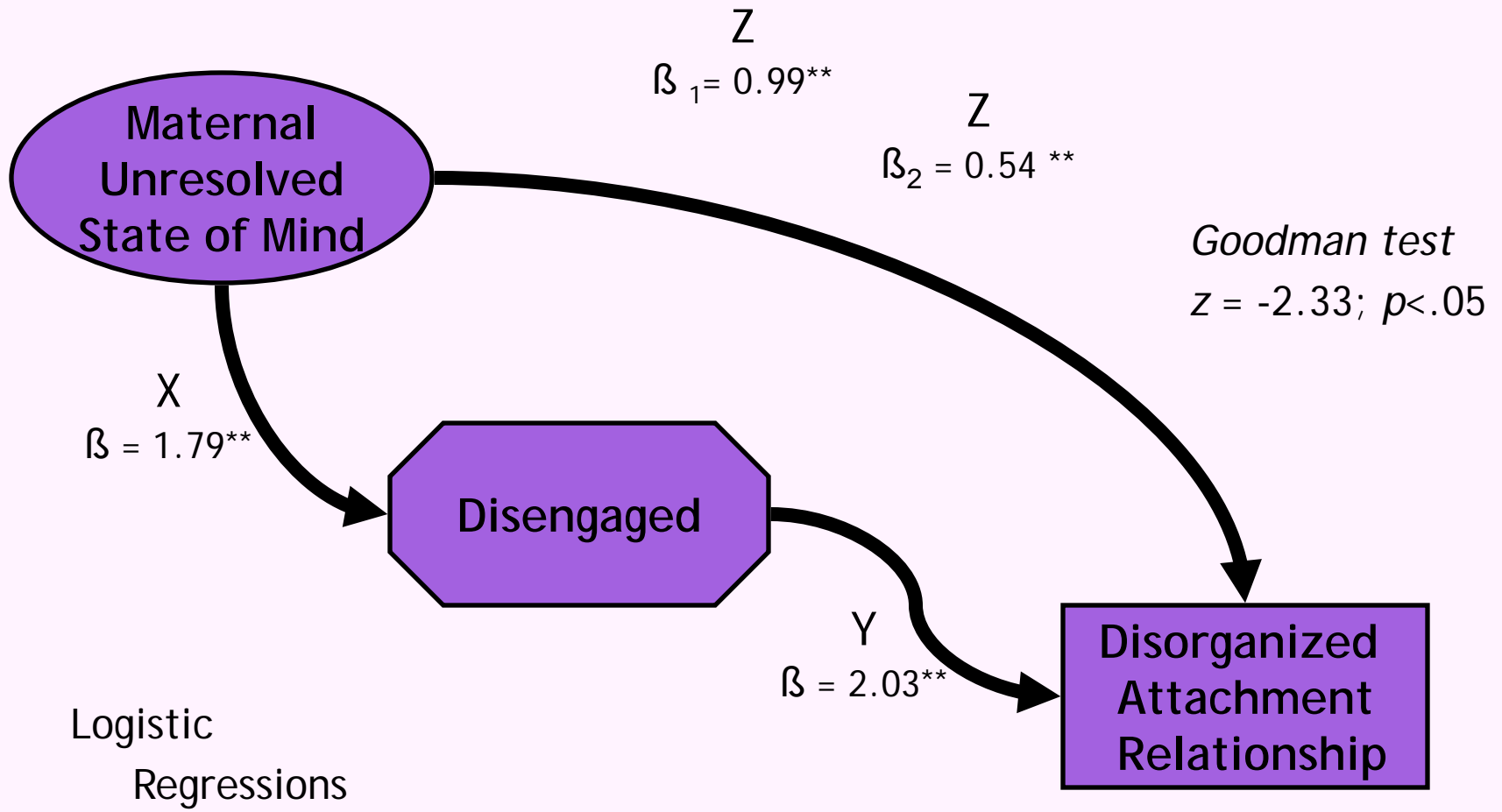
Logistic Regressions  
Linear Causal Model



# Transmission of Disorganized Attachment via Insensitive Maternal Behaviour in the Home



# Transmission of Disorganized Attachment via Disengaged Maternal Behaviour in the Home



# Relationship-Based Analyses

## Latent Class Analysis Systems Model



# Dyadic Styles of Maternal and Infant Interaction

## Maternal Style

Sensitive

Disengaged

Disengaged

and

and

and

## Child Style

Harmoniously

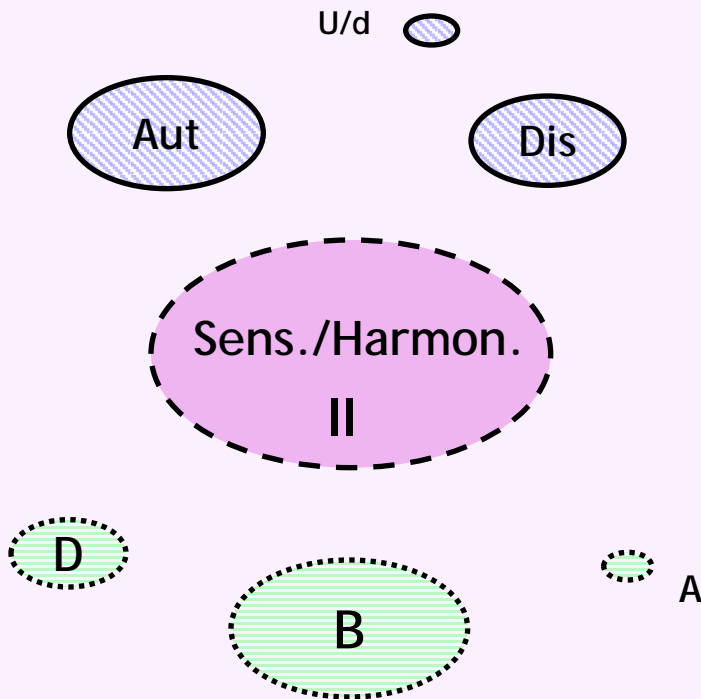
Prefers Stranger

Sad/Withdrawn

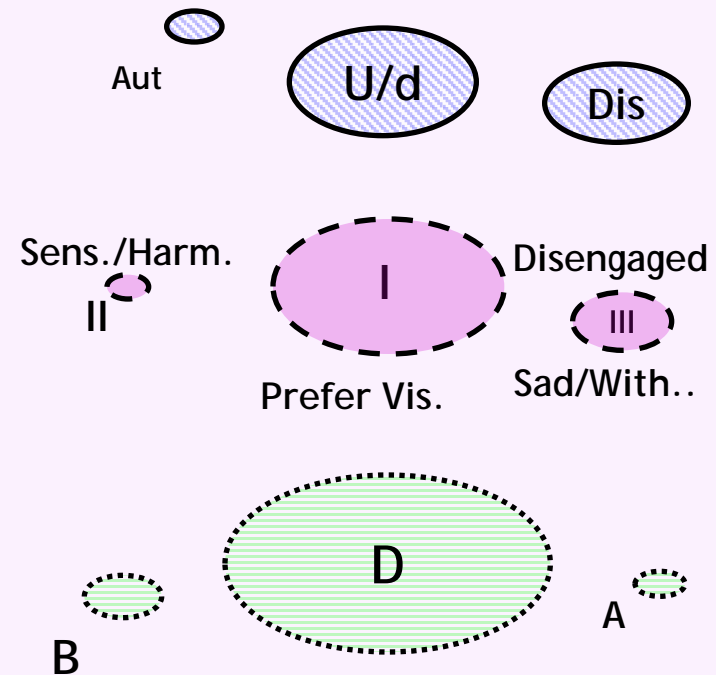


# Mother/Infant Dyadic Profiles

## LCA Class 1 – 45%



## LCA Class 2 – 55%



### Maternal State of Mind

Dis - Dismissive  
Aut - Autonomous  
U/d - Unresolved

### Dyadic Interactive Style

I - Disengaged/Prefers Visitor  
II - Sensitive/Harmonious  
III - Disengaged/Sad-Withdrawn

### Relationship

A - Avoidant  
B - Secure  
D - Disorganized



# Results - Study 3

1. Disorganization has a more pervasive impact on mother-infant interaction than thought - not simply a breakdown of an organized pattern
2. Disorganization associated with both Atypical Maternal Interaction and naturalistic aspects of maternal interaction
  - i.e. not limited to atypical disrupted or frightening behaviour under stress

# 4. Frank Insensitivity vs Atypical Maternal Interaction

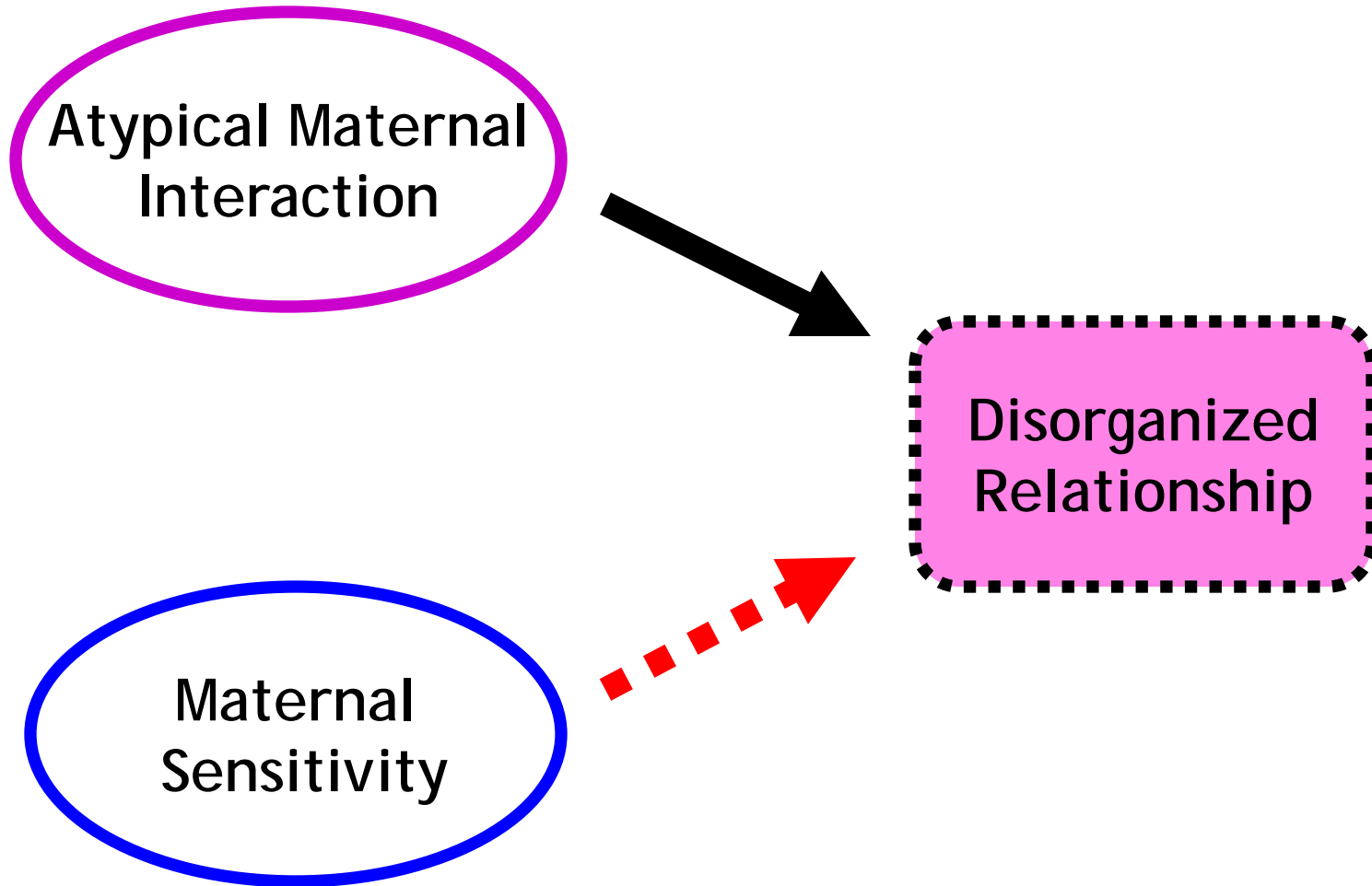
- Atypical Maternal Interaction assessed with AMBIANCE at 12mon in play without toys
- Maternal sensitivity assessed with MBQS at 12mon in home
- Hierarchical regression:
  - Disorganization as dependent variables
  - (1) Atypical maternal behaviour and (2) sensitivity as predictors

# Results - Study 4

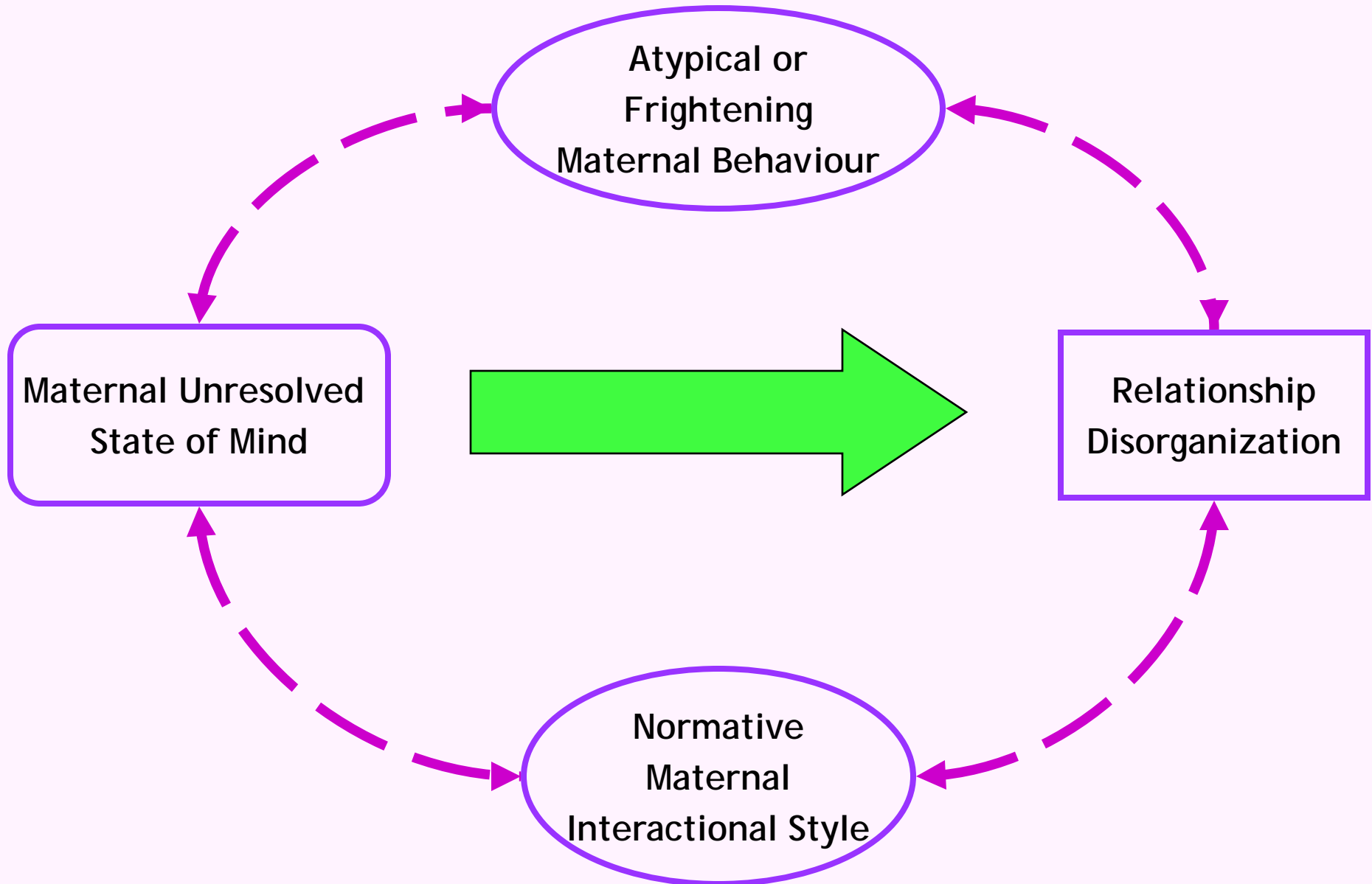
## Sensitivity and Atypical Behaviour

1. As predicted by theory:
    - Atypical behaviour predicts Disorganization
- BUT*
2. Contrary to theory:
    - Maternal Sensitivity adds to prediction of Disorganization

# Interactive Correlates of Attachment Relationship Quality



# Integrating Two Models



“Just as children are absolutely dependent on their parents for sustenance, so in all but the most primitive communities, are parents, especially their mothers, dependent on a greater society for economic provision. If a community values its children it must cherish their parents.”

John Bowlby, 1951, p.84, WHO Report  
Cited by Inge Bretherton,  
*Developmental Psychology*, 1992



For additional information:

# The Pederson-Moran Research Group at the University of Western Ontario

<http://www.ssc.uwo.ca/psychology/faculty/pedmor/pedermor.html>



# Interactive Correlates of Attachment Relationship Quality

