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# The Nature and Origins of Infant-Adolescent Mother Attachment Relationships

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# The Nature and Origins of Infant-Adolescent Mother Attachment Relationships

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London, Ontario, Canada

Workshop on Attachment: Causes and Consequences  
Center for Studies in Behavioral Neurobiology  
Concordia University  
Concordia University, Montreal  
March 31, 2006



# With more than a little assistance from...

- Sandi Bento, Research Coordinator
- Carey Anne DeOliveira (CPRI, London)
- Heidi Neufeld Bailey (U of Guelph)
- Jen Phillips
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- Ann Krupka
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- Sheri Madigan
- Lindsey Forbes
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- Acia Blank
- Anneli Sepa
- 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



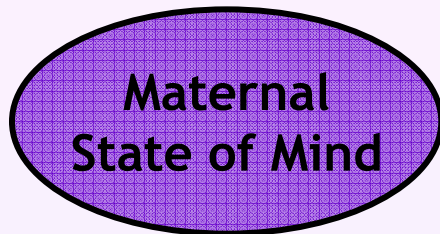
# Some Background to Today's Talk

## The Nature, Sequelae and Origins of Attachment

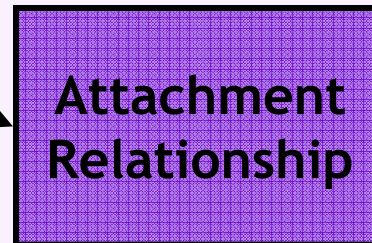
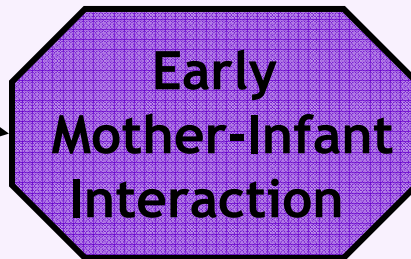
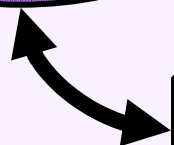


# The First Relationship

Maternal  
Childhood *Trauma*  
Experience



*Organized and  
Disorganized  
Attachment  
Relationships*



Future Relationships



Internal  
Working  
Model of  
Attachment



# Disorganized Attachment

- First noticed in infants with a history of maltreatment
- Breakdown 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
- **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
- Unresolvable conflict

## Lyons-Ruth (1999)

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

- **Issues...**



# Conceptual and Empirical Issues

A theory with an identity crisis??

- Developmental origins in interaction?
  - Fear arising from atypical **disrupted maternal behaviour**, or
  - Extreme insensitivity, or both???
  - Beyond simple associations
- Is Disorganization a breakdown or an absence of organized pattern?
  - Limited or pervasive
- Disorganization beyond the Strange Situation



# 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 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)
- Correspondence between maternal AAI and StSit relationship classifications



# Some Results of the Adolescent Study



# 1. Disorganization and Substantially Disrupted Maternal Interaction

- Objectives
  - To identify particular aspects of disrupted maternal behaviour associated with Unresolved representations and Disorganized attachment and
  - To establish maternal disrupted behaviour as a mediator between disorganized state of mind and relationships
- Overview
  - Maternal interview (6mos) - Adult Attachment Interview (AAI)
  - Maternal disrupted interaction in play (12mos) - AMBIANCE
  - Attachment (12mos) - Strange Situation (StSit)

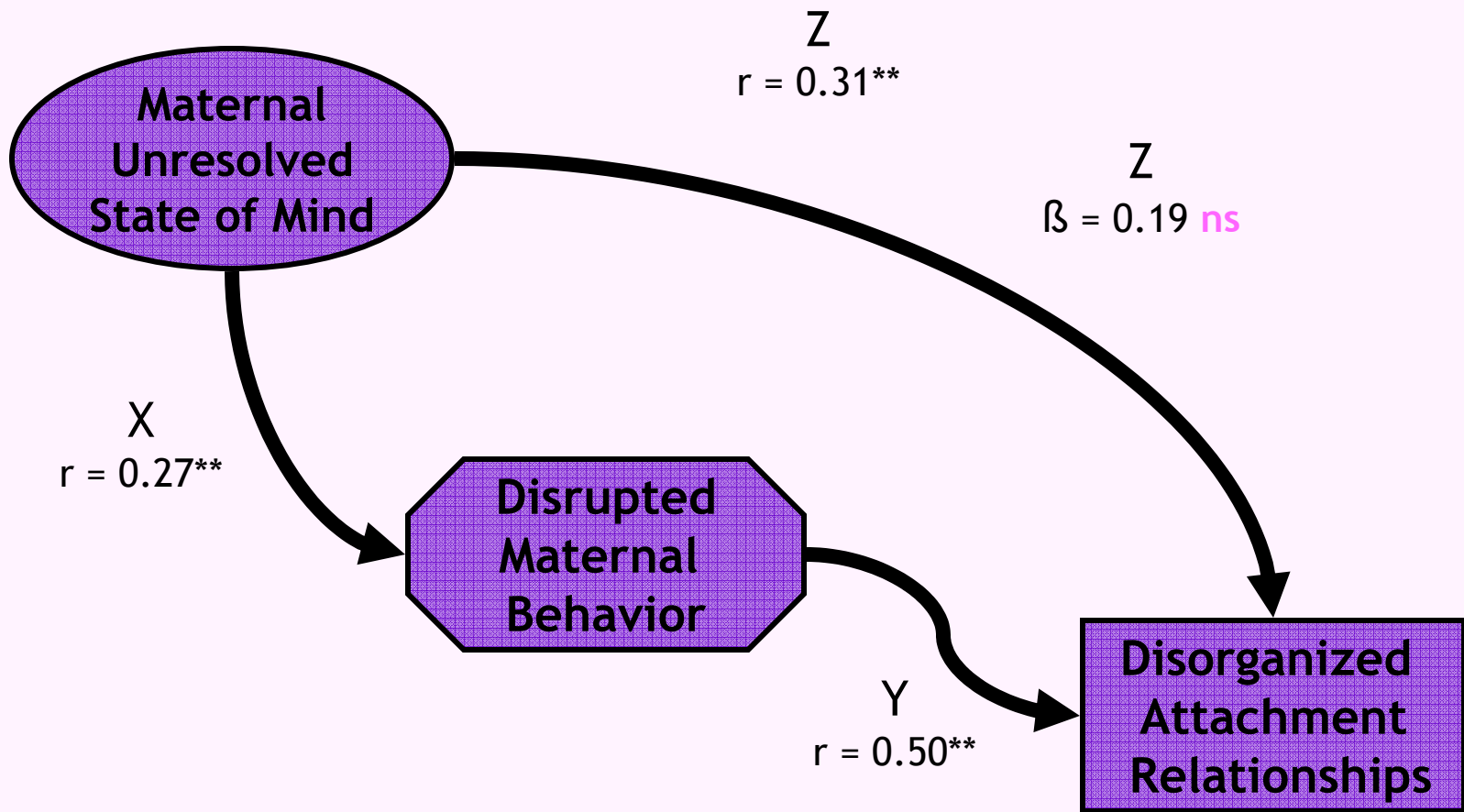
*Madigan, Moran, & Pederson  
Developmental Psychology - February 2006*



# Results - Study 1

- Association of Unresolved maternal state of mind with Disorganization relationship ( $r = 0.31$ )
- Association of disrupted maternal behaviour with
  - Unresolved state of mind ( $r = 0.27$ ) and
  - Disorganized attachment ( $r = 0.50$ )
- Associations between Disorganization and 3 aspects of Disrupted Maternal Behaviour
  - Role boundary/confusion;
  - Fearful/disorientation;
  - Intrusive negativity
  - **NOT** Affective communication errors or Withdrawal

# Transmission of Disorganized Attachment via Disrupted Maternal Behaviour





# Summary - Study 1

- Replication of key associations in hi-risk sample
- Identification of specific elements of disrupted maternal behaviour most related to Disorganized relationships
- First evidence of statistical mediation
- But ---- longitudinal evidence??



## 2. Stability & Change: Disorganization & Maternal Interactive Behaviour

### Objectives

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

### Overview

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

*Evans, Forbes, Moran, & Pederson -Manuscript revised and resubmitted -  
Child Development*

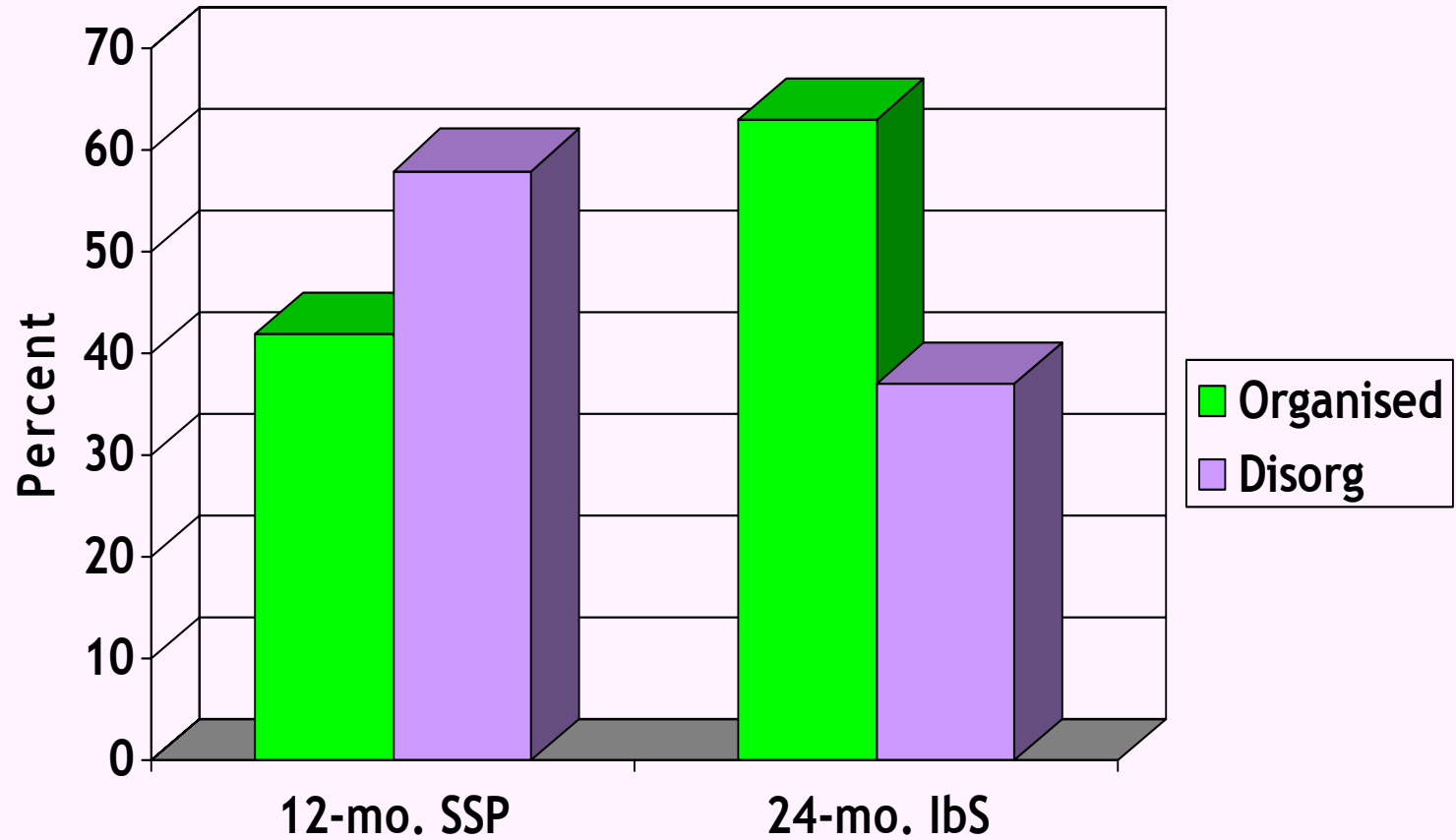
# Results - Study 2



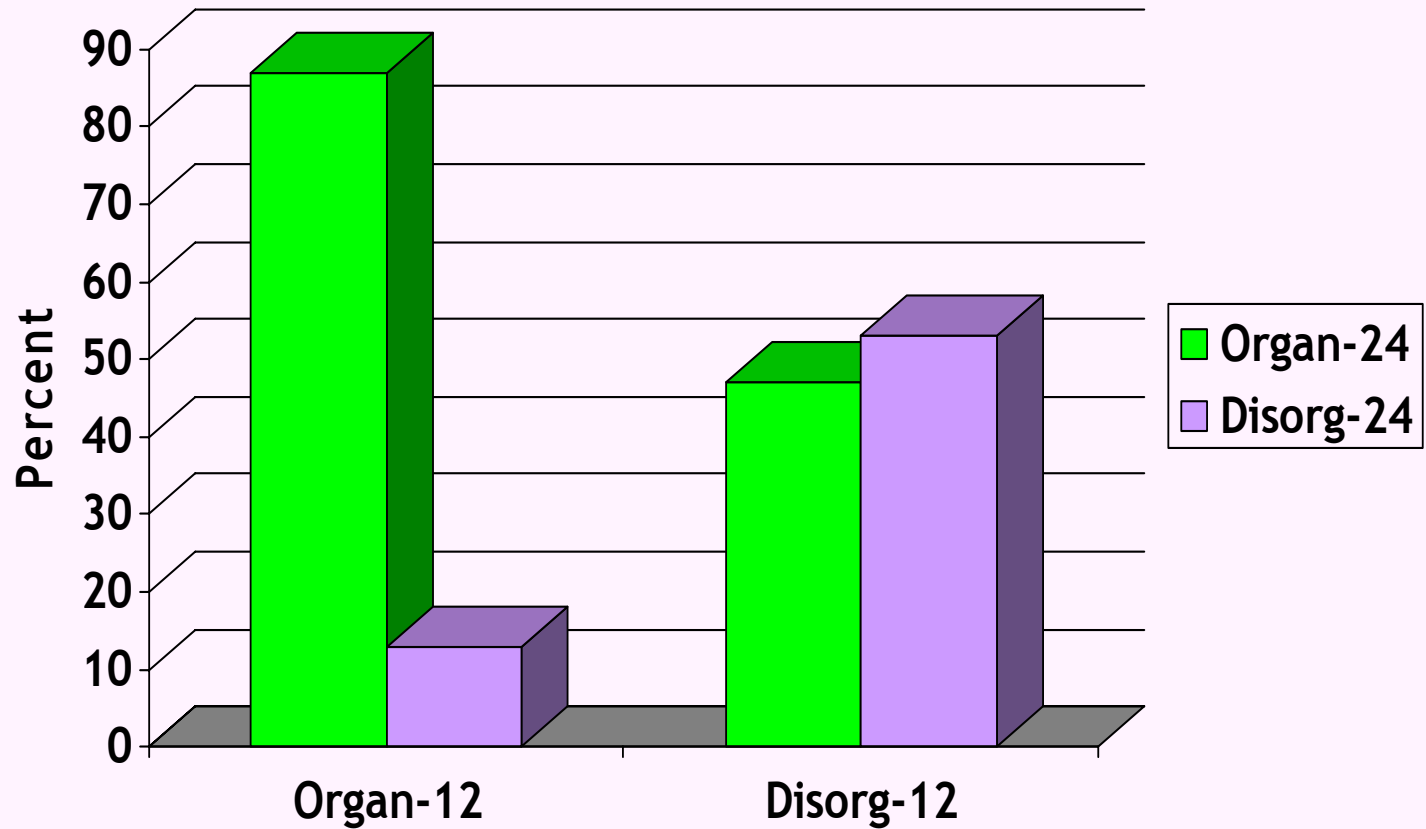
# 12- and 24-Month Attachment

		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

# Distribution of Attachment at 12- and 24-Months



# Changes in Attachment Between 12- and 24-Months



# Initial Results - Study 2

- Continuity - Statistical correspondence as theoretically predicted
- Organized relationships unlikely to change; many Disorganized become Organized
- Similar patterns for maternal Disrupted behaviour
- Accounting for change in Disorganization status???



# Accounting for change in Disorganization status 12-24mos???

- Regression analyses of continuous variables
  - 24mos Disrupted maternal interaction predicts 24mos Disorganization
- Difference Scores
  - 12→24mos Change in Disrupted maternal interaction predicts 12→24mos change in Disorganization





Categorical analyses...





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

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

 Above chance  
 Below chance

DisOrg - Disorganized

DisR - Disrupted Maternal Interaction

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

## Results - Study 2

- Stable quality of maternal behaviour associated with stability in relationship
- Improvement in quality of maternal interaction associated with shift from Disorganized to Organized relationships
- Same was also true for quality of maternal sensitivity observed in the home, so...



# 3. The Big Picture: Maternal Representations, Interaction 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 - Revise & Resubmitted -*

*Develop & Psychopath*



# 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

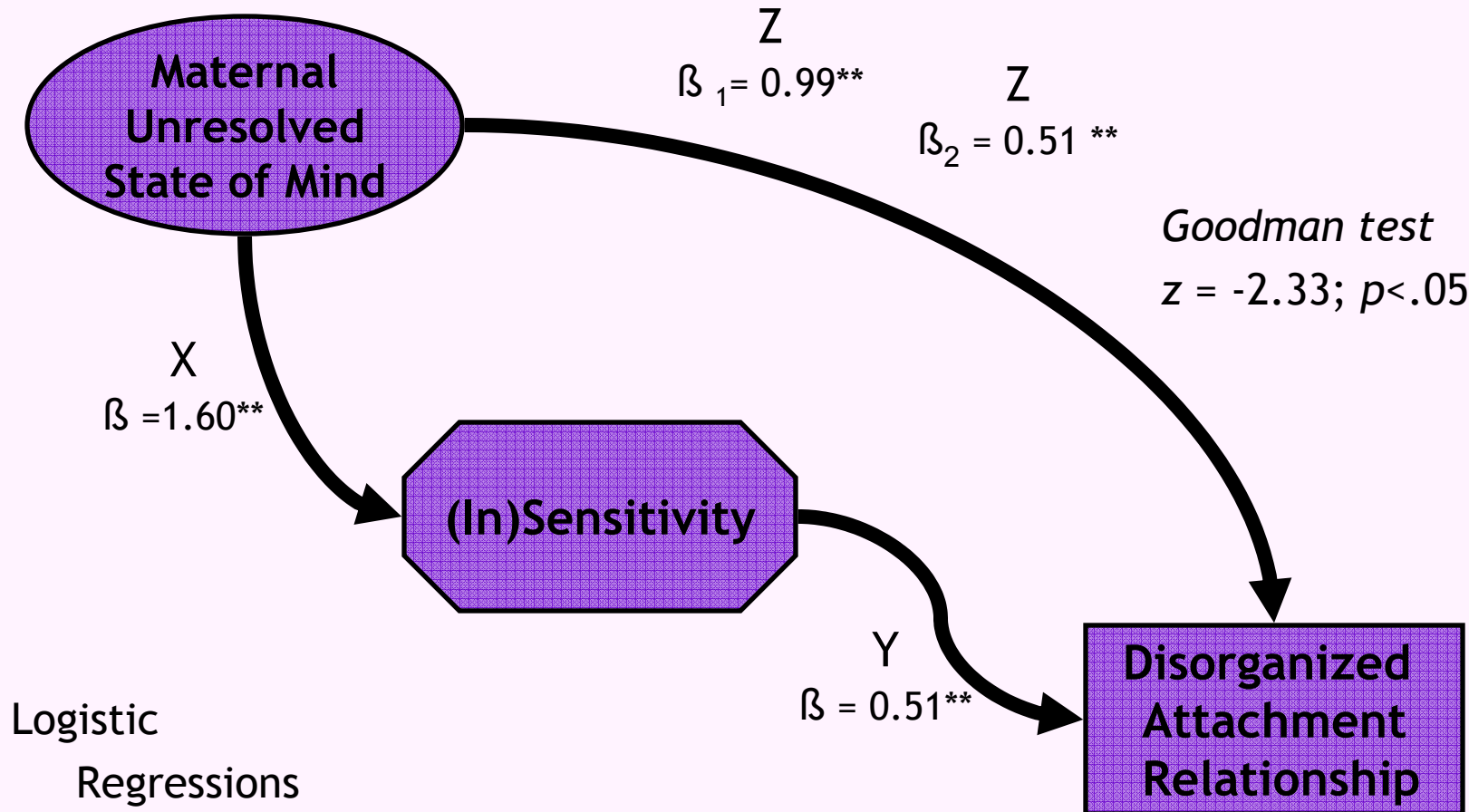
- Unresolved maternal state of mind associated with:
  - (in)Sensitive and Disengaged maternal interactive styles (not non-synchronous) and
- Disorganized relationships associated with:
  - (un)Harmonious interaction, Prefers Visitor, and Sad/Withdrawn

# Traditional Mediation Analyses

Logistic Regressions  
Linear Causal Model

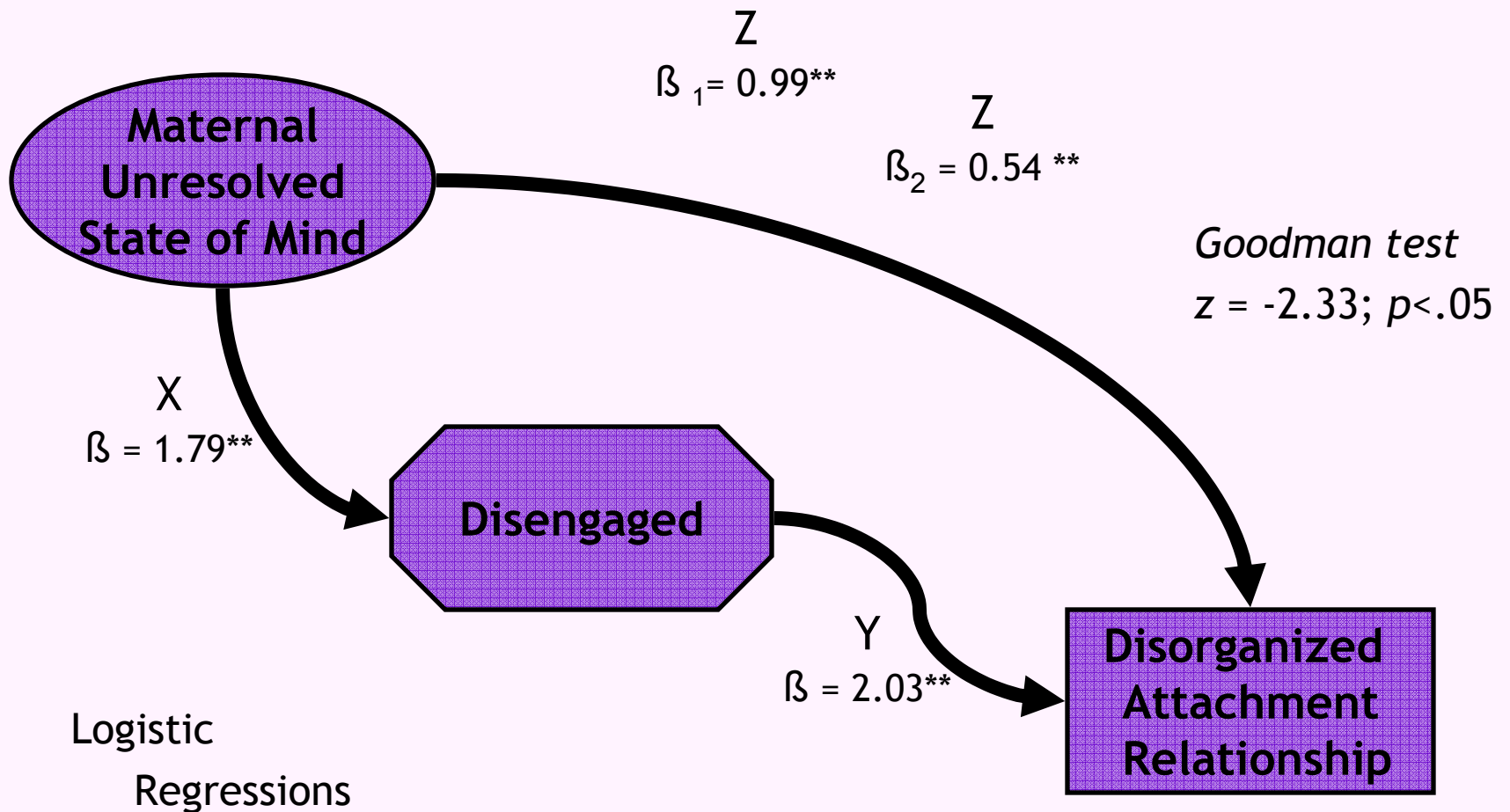


# Transmission of Disorganized Attachment via Insensitive Maternal Behaviour in the Home





# 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

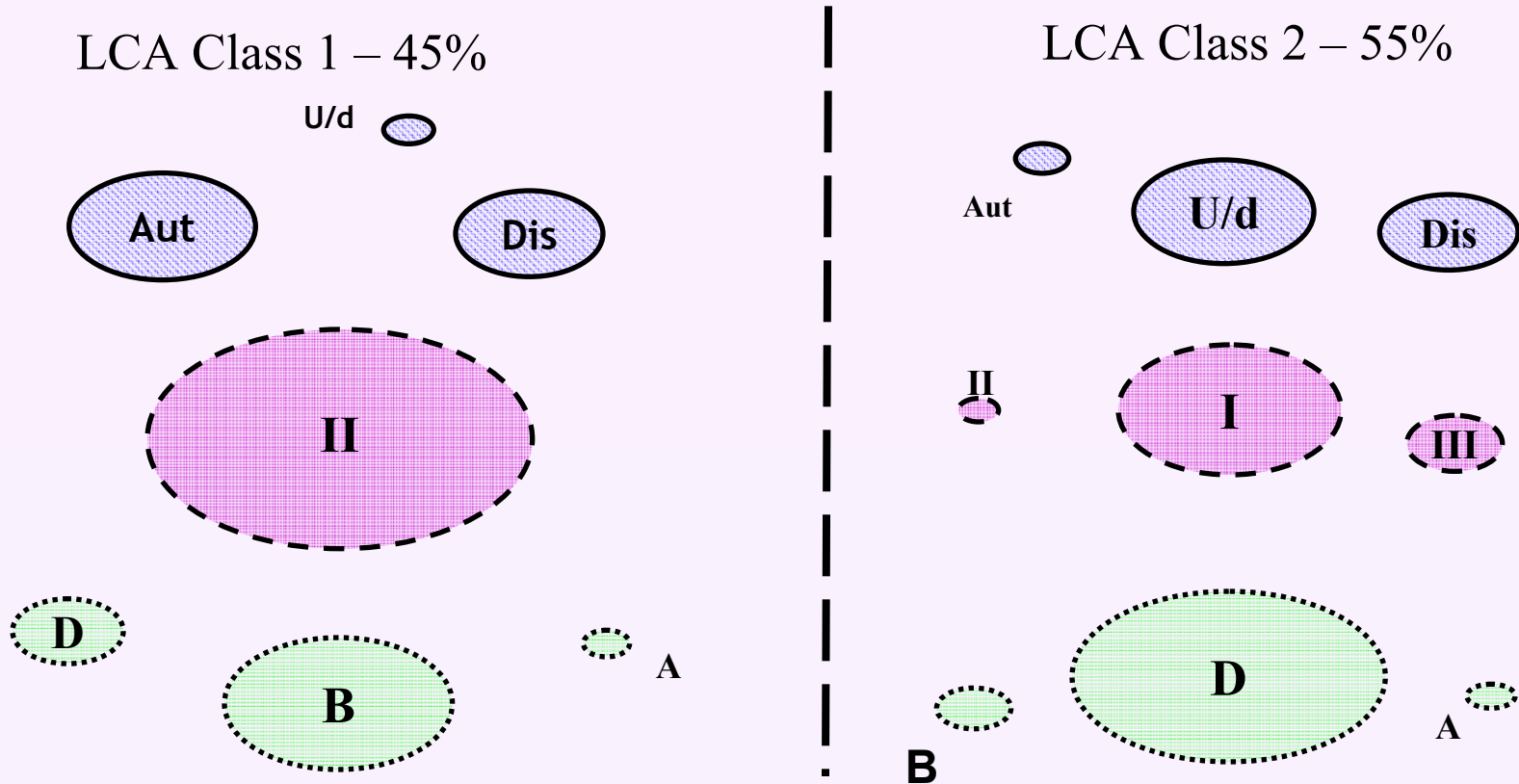
Prefers Stranger

Sad/Withdrawn



Figure 2. Graphic description of two classes identified through LCA using co-occurring patterns of mother/infant behavior profiles. Diameter of circles represent relative conditional probabilities

## Mother/Infant Dyadic Interactive Profiles



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

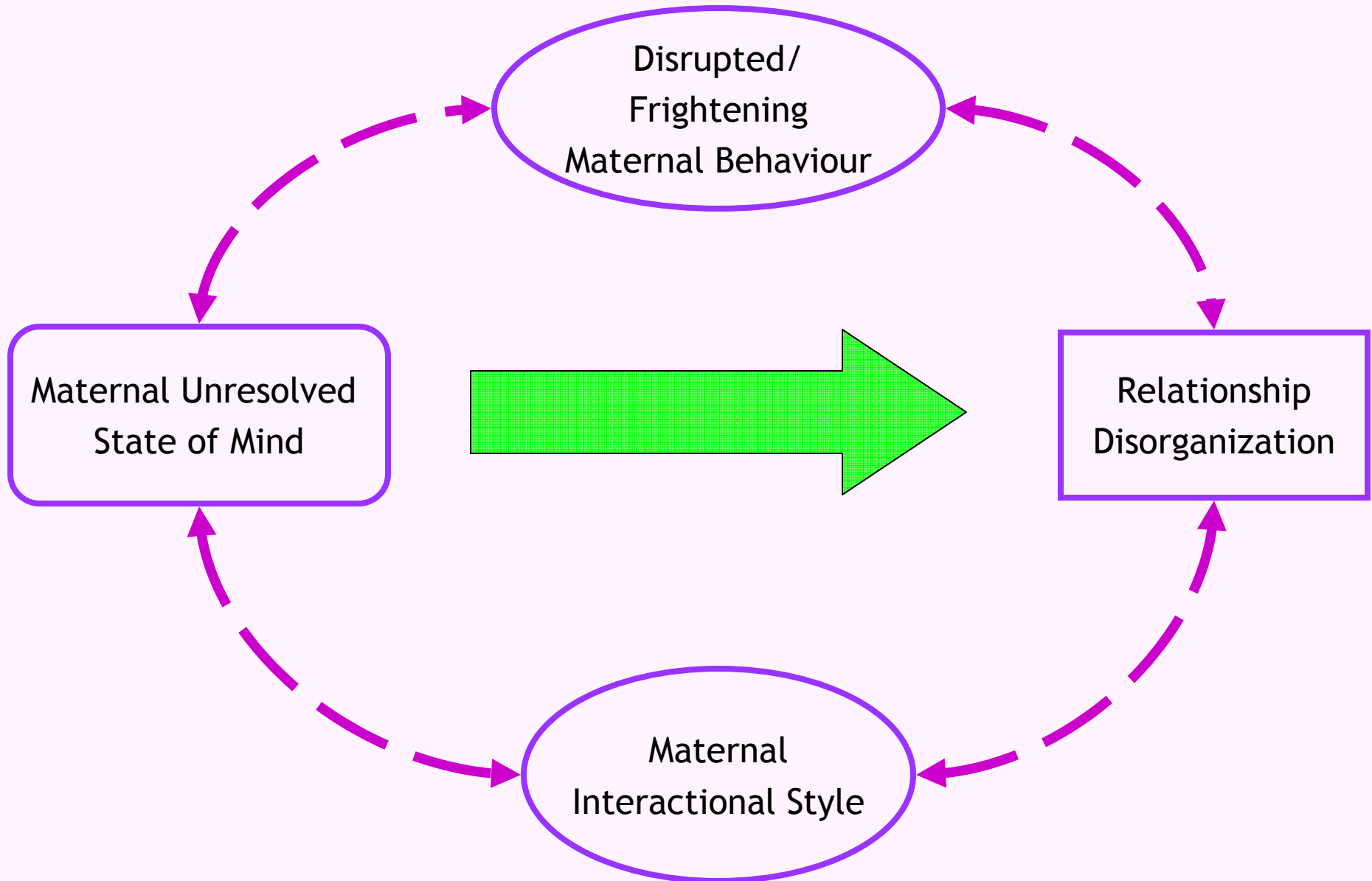
Relationship

A - Avoidant  
 B - Secure  
 D - Disorganized

# Results - Study 3

- Disorganization has a more pervasive impact on mother-infant interaction than thought - not simply a breakdown of an organized pattern
- Disorganization associated with naturalistic aspects of maternal interaction
  - i.e. not limited to atypical disrupted or frightening behaviour

# 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>

