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The Roots of Love: Maternal Behaviour Related to Attachment Security

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The Roots of Love: Maternal Behaviour Related to Attachment Security

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With more than a little assistance from…

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- Carey Anne DeOliveira (CPRI, London)
- Heidi Neufeld Bailey (U of Guelph)
- Jen Phillips
- Karin Gleason
- Ann Krupka
- Ann Robson

- Erinn Hawkins
- Sheri Madigan
- Lindsey Forbes
- Elspeth Evans
- Acia Blank
- Anneli Sepa
- Deanne Pederson

- and others, including *countless London area mothers and their babies*

Roots of our Attachment to Susan Goldberg

- Parents for Peace
- Strange Situation Coding
- Home County Attachment Workshops

university of western ontario
child development study group

Western

The Roots of Love:
How would Sue react to our title??

- In the everyday sense of the word, we have never worked with a mother whom we felt did not "love" her child.

- Here, we use "love" to refer to a mother's sensitivity to cues for comfort, protection, and assurance.

Overview

- Ainsworth's observations of maternal behaviour
- Challenges of observing sensitivity
- Maternal Behaviour Q-set
- Studies of sensitivity
- Implications for those working with mothers

Mary Ainsworth's Observations

- Observed 23 mother-infant dyads
  - 4 hr visits every 3 weeks over the first year
  - Over 70 hours of home observation
  - Strange Situation conducted at 12 months
- Mothers who were in secure relationships were rated as being more accessible, accepting, cooperative and sensitive

Ainsworth's Sensitivity Hypothesis

- The Sensitivity Hypothesis:
  - *Parental sensitivity is the predominate developmental determinate of attachment security*

- Core assertion of attachment theory

- Sadly, subsequent research found rather weak relationships between sensitivity and security
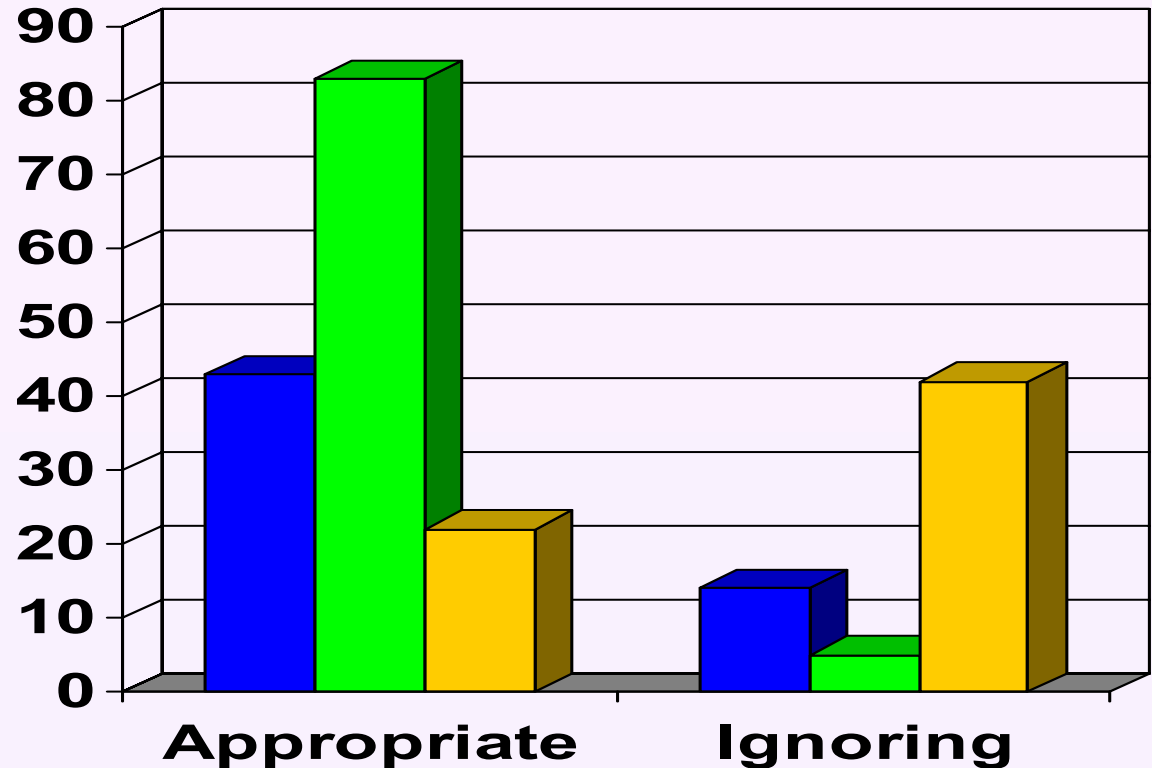
Our Initial Experiences in the Study of Sensitivity

- The questionnaire procedure
  - Removed toys from room after Strange Situation and gave mother questionnaire to fill out
  - Behaviour frequency codes of maternal behaviour
  - Mothers in secure relationships were more responsive to their infants' cues

% Maternal Responses to Infant Cues in Questionnaire Situation

- **Mothers in Secure relationships were more appropriate and less ignoring**

Quest for Ecological Validity: Move to Home Observations

- Focus on the stresses of preterm birth
  - Adapted the questionnaire situation coding system
  - Home observations at 12 months and Strange Situation at 18 months
- Sensitivity ratings related to intellectual development at one year and at six years but **NOT** to Strange Situation security
- Lessons learned about the challenges of observing sensitivity

Lessons from the Brannen Twins

- *Objective* event coding of maternal responses to infant cues
- When we were coding Twin A, mom very responsive to him but ignored Twin B
- Pattern switched when we turned our attention to Twin B
- Obviously presence and attention of observers influences maternal behaviour

Controlling for Observer Effects

- Ainsworth – repeated home visits decreased novelty of being observed
  - For many reasons, this is an ideal solution but not affordable
- We adapted what we learned from the questionnaire situation in a semi-structured visit
- Parenting takes place within a busy ongoing life – so must our observations!

Lessons from Mrs. Robertson and Amanda

- Participants in the same *Stresses of Preterm Birth Study* as the Brannen twins
- Mrs. Robertson very dedicated to Amanda's development
  - Home was a teaching machine
  - Mrs R very proud of Amanda's development
- Amanda very bright, sociable baby
- Clearly avoidant in the Strange Situation

Observing Sensitivity
- A Serious Challenge -

- We were focused too narrowly on responsiveness

- Ainsworth rating scales entice relatively inexperienced observers into using global impressions

- Waters succeeds in observations of infant behaviour at home with q-sort method

Development of the Maternal Behaviour Q-set

- Writing q-set items
  - Reviewed the literature for specific descriptions of maternal behaviour related to the construct of sensitivity
  - Ainsworth's detailed descriptions were a rich source of ideas
  - Chose behaviours we were likely to observe in 2 hour home observation

Examples of Q-set Items

- High Sensitivity Items:
    - Shows delight in interaction with B
    - Interventions satisfy B
    - Responds to B's distress and non-distress signals even when engaged in some other activity such as having a conversation with visitor
    - Interactions revolve around B's tempo and current state

Examples of Q-set Items

- Low Sensitivity Items:
  - Teases B to promote continued interaction
  - Content and pace of interactions set by M rather than according to B's responses
  - Interactions characterized by conflict
  - Actively opposes B's wishes

Q-sort Procedure

- Items printed on cards
- Cards sorted into 9 piles of 10 cards each
  - Pile 9 ➡ most **like** of mother
  - Pile 1 ➡ most **unlike** the mother
- The pile number is the score for that item
  - Each item has a number from 1 to 9 reflecting how descriptive the item is of the mother

Analysis of Q-sort Data

- Item by item analysis – e.g., which items are most characteristic of mothers in secure relationships?

- Sensitivity score – correlation between mother's scores and those for prototypical sensitive mother

- Content grouping – responsiveness, expression of affection, accuracy
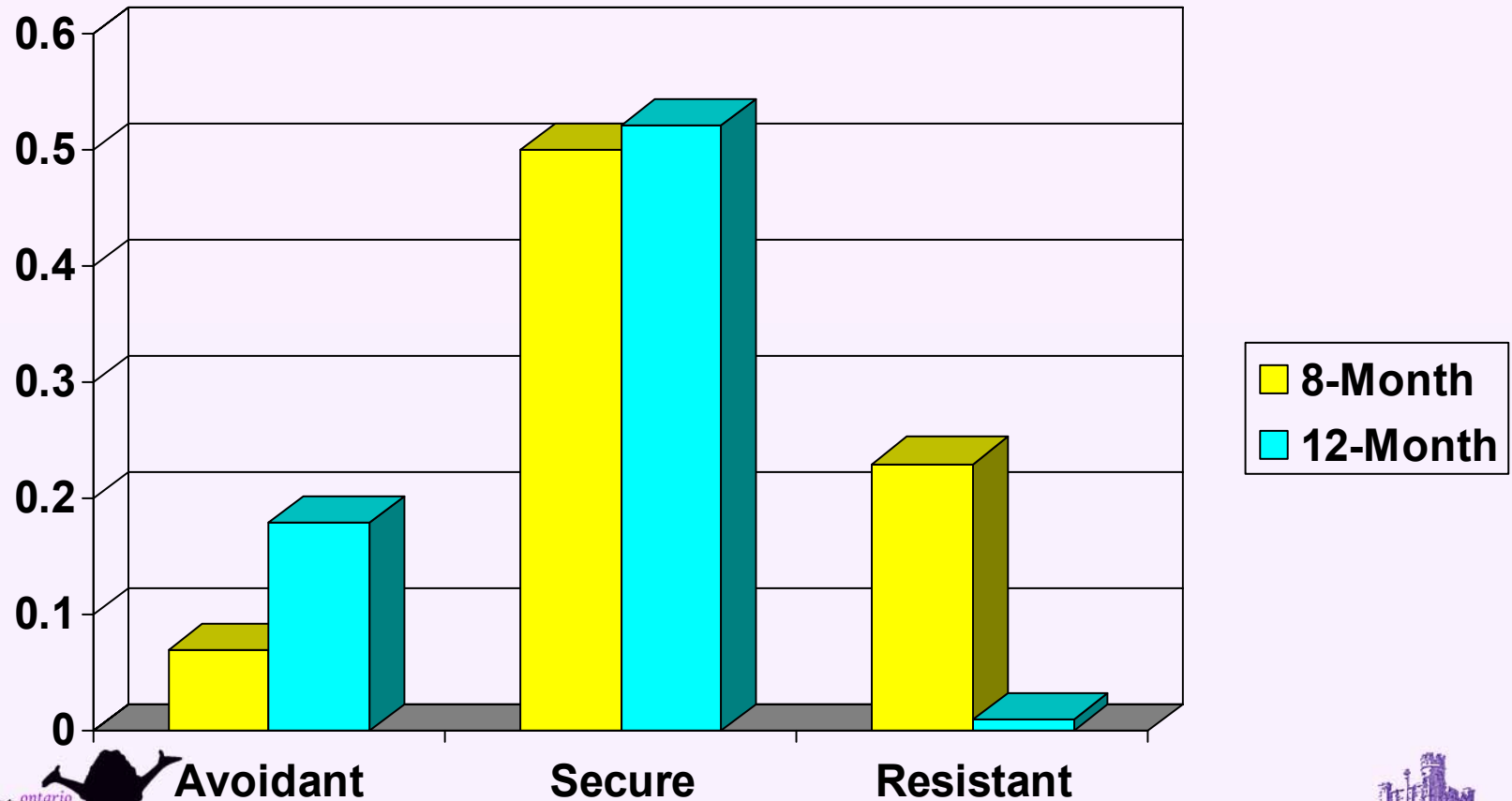
- Q-factor analysis

Initial Q-sort Studies

- Sensitivity correlated with:
    - second observer's attachment security scores ($r = .42$), and
    - security scores derived from the mothers' q-sort descriptions ($r = .29$)
- Mothers of secure infants described as:
    - noticing when B smiles and vocalizes,
    - correct in interpreting B's cues, and
    - not resenting B's signals

Q-sort Sensitivity

- Substantially Related to Strange Situation Security
    - security at 18 months correlated:
        - r =.39 with sensitivity at 8 months, and
        - r = .62 with sensitivity at 12 months
          Pederson & Moran (1996)
    - Security and sensitivity at 12 months correlated, r = .51 *Pederson, Gleason, Moran, & Bento (1998)*
- Contrast with r = .24 in meta analyses

Sensitivity at 8 and 12 months in the Home and Strange Situation Classifications at 18 Months

Q-Factor Analyses

- Q-factor analyses looks for clusters of participants rather than clusters of items
  - *Emergent styles* of maternal and infant interaction
  - Allows for several styles rather than limiting to variation on a single dimension

- Our student (now colleague) Heidi Bailey has led in the application of q-factor analyses

Ainsworth Revisited

Bailey, Waters, Pederson, and Moran (1999)

- Q-sorts describing 12 month interactions of adolescent and adult mothers and their infants

- Identified one factor for adult mothers
  - Seen as highly sensitive, effectively responsive, and displaying delight in their interactions with their child

Ainsworth Revisited - An Adolescent Sample

- Three factors in the q-sort data describing the adolescent sample
    - *Sensitive* - similar to the sensitive adult mothers
    - *Disengaged* – missing, ignoring and unresponsive to infant signals and needs
    - *Non-Synchronous* - actively opposed baby's wishes, instructive, and annoyed by baby's lack of cooperation

Maternal Styles, Maternal State of Mind, and Strange Situation Attachment

- Adolescent mothers and their infants
  - Adult Attachment Interview to assess maternal attachment representations at 6 months
  - Home observations at 12 months summarized by Maternal Behaviour Q-sort
  - Infant attachment behaviour summarized by Attachment Q-sorts
  - Strange Situation assessment of attachment also at 12 months

Bailey, Moran & Pederson – Revise & Resubmitted –

Develop & Psychopath

Emergent Styles of Maternal and Infant Interaction

- Same Three Maternal Factors
  - Sensitive/Insensitive
  - Disengaged
  - Non-Synchronous

- Three Infant Interaction Factors
  - Interacts Harmoniously with Mother
  - Prefers Stranger
  - Sad/Withdrawn

Maternal Styles, AAI, and Strange Situation Classifications

- *Sensitive* Mothers were unlikely:
  - To be Unresolved/disoriented in discussion of loss or abuse on the AAI
  - To have Disorganized infants in the Strange Situation
- *Disengaged* Mothers were likely:
  - To be Unresolved/disoriented
  - To be in Disorganized relationships with their infants
- *Non-Synchronous* Mothers were likely:
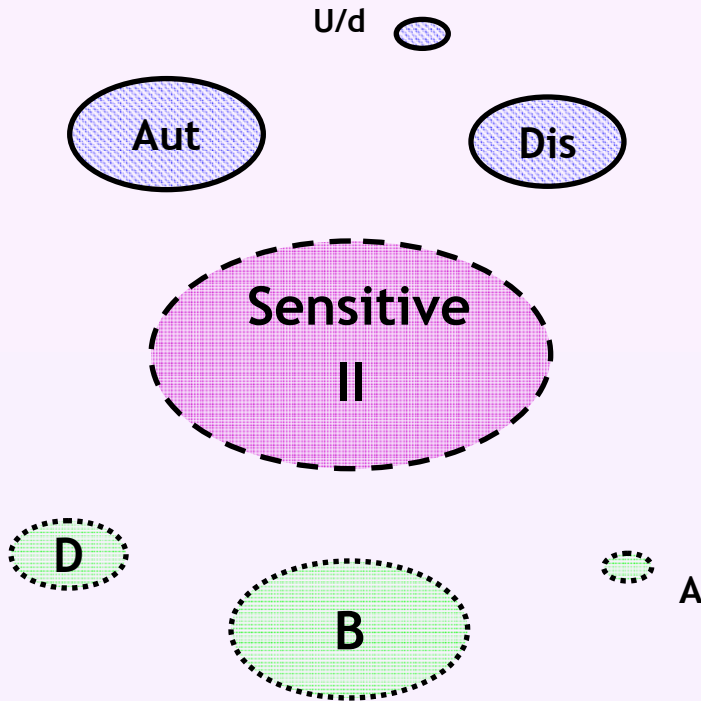 - To be in Disorganized relationships with their infants

Clusters of AAI, Strange Situation, and Dyadic Styles in the Home

- Dyadic styles of mother-infant interaction
  - Sensitive – Harmonious
  - Disengaged – Prefers Visitor
  - Disengaged – Sad/Withdrawn

- Latent Class Analysis revealed two contrasting clusters
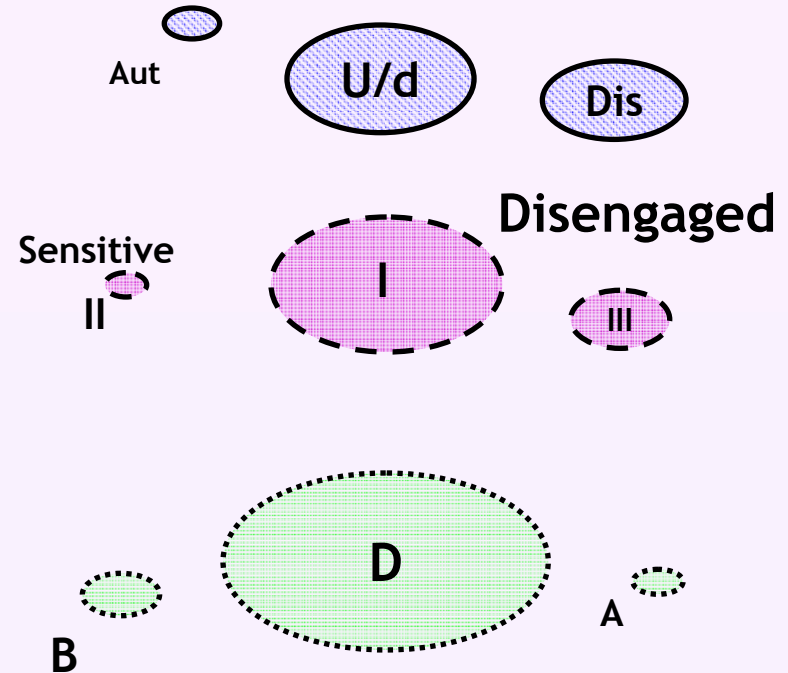 - Organized
  - Disorganized

Mother/Infant Dyadic Interactive Profiles

LCA Class 1 – 45%

LCA Class 2 – 55%

U/d

Aut

Dis

Sensitive II

D

B

A

Aut

U/d

Dis

Disengaged

Sensitive II

I

III

D

B

A

Maternal State of Mind	Dyadic Interactive Style	Relationship
Dis – Dismissive	I – Disengaged/Prefers Visitor	A - Avoidant
Aut – Autonomous	II – Sensitive/Harmonious	B - Secure
U/d – Unresolved	III – Disengaged/Sad-Withdrawn	D - Disorganized

Lessons Learned in Describing Sensitivity - Implications for Working with Mothers

- Sensitivity is not what it may seem
  - Not objective or impressionistic
  - Structured and disciplined assessment
- Sensitivity matters
  - Different paths to relationship
  - Maladjustment
    - Sensitivity may provide minimum necessary framework for adaptive development

Lessons Learned

- Our journey in understanding how to assess sensitivity has also echoed in similar ways in learning other attachment assessments

- Early days of Adult Attachment Interview coding

  - we generated AAIs from our sample

  - Met with our fellow participants and almost every classification was represented for these cases

Lessons Learned

- In our data set for Disorganization we have D-scores, new D-scores, and even newer D-scores

- Similar stories for coding AMBIANCE and FR behaviour

- Understanding relationships is not simple
  - Relationships are complex
  - Working with relationships demands prudence