


## Development 2

- Attachment
- Correlational Research

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- Separation anxiety, in which an infant becomes visibly upset whenever her mother leaves the room, implies the development of
  - A. neurosis.
  - B. insecurity.
  - C. coping mechanisms.
  - D. attachment.

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## Attachment and the Strange Situation

- Grouping, Imprinting, Attachment
  - Fish and reptiles may gather in groups
  - Ducks imprint on a moving object
  - Attachment in primates

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- Why do psychologists study the Strange Situation?
  - A. It's amusing to see small kids cry
  - B. To understand the basis and mechanisms of love.
  - C. The classification it produces provides parents useful insights about their kids
  - D. To demonstrate associations between security of attachment and stable characteristics of personality
  - E. To gain understanding that will improve delivery of pre-school education

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## Attachment and the Strange Situation

- What is the contribution of the Strange Situation?
- Video example of attachment research using the Strange Situation:  
<http://www.youtube.com/watch?v=QTsewNrHUHU>
- The Strange Situation classifies parent-child attachment as
  - Securely attached
  - Anxious
  - Resistant
  - Disorganized

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- Bowlby argued that disruption of a child's initial attachment to its mother would
  - A. increase the child's ability to cope with problems throughout life.
  - B. have long-term negative consequences for all future relationships.
  - C. have no long-term effects.
  - D. increase the child's independence and self-reliance.

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## Attachment Results as an Example of Socialization Research

- John Bowlby proposed that the mother-child relationship forms a working model – a template – for *all* later relationships
- But, although intuitive, is this hypothesis correct?
 

“Despite repeated assertions that the quality of social competence with peers is **determined** by the prior quality of infant-mother attachment relationships, there is actually little empirical support for this hypothesis.” – Lamb & Nash

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## Methodology of Socialization Research

- Socialization research is based on correlations, not experiments
- In an experiment
- Socialization research takes advantage of natural variations in parenting behavior
  - Groups may have pre-existing differences
  - Manipulations cannot be controlled
  - Groups may not be treated identically

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## Example of a Correlational Study

	Percentage Still Alive After Five Years		
	All Participants	Women	Men
Broccoli Lovers	99	99	99
Broccoli Tolerators	98	99	97
Broccoli Haters	97	99	95

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## Does Broccoli *Cause* Good Health?

- Headline: EATING BROCCOLI MAKES MEN LIVE LONGER, STUDY SHOWS
- Possible confounding factors
  - Other differences in eating habits
  - Lifestyle differences
  - Status differences
- Difficult to conclude that this is a *causal* link between eating broccoli and living longer

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## Summary: Correlation vs Causation

- Demonstrating that a correlation exists between two variables is useful.
- However, from this alone, we cannot safely infer that variation in one variable **causes** changes in the other.

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## Problems Interpreting Correlational Data in Socialization Research

- The Effects of the Genes
  - Socialization studies do not separate out the effects of heredity and the environment
  - Parents provide both the child's genes and the child's environment

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### Behavioral Genetics: Separating Heredity and Environment

- Adopted children have two sets of "parents":
  - 50% Biological parents provide the child's genes
  - 50% Adoptive parents help create the child's environment

Group	Shared Genes	Shared Environment
Adoptive Siblings	None	Home
Adopted Identical Twins	All	Home
Adopted Fraternal Twins	Half	Home
Separated Identical Twins	All	None
Separated Fraternal Twins	Half	None

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### A Notation Showing Two Correlated Factors

- We can depict correlations
  - Using a box to represent the measurements of the parents
  - A second box to represent the measurements of the children
  - A double headed arrow to indicate that these measures are correlated

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### Representing Causality

- According to the nurture assumption
  - The children differ **BECAUSE** of differences in parenting
  - We reflect this in the diagram by changing the two-headed arrow into a single-head arrow pointing in the direction of the causation

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### "3rd Variable" Problem in the Interpretation of Correlations

- The genes that the parents and children share create problems for this interpretation
  - These shared genes are considered a **3rd variable**
  - The shared genes influence parenting style
  - The shared genes influence characteristics of children
  - These two effects can lead to a **correlation** between parenting style and children's characteristics without one **causing** the other

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### A 2nd Problem for Socialization Research: Parents do not Treat their Kids Identically

- Socialization research includes only a single child in each family studied
- Parents do not treat their children identically
- The personality of children affects parenting

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### Children Influence Parental Behavior from an Early Age

- By 2 months old, most babies are looking their parents in the eye and smiling at them
- Autistic babies don't look their parents in the eye
- Differences in infant temperament can influence parenting style

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### Directionality the 2<sup>nd</sup> Problem Interpreting Correlations

- Consider this (plausible? if exaggerated) generalization:  
Children who are hugged are more likely to be nice  
Children who are beaten are more likely to be unpleasant
  - This describes a correlation
  - But we often interpret this to imply that the treatment of the child by the parent *causes* changes in the child
- Consider this (equally plausible?) alternative generalization:  
Nice children are more likely to be hugged  
Unpleasant children are more likely to be beaten
  - This also describes a correlation
  - But it implies that it is behavior of the child that *causes* differences in treatment
- Directionality Problem:** The causation could plausibly go either way
  - We cannot know from the correlation the *direction* of causation

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### Summary: Problems Interpreting Socialization Correlations

- In socialization research generally and attachment research in particular, there are two general problems that make correlations difficult to interpret causally
  - The genetic similarity of parents and children creates a **3<sup>rd</sup> variable problem**
  - The behavior of parents with their children is influenced, in part, by characteristics of the child creates a **directionality problem**

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### What is Known about Attachment from the Strange Situation?

- Its results describe the mother-child relationship
- The mother's relationship with her child does *not* function as the working model for other relationships
- A child's relationships are, to a large extent, independent of each other
- Commonalities across a child's relationships reflect characteristics of the child
  - It's the same child, with the same genes, who participates in all these relationships, so it's not surprising that the attachment researchers find correlations between them.

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### Final Exam Review Sessions

- Final exam in Monday, Dec. 15<sup>th</sup> at 8 AM
- Two final review sessions
  - Friday, Dec. 12<sup>th</sup>, starting at 2:00 PM in SSL 248
  - Saturday, Dec 13<sup>th</sup>, starting at 2:00 PM in TBA
- Scantrons for CT 5 will be available at these sessions
- You must pick up all other Scantrons from your TA by the end of Week 10

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### Course Evaluation

- Please take 5 minutes to fill out the course evaluation for this course
- You should only fill out at most one TA evaluation
- These evaluations are anonymous and important – I personally read all of the written comments when they are released
- You have until the end of next week

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### To receive extra credit for experiment participation ...

Experiment participation ends on FRIDAY, December 12<sup>th</sup>

**AFTER** you participate, you must allocate your credit:

- Log in to <https://uci.sona-systems.com/>
- Click on "assign credit to your courses"
- Once you assign your credit(s) to the course, make sure to click on "recalculate and save"

You must allocate your credits **by 9PM on Monday December 15<sup>th</sup>**

Questions or problems: contact Ruth in the Social Sciences Lab: [ssreslab@uci.edu](mailto:ssreslab@uci.edu), (949) 824-1023 **before the June 12<sup>th</sup> deadline.**

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## Another way to receive extra credit: Writing a Research Summary

- This is instead of (not in addition to) experiments
- Assignment: a 3 page summary of a *journal article* cited in Gleitman. It must also
  - (a) explicitly cite the page in Gleitman where the article is referenced,
  - (b) summarize the discussion in Gleitman at the point of the citation,
  - (c) describe how the article is relevant to the point made in the text,
- Submit this with a copy of the article cited AND a signed statement of originality into the EEE Dropbox for this course
- Due by midnight on Friday, Dec. 12<sup>th</sup>
- Please see the class website for details  
[http://aris.ss.uci.edu/psych/9B/Organization.htm#\\_Extra\\_Credit](http://aris.ss.uci.edu/psych/9B/Organization.htm#_Extra_Credit)

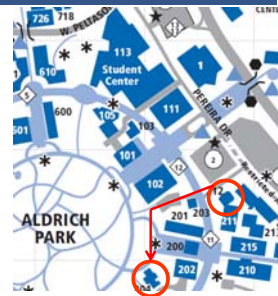
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## Looking Ahead

- For Friday
  - Gleitman: Ch. 14, pp. 576 – 582
  - Reader: Harris, pp. 291 - 303
- Please do the course evaluation on EEE
- Coffee?



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