

Joint attention

- Simultaneous engagement of mental focus on the same thing
 - Looking where someone else is looking
- May serve as the basis for acquisition of language
- Increasing tendency for infants to “follow the gaze” of adult caretakers

Phases in joint attention

- Up to 6 months
 - Joint reference is driven by parent
- 7-8 months
 - Child begins to communicate intentionally and initiate joint reference
- 8-12 months
 - Child uses combinations of gestures & vocalizations

Joint attention & language

- Parents provide joint attention cues when speaking
- Infants make use of these cues
- Infant vocabulary acquisition increases when parents follow infants’ focus of attention
- Are infants aware of this relevance?

Using joint attention in production

- Protoimperative
 - pointing to obtain object
- Protodeclarative
 - pointing to get parent to look at object

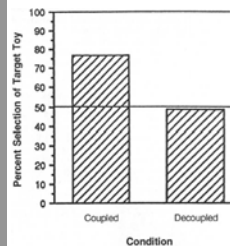
Using joint attention in perception

- By 10-14 months, infants attend longer to novel objects if an adult talks about them
 - Baldwin & Markman, 1989



Image from Baldwin, 1995

Using joint attention in perception



- By 18-20 months, infants don’t match a label to an object when the adult’s attention is elsewhere
 - Baldwin et al. 1994

Image from Baldwin, 1995

Using joint attention in perception

Image from Baldwin, 1995

Using joint attention in perception

- Infants 18 months old do not make mapping errors when labeling occurs while infant and adult are attending to different things
 - Infants check the speaker's focus in labeling situations
 - Baldwin 1991; 1993

Category	% Infants Meeting the Criterion
Correct Mapping	~65
Mapping Error	~10

Image from Baldwin, 1995

Using joint attention in perception

- What about younger infants?
 - Infants 14-15 and 16-17 months in same studies
 - Infants glanced at speaker and followed their gaze
 - But didn't learn the mapping between object and name.

Nonreferential acts

Images from Baldwin, 1995

Condition	Percent selection of first toy
referential	~70
nonreferential	~50

Development of joint attention

- During the first year, infants begin following eye gaze & pointing.
- By 18 months, understanding of eye gaze influences verbal understanding.
- Children with ASD do not show these patterns.

Individual differences in joint attention

- Initiating Joint Attention (IJA)
 - Eye contact
 - Alternating (referencing)
 - Pointing
 - Showing
- Responding to Joint Attention (RJA)
 - Following proximal point/touch
 - Following line of regard

Individual differences in responding to joint attention

- RJA in 12-18 month olds predicts receptive language development
 - Both typically developing & cocaine-exposed infants
- Individual differences in RJA as young as 6 months predicts language development through 2 years
 - Mundy & colleagues
- RJA depressed in high risk low SES sample at 12 months

Individual differences in initiating joint attention

- IJA at 12 months predicts IQ & language outcomes through age 8 in high-risk infants
- IJA development between 12 & 18 months predicts social behavior at 27 & 36 months
- IJA is related to attachment relationships between parent & child

More on autism

- Most autistic children show some IJA deficit, regardless of IQ
 - IJA predicts language 1 year later
- RJA can also be effected, but children may catch up
- Individual differences in IJA in the first 5 years predict social outcomes through adolescence

Results from Sigman, 1998; Mundy et al. 1990, 1994