

PRESCHOOL PRAGMATIC AND SEMANTIC DEVELOPMENT

COMD570: Language Development

Sign(s) of the day

- Numbers
 - 1-5
 - 6-10
 - 11-20
 - 20-100

Language Life of a Preschooler

- **3-year-old**
 - 900-1,000 words in lexicon
 - Uses ~12,000 individual words per day
- **4-year-old**
 - 1,500-1,600 words in lexicon
 - Uses ~15,000 individual words per day
 - More complex structures
 - Basic conversational ability
 - Engages in monologues (20-30% of utterances)
- Verbs are often “invented” using zero derivation/conversion:
 - Spooning (stirring)
 - Sugaring (sweetening)

Many preschoolers talk seemingly non-stop!

Semantic development

Semantic development

- Use of new words with complex semantics reflects a mix of two things:
 - Semantic development
 - Children forming a more complex internal model of the world and more complex mental processes
 - Newly-established links between complex and abstract concepts and linguistic forms
 - Far more difficult to establish than things in the physical environment!
- Increased verb vocabulary reflects these factors

Relational terms

- Relational terms begin to be used in preschool age
 - E.g.: Questions, Temporal relations, Physical relations, Locational prepositions, Kinship terms
- WH-questions
 - Early: *what, where*; later: *who, whose, which*; even later: *when, how, why*
 - Errors indicate incomplete semantics of these words
 - E.g. “when are you going to eat?” -> “a cookie”?
- Temporal expressions
 - Indicate timing relations between events
 - Early: *after, before*; later: *since, until*, even later: *while*

Relational terms

- Physical relations
 - *Hard/soft; big/little; heavy/light; thick/thin, fat/skinny, more/less, same/different*
- Locational Prepositions
 - Spatial/physical/grounded prepositions acquired first, then more abstract terms
 - Latest emerging are concepts of cause, manner, and time
- Kinship terms
 - E.g. *mommy, daddy, sister, brother*
 - Terms are initially thought of as names or part of names; become more abstract later
 - Other terms, e.g. grandmother, gradually learned, along the same path as immediate family terms

TABLE 8.3 Summary of Comprehension of Locational and Temporal Relationships

AGE (MONTHS)	RELATIONSHIPS UNDERSTOOD
24	Locational prepositions <i>in</i> and <i>on</i>
36	Locational preposition <i>under</i>
40	Locational preposition <i>next to</i>
48 (approx.)	Locational prepositions <i>behind</i> , <i>in back of</i> , and <i>in front of</i> ; difficulty with <i>above</i> , <i>below</i> , and <i>at the bottom of</i> ; kinship terms <i>mother</i> , <i>father</i> , <i>sister</i> , and <i>brother</i> (last two are nonreciprocating)
60	Temporal terms <i>before</i> and <i>after</i>
60+ (school-age)	Additional locational prepositions in temporal expressions, such as <i>in a week</i> ; most major kinship terms by age 10; more precise locational directives reference the body (<i>left</i> and <i>right</i>)

Pragmatic Development

Pragmatics

- Language is often used in a social context
 - Linguistic expressions (roughly, sentences) have individual semantics, but communication goes well beyond this
- Gricean Maxims – “Rules of conversation”
 - I.e. relevance, quality, quantity, manner
- Meanings are often expressed indirectly
 - Children as young as 2 understand indirect propositions
 - A listener must use the rules of conversation and understand (or guess at) the speaker’s intent in order to understand indirect propositions

Participating in a Dialogue

- When a person speaks, he adopts the “speaker” role, assigns the “listener” role to the interlocuter(s)
- The interlocuter either accepts or rejects the role
- However, the interlocuter cannot become the speaker until the speaker relinquishes this role

Dialogue rules (basic turn-taking)

- Initiating an interaction
- Maintaining an interaction
- Waiting your turn
- Fulfilling your turn
- Terminating an interaction

Origins of turn-taking

- Infants begin to learn turn-taking from infancy:
 - Feeding
 - Tickling
 - Bouncing
 - Smiling
 - Vocal play (proto-conversations)

Development of turn-taking

- By the time a child starts talking, he is already taking part in dialogue
 - e.g., reciprocal play activities, peek-a-boo, raspberries
- Preschool age children begin to engage in conversational turn-taking

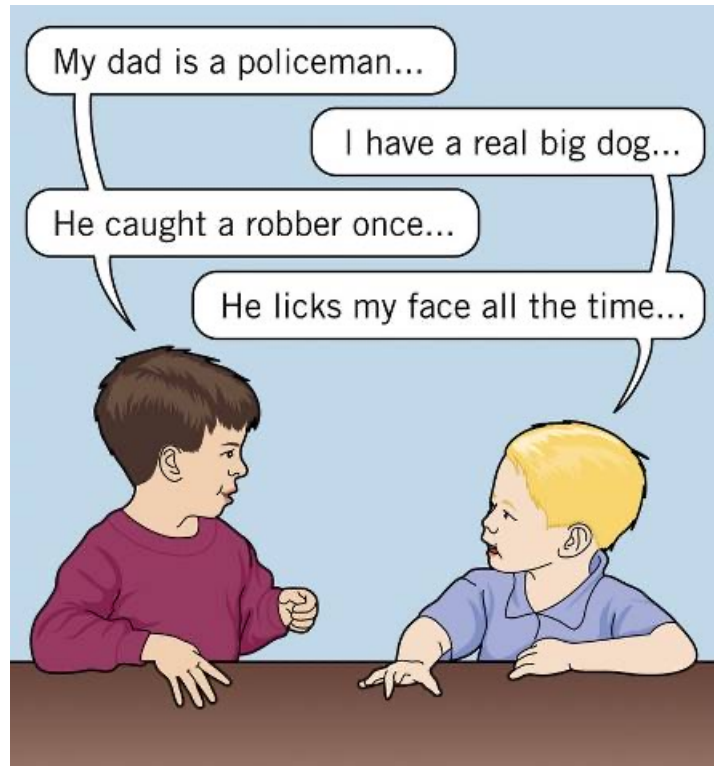
Topic maintenance

- **Topic maintenance:** the ability to stay on topic and to avoid non-sequiturs or tangents
- Preschoolers introduce topics; have difficulty maintaining them
 - Less than 20% of preschoolers' responses relate to partner's utterance
- Topic maintenance improves with age
 - Age 2: 1-2 turns
 - Age 5: up to a dozen turns
- Lots of adult scaffolding and support
- Topics shift and change quickly
 - 5-year-olds may discuss as many as 50 topics in 15 minutes!

Conversations Between Children

“Egocentric Conversations”

- https://www.youtube.com/watch?v=1bgnn_8yTRo
- <https://www.youtube.com/watch?v=O2K09LFreT8>



Conversational Repair

- Communication breakdowns occur frequently throughout the lifespan
- Preschoolers signal miscommunication and requests for clarification via several strategies:
 - Nonverbal (e.g., confused expression)
 - Verbal (e.g., “What?” “Huh”?)

Conversational Repair

- Preschoolers are able to signal that they don't understand, but often aren't able to articulate specifically *what* they don't understand
 - Can usually repair their own requests if asked
 - Not as good at repairing other communication (e.g., just repeat, don't revise or elaborate)

Self-Monitoring

- Self-monitoring: assessing output with what was intended
 - Our ability to catch our own speech errors depends on self-monitoring
 - This can happen even before speech is produced overtly!
- Preschooler's speech seems to indicate evidence of self-monitoring
 - Long silent pauses
 - Filled pauses (e.g., “um”, “uh”)
 - Repetitions of what was already produced

Development of Conversations

- 3-year-old: <https://www.youtube.com/watch?v=I9DPTdVMnFc>
- 4-year-old: <https://www.youtube.com/watch?v=vY-QM8ydbok>
- Slightly older 4-year-old:
<https://www.youtube.com/watch?v=Ng2wtPL75Zk&t=17s>

Social & Cognitive Development

Social and cognitive development

- Different aspects of social and cognitive development underlie pragmatic development in preschool age (and beyond):
 - **Social knowledge**
 - Culturally-defined knowledge
 - **Theory of Mind (ToM)**
 - Ability to understand or imagine another's perspective

Social knowledge

- Culturally-defined knowledge (biological sex, age, status markers, social setting)
 - Registers
 - Politeness markers
 - Code-switching

Social knowledge

- Later evidence (preschool and beyond)
 - Asking questions about partner's knowledge, interests, etc.
 - Placing stress on words that reflect new information
 - Humor, deceit, irony, sarcasm, non-literal language (e.g., idioms)

Registers

- **Register:** different styles of speaking that are dependent upon context and conversational partner
 - Child-directed speech
 - Adult-directed speech
 - Politeness
 - Gender roles
- Register development:
 - Pitch and volume are first to be manipulated
 - Vocabulary, word choice, MLU are manipulated later in development
 - By age of 4, children engage in their own child-directed speech to younger children and babies

Theory of Mind

- Theory of Mind:
 - The ability to attribute mental states (beliefs, intents, desires, emotions, knowledge, etc.) to oneself, and to others
 - To understand that others have beliefs, desires, intentions, and perspectives that are different from one's own
 - Major influence on language and communication!

Theory of Mind

- Development:
 - 18 months – self-awareness
 - 24 months – expression of own emotions, emerging recognition of others' emotions
 - 3-5 years – Begin to differentiate different points of view (i.e., perspective taking) and interpret others' false beliefs

Theory of Mind

- <https://www.youtube.com/watch?v=YiT7HFj2gv4>
- https://www.ted.com/talks/rebecca_saxe_how_brains_make_moral_judgments?utm_campaign=tedsread&utm_medium=referral&utm_source=tedcomshare

Presupposition

- Presuppositions: information a listener needs to understand the utterance
 - E.g. “Bob never reads fiction anymore!”
 - Presupposed: Bob used to read fiction with (some) regularity
- Both speakers and listeners incorporate presuppositions, which requires Theory of Mind
 - Speakers: select what they say based on presuppositions
 - Listeners: interpret what they hear based on presuppositions

Presupposition

- Conversations require a constant balance of just enough presupposed information but not too much
 - Roughly before age 3, no understanding of the need for appropriate background information
- By 3, use of definite (*the*) and indefinite (*a/an*) is mostly correct, indicating ability to assess the degree of shared background knowledge
 - The = old/presupposed discourse referent, a = new discourse referent
- Understanding of presuppositions gradually improves with age
 - Strongly correlated with independent assessment of Theory of Mind (ToM)

Ellipsis

- Ellipsis – omitting unnecessary parts of the message to avoid redundancy
 - C1: “Are you playing with that?”
 - C2: “I am [~~playing with that~~]”
- Ellipsis has complex syntactic & semantic rules, but also:
 - Requires an awareness of a conversational partner’s shared assumptions and presuppositions (theory of mind)
- Ellipsis becomes more common by 3 or 4 years of age

Development of Communicative Intentions

Communicative Intentions

- We initiate conversations for different reasons!

Early Pragmatic Function	Early Verbal Usage
Control	Direct Requests; Protests
Representational	Naming/Labeling; Answering/Replying
Expressive	Exclaiming; Commentary
Social	Greetings
Tutorial	Repeating/Practicing
Procedural	Calling

Pragmatic analysis

- Pragmatic analysis can inform us of the development of communicative intentions of a child
- Steps:
 - Collect a communication sample
 - Assign pragmatic function to each utterance
 - Describe the range of pragmatic functions
 - Calculate the % each pragmatic function comprises

Pragmatic analysis

- A pragmatic analysis reveals:
 1. The motivations of an individual to communicate
 2. Which functions dominate the individual's interactions
- The fewer reasons a child communicates indicates a more restricted pragmatic repertoire

Pragmatic analysis

• For example:	%
• Requesting Objects	20
• Requesting Action	10
• Requesting Assistance	8
• Requesting Information	24
• Imitating	2
• Informing	16
• Interacting	8
• Labeling	12

Pragmatic analysis

• For example:	%
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Over 50% of this child's communicative intentions are for requesting things!

Pragmatic analysis

- More advanced pragmatic functions emerge later in development:
 - Expressing emotions
 - Relating information
 - Telling stories
 - Narrating play
 - Sharing opinions

Communicative Intentions: development

TABLE 8.2 Intentions Exhibited by 90% of Children

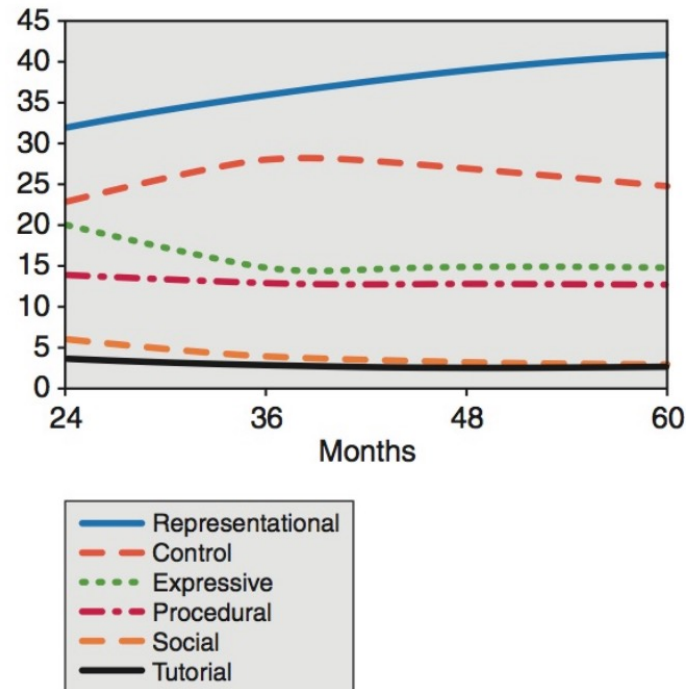
INTENTION	AGE AT WHICH 90% OF CHILDREN USE INTENTION (IN MONTHS)
Exclamation and call	18
Ostention (naming)	21
Wanting, direct request, and statement	24
Content question	30
Prohibition, intention, content response, expressive state, and elicited repetition	33
Yes/no question, verbal accompaniment, and contingent query	36
Request permission	45
Suggestion	48
Physical justification	54
Offer an indirect request	57

Source: Information from Wells (1985).

Communicative Intentions: development

FIGURE 8.1 Communication Functions as a Percentage of All Utterances

Note that the representational and control functions predominate throughout the preschool years, accounting for approximately 65% of all utterances by age 5. The representational function includes statements and questions. Within the control function are demands, requests, and statements of prohibition.



Source: Information from Wells (1985).

Narratives

Narratives

- **Narratives:** an uninterrupted stream of language modified by the speaker to capture and hold the listener's interest – a story!
 - Self-generated (imaginative) stories
 - Retelling of familiar stories/tales
 - Retelling of books, movies, shows
 - Recounting personal experiences
- Vast cultural differences: preschoolers' narratives reflect the cultural context

Narratives

- **Event structure:** set of event sequences, including the events, their relationships, and their relative significance
 - **Event scripts**
 - Expectations about familiar routines and sequences
 - Help children interpret experiences and talk about them in narrative form
 - Linguistic devices are used to mark beginning, middle, end, hierarchies, cause-and-effect, significance, etc.
 - These are culturally defined

Narratives

- **Centering:** series of loosely related events to form a story
 - Unstructured, but links may be based on similarity of features
 - Often a salient experience
 - Example: “The doggie go ‘woof’. The cow go ‘moo’. The man ride tractor.”
 - Characteristic of narratives of 2-year-olds
- **Chaining:** a sequence of events that share attributes and have some causal relationship
 - Starts to be used by ~3
 - Temporal (time-based) sequences emerge between ages 3-5

Narrative examples

- 3-year-old: <https://www.youtube.com/watch?v=jBVDiz-LY7w>
- 5-year-old: <https://www.youtube.com/watch?v=C4tUzLc6JCc>

Recap

- Semantic development
 - Increased use of verbs and relational terms reflects increased semantic complexity and linking abstract concepts to linguistic forms
- Pragmatic development
 - Turn-taking and conversational skills
- Social and Cognitive development
 - Social knowledge
 - Theory of Mind
- Development of communicative intent
 - Different communicative functions emerge over time
- Narratives
 - Culturally-specific narrative structures become more complex