

Strategies in the Acquisition of Syntax

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- The stage of child language where it progresses from mere concatenation of lexical items to adult language.
- Child acquires Morphosyntax – syntax and grammatical morphemes.

Learning a grammatical morpheme

- **Production:**
 - Form-function mapping.
- **Perceptual information:**
 - What it sounds like? (including allomorphs)
 - Where it is likely to occur in a sentence? (its distribution)
 - What it is used for? (its syntactic function)

Proposed strategies:

- Child uses phonology as an indicator to get hold of grammatical morphemes
- Child can also be initialized by the function of the morpheme to collect more information about a particular functor.

Stage considered

- Early stage of acquisition when learner's grasp of the morphosyntactic structure is fuzzily perceived and dominated by prosodically defined place holders.
- two additional knowledge that improves grammatical understanding:
 1. Familiarity with prosodic structure of the language and growing ability to identify open class items now allows them to focus on what occurs between the open class items.
 2. Expanding awareness of sorts of function language can accomplish makes them look for linguistic means to express these functions

Acquisition of Grammatical Morphemes

(Some observations)

- In English children's first productive combination is two words rather than two morphemes. In other languages such as Turkish, Eskimo, Japanese-early combinations may consist of an open-class word or stem plus a bound morpheme.
- Cross linguistically, derivational morphemes occur closer to the root than do inflectional morphemes.
- Children's first grammatical morphemes are the ones which are more salient like ones:
 - Located at prominent places (like end of a word)
 - Having identifiable semantic content
 - Carrying stress

Inflectional Morphemes:

- includes particles like plural, possessive, third person singular, progressive, and regular and irregular past tense.
- progressive, plural and possessive inflections are produced first; third person singular and past tense appear quite later.

Homonymy of Inflectional Morphemes in English

- Plural, possessive, and third person singular all utilize an identical set of allomorphs {z/s}.
- Contracted form of copular is and auxiliaries is and has also has the same phonological forms.

PLURAL: the boys(came early)

POSS: the boy's (book)

AUX is the boy's (coming)

COP is the boy's (here)

AUX has the boy's (come already)

Inflectional Morphemes: Studies and Observations.

- strong interaction between phonology and morphology during acquisition of inflectional morphemes.
- Initial acquisition of inflectional morphemes is rather phonological than morphological. Later there is a gradual shift to a semantic basis .
- Studies conducted by Peters and Menn

Derivational Morphemes:

- enable speakers to build words from other words or stems, e.g. noun from verbs, adjectives from nouns or verbs from verbs.
- includes both fully productive prefixes (un-, non), less productive prefixes (pre-, con-), suffixes (diminutive –ie, agentive –er, nominalizers -ness and –ity, causative –ize, comparative –er, superlative –est, adverbializer –ly).
- acquired much later than inflectional morphemes.

Derivational Morphemes: Studies and observations:

1. Compounding greatly preferred over derivation (Berko, 1958).
2. Derwing and Baker(1986) – Word formational process follows the following sequence in terms of productivity:

**Noun Compounding
(preschool subjects)**



**Agentive suffix -er
(eight year olds)**



**Instrumental Suffix -er
Adjectival -y
(nine to eleven-year-olds)**



**Adverbial -ly
(12-17 year-olds)**

Derivational Morphemes: Observations:

3. Eve Clarke –looked at children’s strategies (simple transfer, compounding, or derivational morphology) to change nouns into words. Observed that in English less use of derivational morphology, more use in French and German.
2. Melissa Bowerman- children’s expression of causation and reversal. Observed that reversal can be easily expressed by the prefix un- . No such mapping for cause/effect relation. Such relations are expressed syntactically.
3. Children learn derivational morphemes early if they:
 - are easily perceivable
 - have sufficiently clear semantic roles
 - There is one to one mapping between form and context.

Free Standing Grammatical Morphemes:

- can occur in more than one position in a sentence, whereas bound morphemes are quite rigidly ordered.

Free Morphemes: Research Questions

- Are the phonological shapes of freely movable words easier to perceive and segment than those of affixes?

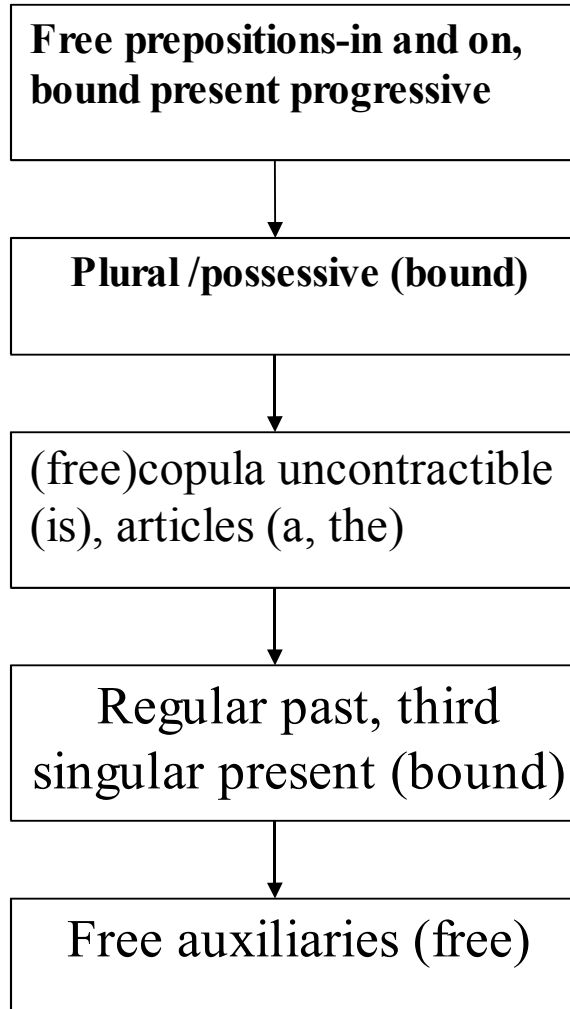
Both free and bound morphemes are generally equally obscured in stressed languages.

Vulnerable to elision by reduction of their vowel to schwa (Wilson, 1986; Peters, 1987). Thus, free morphemes are no more phonologically salient than bound ones.

Free Morpheme: Research Questions.

- Does the resulting variation due to free moving ability of a free morpheme makes it easier or harder for the learner ?
- Exceptions: Free Morpheme is not always free and Bound Morpheme is not always bound:
 - in West Greenlandic derivational process apply more than once, thus less predictability of position
 - in English sometimes free functors can have fixed positions atleast within phrases

Studies and Observations: Roger Brown(1973)



Thus, acquisition of grammatical morphemes involves the simultaneous working of three attributes :

- Phonological shape
- Distribution
- Function

Strategies for acquisition of grammatical morphemes

- Three major stages of productive ability:
 - a) One unit stage – productions are single lexicalized chunks.
 - b) Multiple units within a single clause.
 - c) Full recursive syntax.

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Strategies for acquisition of grammatical morphemes

- Early one unit productions – close to target word, but may be too small or a substitution for an adult phrase
 - e.g. fent – elephant
 - aga – all gone
- (Brown, 1973) – in the multiunit stage, limit themselves to a small set (11) of semantic relationships: NOMINATION, NONEXISTENCE, AGENT+ACTION, ACTION+OBJECT, ACTION +LOCATION etc
 - a) Either functor + open class word (this/that/here + N, N + away/gone...)
 - b) Two open class words (car go, hit ball etc)
 - c) “expressive kids” (Nelson 1973/Braine 1972) use (I/my/you + V, V + it, N + here/there)

Strategies for acquisition of grammatical morphemes

- There seem to be 2 major strategies at hand:
 - a) Juxtapositional strategy: open-class items are concatenated.
 - b) Holistic strategy: single open-class items placed in frames containing functor-like elements.
- Juxtaposers need to fill in the closed-class morphemes.
- Holists need to expand their frames and make them flexible.

Strategies for acquisition of grammatical morphemes

- Filling in the gaps:
- Children who learn name-object mapping (“referential”/ ”nominal” children)
- Vertical -> Horizontal construction (coined by Sollen 1976)
- 2 words, each with its own intonation contours and pauses -> Single contour and shorter pause (Branigan, 1979; Bloom 1973)

Strategies for acquisition of grammatical morphemes

- e.g. Brenda (from Sollen 1976) at 1;10
- Brenda Tape Corder my turn
- See that in there do it
- Some children like Brenda include identifiable functors, while children like Seth use filler syllables where they think a functor should appear.

Strategies for acquisition of grammatical morphemes

- Generalizing frames
- Closed-class items have no stresses, while open-class items have at least one stress (Cutler 1993). Learners learn and produce this stress – no-stress rhythm.
- Once segmentation is possible, learners find structures in the form of “frames with open slots” (Peters 1986) and “Positional patterns” (Braine, 1987, MacWhinney 1975).

Strategies for acquisition of grammatical morphemes

- Ewing's Son: (Ewing 1982)
 - a) Integration of 2-unit constructions into a frame:
 - want + change -> want + V
 - want + see
 - want + skate
 - Want + turn
 - b) Integration of 2-unit construction with an overlapping frame:
 - I + want -> I + want + V
 - want + V

Strategies for acquisition of grammatical morphemes

- c) Integration of a set of 2-unit constructions to a more general 2-slot frame:

	Experience +	Experience
• I do ->	I	do
• me walk	me	walk
• Guyplay	Guy	play
• me fish	Daddy	fish
• me laugh	doggy	laugh
• doggy see		see
• I drive		drive
• Daddy do		watch
• Guywatch		

Strategies for acquisition of grammatical morphemes

- Crosslinguistic Strategies:
 - Influences of morphological topology:
 - Ease of phonological segmentation
 - How predictable positions are
 - How easy Functions are to identify
- Obvious classification on the above basis
 - isolating, agglutinating, inflectional, polysynthetic.

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Strategies for acquisition of grammatical morphemes

- Inflectional:
 - Full-syllables / half syllables / interdigitated vowel sounds (Hebrew).
 - Bound Morphemes more consistent in position than free ones.
 - Inflections are often “portmanteau morphs” - 2 or more functions are bound into a single unsegmentable form:
 - e.g. Italian verb endings:
 - -o = Present + Singular + 1st-Person
 - -i = Present + Singular + 2nd -Person
 - -a = Present + Singular + 3rd -Person

Strategies for acquisition of grammatical morphemes

- Isolating:
 - Ideally each morpheme separate
 - Some languages have bimorphemic words with second functor bleached of meaning and with neutral tone.
 - Obviously easy to segment.
 - Phonological processes may upset this (I am -> I'm)
 - Positional Predictability low (not always. e.g. determiner precedes noun).

Strategies for acquisition of grammatical morphemes

- Agglutinating:
 - Morphemes as full syllables – Turkish, Japanese
 - Single Segments – Gregorian
 - -VC- sequences that straddle syllable boundaries – Kiche
 - In general, bound morphemes are prefixes and/or suffixes, with a fairly fixed position within words.
 - Their morphosyntactic functions are not used, and hence are easier to identify.

Strategies for acquisition of grammatical morphemes

- Polysynthetic:
 - May be more than one open-class stem in a single-word construction (Mohawk).
 - Affixes can be primarily suffixes, prefixes or both.
 - Segmentation is generally difficult; either affixes consist of a single segment, so a single syllable can contain more than 3 morphemes, or a morpheme can take several phonological forms.
 - Derivations occur before inflections, but isn't always true.

Strategies for acquisition of grammatical morphemes

- Another issue – Stress/Syllable – timed.
 - Stress – timed: Stressed syllables get more length and intensity than unstressed ones.
 - Syllable- timed: Each syllable receives weightage according to the phonetic material it contains.
- Stress may be an important natural segmentation mechanism.
- English-speaking children recognize rhythm in English by about 0;9 (Jusczyk, Cutler, Redanz 1993).

Strategies for acquisition of grammatical morphemes

- Strategies:
 - When boundaries are hard to find, learners segment prosodically delimited chunks.
 - When functors fuse phonologically and phonetically into neighbouring morphemes, amalgams are produced (didja etc)
 - Children who learn prosodically tend to perceive slots for functors, but find it tougher to fill them. They produce protomorphemes.
 - When functors straddle syllable boundaries, learners reproduce only those parts which fall within stressed syllables.

Strategies for acquisition of grammatical morphemes

- Strategies:
 - Productions of two bound morphemes precedes two open morphemes when the language consists of single words with many affixes.
 - Learning occurs furthest away from the stem first, then moves in.
 - Learners tend to omit functors occurring in the middle of a word.
 - Learners fail to learn in case of fusion or bleaching.
 - Omission or inappropriate production occurs or Homonyms – since differentiating their functions is not easy.

Strategies for acquisition of grammatical morphemes

- Strategies:
 - Productions of two bound morphemes precedes two open morphemes when the language has
 - a) sufficient phonological content to be easily perceivable
 - b) clear semantic roles
 - c) one-to-one mappings between form – and content.