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Compounds and Complex Predicates in English, Basque, and Romance

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Part I: Learnability Issues

A Learnability Paradox:

- Nominal compounding is fully productive in certain languages, and completely unproductive in others (1).
- Even in languages without productive compounding, lexicalized nominal compounds can occur in large numbers (2).
- Given that the child's linguistic input is finite, how can (s)he tell one type of language from the other?

(1) **English:**

teacup
family name
emergency exit

French:

tasse à thé
nom de famille
sortie de secours

(2)

frogman
[various senses]

homme grenouille
[sense fixed]

Some possible solutions:

- (3) a. Listen for any "novel" nominal compound in the input.

Problem: No obvious way to distinguish between novel and lexicalized compounds.

- b. Listen for "large numbers" of nominal compounds in the input.

Problem: How many counts as a large number? French has quite a few lexicalized compounds (Bauer 1978).

- c. Try using novel nominal compounds for a while and see if anyone corrects you.

Possible Problem: Corrective feedback does not appear to be essential to successful acquisition. (Stromswold 1994)

Clear Problem: Non-adult nominal compounds (i.e. errors) should occur in the spontaneous speech of children learning French, but they do not. (Snyder & Chen 1997, Clark 1993)

- d. Listen for head-modifier order in nominal compounds, which has been suggested as a diagnostic of unproductive compounding (Namiki 1994).

Problem: A number of languages with fully productive nominal compounding employ head-modifier order (e.g. Khmer, Thai, Vietnamese).

- e. Listen for N-Preposition-N constructions, which are typical of the languages lacking productive nominal compounding.

Problem: English also permits these constructions: *a shelf for books, a box of oranges, a book of children's stories*, etc.

- f. Listen for distinctive cases of complex-predicate formation, such as verb-particle constructions (*lift the box up*) or transitive resultative constructions (*hammer the metal flat*), which exhibit a strong cross-linguistic association with productive nominal compounding (Snyder 1995, 1996; see 4 below).

Problem: Languages with productive nominal compounding but no clear-cut complex predicates are attested (viz. **Basque**; see 5 below).

- g. Listen for **recursive** nominal compounds, which have been proposed as a diagnostic of fully productive compounding (Namiki 1994).

Prediction: Recursive nominal compounds should be relatively common in the input to children learning a language such as English, given that such children exhibit productive nominal compounding quite early (Snyder 1995, 1996; Clark 1993).

Cross-linguistic Association of Complex Predicates with Productive Compounding:

(4)	<u>Language</u>	<u>Transitive Resultatives</u>	<u>Particle Verbs</u>	<u>Productive N-N Compounding</u>
	Germanic	Y	Y	Y
	Latvian	Y	Y	Y
	Estonian	Y	Y	Y
	Hungarian	Y	Y	Y
	Chinese	Y	Y	Y
	Khmer	Y	Y	Y
	Thai	Y	Y	Y
	Japanese	Y	N	Y
	Korean	Y	N	Y
	ASL	Y	N	Y
	French	N	N	N
	Slavic	N	N	N
	Modern Greek	N	N	N
	Semitic	N	N	N
	Bantu	N	N	N
	Javanese	N	N	N
	Basque	<u>N</u>	<u>N</u>	<u>Y</u>

The Problem of Basque:

Learning strategy (3f) is inapplicable to **Basque**, which has productive nominal compounding (5a) but **no** clear examples of Larsonian complex predicates (e.g. transitive resultatives, verb-particle constructions; 5b).

- (5) a. liburu-kutxa
book box
(for 'a box in which books are stored')
- b. Gorri-z atz-azal-ak pintatzen ari naiz.
red-**with/in** finger+covering-Pl painting AUX
'I am painting my finger nails **with/in** red.'

[See Saltarelli (1988:262) on the productivity of nominal compounding in Basque.]

Association of Productive Compounding with Frequency of Recursive Compounds:

(6)	English:	French and Italian:
	<i>Black Forest cake</i> <i>sales department head</i>	<i>gateau "Fôret-Noire"</i> <i>capo settore vendite</i>
	[Recursive compounds common]	[Recursive compounds exceedingly rare]

Recursive nominal compounds are attested in the sampled adult speech in 10 of 10 CHILDES corpora for English:

- (7) *Examples of recursive nominal compounds in maternal input:*
(Source: CHILDES; MacWhinney & Snow 1990)

Adam 02	cowboy boots
Allison 03	baby doll truck
April 01	Apple Dumpling cup
Eve 05	Christmas tree cookie
June 01	baseball costumes
Naomi 15	toilet seat cover
Nina 03	birthday card
Peter 011	nursery school book
Sarah 005	peanut butter
Shem 04	cookie monster shirt

Conclusions on Learnability:

- ***Recursive*** nominal compounds are a possible acquisitional "trigger" for the productive nominal compounding found in languages such as English.
- The presumed absence of *lexicalized* recursive compounds (6) in the child's input for languages such as French, remains to be tested.

Part II: Methodological Issues

Case Studies versus Group Data in the Analysis of Child Language Corpora:

- Snyder (1996), building on (Stromswold & Snyder 1995), argued that a single parameter-setting of English is a prerequisite for both productive root compounding (e.g. *school bus*) and several types of complex predicates, including V-NP-Particles (*pick it up*), Double Object Datives, and *Put*-locatives (*put it here*).
- Stromswold & Snyder had argued that children consistently acquire the English complex predicates as a group, with DOD's, V-NP-Particles, and *Put*-locatives appearing first, followed soon after by perceptual reports and *Make*-causatives, then *To*-datives and V-Particle-NP's.
- Snyder argued that the first complex predicates entered a given child's speech precisely when the child began producing novel root compounds (e.g. *zoo story*, for 'story about a zoo').
- Evidence came from regression tests on ages-of-first-use in ten longitudinal corpora.
- **Question:** Would the same pattern emerge in a case-study analysis, performed on a single, longitudinal corpus?

Case-study Approach:

- To test reliability, an alternative, case-study technique was applied here to the corpus for Eve (Brown 1973, MacWhinney & Snow 1990).
- Constructions were evaluated for acquisition significantly earlier than, later than, or concurrent with V-NP-Particle (chosen as the "reference" construction).
- Alpha-levels were calculated by modified sign test, based on relative frequencies of the constructions in later transcripts.
- **Results** were overwhelmingly consistent with (Snyder 1996). As predicted, age-of-acquisition of V-NP-Particles constructions was not significantly different from the ages for novel compounding ($p=.082$ NS), or *Put*-locatives ($p=.630$ NS).
- As a control, lexical compounds (e.g. *toothbrush*) appeared significantly earlier than V-NP-Particles ($p<.001$).
- Significantly later than V-NP-Particles were perceptual reports ($p=.007$), *Make*-causatives ($p<.001$), *To*-datives ($p<.001$), and V-Particle-NP's ($p<.001$). These results conform closely to the findings of (Snyder 1996).
- **Conclusion:** A detailed case-study analysis of an individual longitudinal corpus, taking account of relative frequency of constructions in the child's later speech, can provide information similar to that obtained from group statistical tests on ages-of-first-use performed on a collection of longitudinal corpora.

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