

Restitutive *again* with goal-PPs: A learnability perspective

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1. Introduction

When *again* modifies an English goal-PP construction (*walk to the village*, in (1)), the sentence is ambiguous between a repetitive (1a) and restitutive (1b) reading. Interestingly, languages vary in availability of (1b) (Beck 2005; Beck & Snyder 2001). This study addresses the following learnability challenge: How do children decide whether (1b) is available in their target language, given that the extreme scarcity of clear examples in parental input?

2. Background

Many researchers (Stechow 1996, a.o.) argue that the ambiguity of *again* is structural: A single *again*, denoting repetition (2), can adjoin to different syntactic projections within a complex VP. This is illustrated in (3a) and (3b), which give rise to the repetitive and restitutive reading respectively, under the assumption that *to* means *at* (3c, see Beck 2005). Beck (2005) and Snyder (2012) further argue the syntax of goal-PPs varies. A constituent denoting just the result, as needed for the restitutive reading, is possible if, and only if, the language provides a special semantic composition rule. This rule can combine a manner-of-motion verb (*walk*) with a PP denoting location or path (*to the store*), and yield an accomplishment event (with “walking” as its development and “at the village” as its culmination). A language with this rule (e.g. English) has restitutive reading of *again* with goal-PPs, plus it will have adjectival resultatives (*wipe the table clean*) and possibly also verb-particle combinations (*tear the lid off*). In languages without it (e.g. Spanish), a PP gets a ‘goal’ interpretation only if the verb specifically selects for it. Given the cross-linguistic variation, how do children decide whether restitutive *again* is possible with goal-PPs?

3. Relying on the Semantic Subset Principle?

One possibility is that children are guided by an innate learning constraint, such as Crain et al.’s (1994) Semantic Subset Principle (SSP). The SSP concerns the acquisition of ambiguous sentences with one reading entailing the other, and is intended to avoid problems when the learners’ language includes only the “strong” (entailing) reading but not the “weak” (entailed) reading: Learners initially acquire the strong reading, and may later add the weak reading upon hearing direct evidence. The principle could apply here, since the repetitive reading of *again* entails the restitutive reading, and in some languages only the repetitive reading is available.

We examined parental input to four English-speaking children (CHILDES: Sarah, Lily, Violet, Mat). All the adult speech was searched for utterances containing a potential goal preposition (one of the following: *to, into, onto, under, down, up, in, across, around*) together with *again*. Table 1 in (4) shows the frequency of utterances where (based on context) a truth-conditionally distinct, restitutive meaning was possible. What the child would really need, however, is sentences where the restitutive reading is unambiguously intended, and we found none that were unambiguous (0/175,201 utterances). To account for reliable success (e.g. the stable availability of restitutive readings across generations of English speakers, and their stable unavailability across speakers of a language like Spanish), the SSP-based strategy will require each child to collect a considerable number of clear examples, ideally from multiple speakers, before drawing any conclusion. Given the extreme scarcity of clear examples (at least in English), a child is facing a challenging acquisition task and might wait many years to collect sufficient information.

4. Relying on a Downward Entailing (DE) operator?

Gualmini and Schwarz (2009) question the premise of the Semantic Subset Principle and suggest that children can exploit various kinds of evidence. In particular, sentences with DE operators, which reverse the entailment relation, can provide children with truth-conditional evidence even if learners start with the weak reading. This general mechanism based on DE operator, however, cannot applied here (at least for English), because total clear examples of restitutive ‘again’ is extremely few parental input, letting alone those involving a DE operator. Meanwhile it fails to explain how children learning a language without the special semantic composition rule (e.g. Spanish) can “unlearn” a wrong initial hypothesis that restitutive *again* is available, using only truth-conditional evidence.

5. Proposal: Relying on non-truth-conditional evidence

We propose that children are benefiting from non-truth-conditional evidence. Based on Beck and Snyder (2001), Beck (2005) and Snyder (2012), what a child really needs to learn is the meaning of ‘again’ in its simple, repetitive uses, plus the fact that whether a language has something like the special composition rule. Taking English as an example, the spontaneous speech of Lily (one of the four children whose parental input were examined in Section 3) shows that repetitive *again* is acquired very early, often by the age of two years. Productive use of verb-particle combinations, which suffice to indicate that the special composition rule is available in English, is normally in place before the age of three years (Snyder & Stromswold 1997). While the child does not reliably get direct evidence for restitutive *again* with goal-PPs, s/he deduces this possibility from evidence concerning repetitive *again*, and from evidence that other structures (e.g. verb-particle combinations) requiring the composition rule are well-attested in the target language. If children are using this type of strategy, the acquisition task is much easier. In an experimental

study, we are examining 4- and 5-year-olds' interpretation of restitutive *again* with English goal-PPs. Child participants' considerable success is compatible with our proposal.

(1) John walked to the village again.

- a. Repetitive: John walked to the village, and he had walked to the village before.
- b. Restitutive: John walked to the village, and he had been at the village before.

(2) Let P be a property of eventualities and let e be an eventuality.

[[again]](P)(e) is defined only if $\exists e'[P(e')=1 \& e' < e]$. Where defined, [[again]](P)(e)=1 iff $P(e)=1$.

- (3) a. [[John I [t_i [walked [PRO_i to the village]]]] again] Repetitive
- b. [John I [t_i [walked [[PRO_i to the village] again]]]] Restitutive
- c. [[PRO_i to the village]]^g= $\lambda e.at_e(\text{the_village})(g(1))$ (see Beck 2005)

(4) Table 1. Goal-PPs with *again* in child-directed speech

	Uses of potentially restitutive <i>again</i>	Total adult utterances	Frequency of potentially restitutive <i>again</i> per 1000 utterances	Total uses of <i>again</i> with goal-PPs	Relative frequency: Potentially restitutive uses over all uses of <i>again</i> in goal-PPs
Naima	2	61794	0.0485	7	0.29
Lily	7	67238	0.1041	15	0.47
Violet	1	25999	0.0385	4	0.25
Mat	2	20170	0.0992	5	0.40

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