



The curious development of *have-raising*  
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when Voice moves, it spells out as *do* (cf. Embick & Noyer 2001, Bjorkman 2011), meaning LT generates *do-have* but not *have-raising*. EX can generate *have-raising* with *v (=have)* in T, since this *v* is the highest verb. The *have* in HT can also raise, and in fact we claim that it is associated with two distinct spellout patterns: its trace may spell out as *got* (HT-*got*) or zero (HT-t). The claim that *got* is a spellout of a trace of *have* is motivated by the fact that it only occurs in possessive clauses when *have* is finite (cf. 6a,b) and plausibly in T; if *have* is low, for instance if it follows adverbs, then *got* is impossible.

(6) I want to have (\*got) a pen.

(7) I only have (\*got) a pen.

The table summarizes what each

	in-situ	in-T	Trace= <i>got</i>
HT	have (in)def	have X (in)def	have got (in)def
LT	have (in)def	do X have (in)def	
EX	have indef	have X indef	

analysis can generate: HT-in-situ generates *have*-clauses with definite or indefinite possessums; EX-in-T generates unambiguous cases of *have-raising* (with some diagnostic X, e.g. negation) with an indefinite possessum, etc. It is crucial for our proposal that it's not the case that all English speakers have access to all of the analyses in (3)-(5) at any given time: whether a given grammar is acquired depends on the input. We claim that the definiteness effect comes about where competition between the different forms leads to the EX-in-T analysis being the only one which can generate *have-raising* without *got*.

**Competition.** We adopt the acquisitionist approach to grammar competition in Yang (2001): grammars (Gs) compete to analyse input, and Gs which generate the highest proportion of unambiguous sentences (sentences that no other G generates) are the fittest ones which ultimately win out over generations. Change comes about when there is variation in the input and two or more analyses have a distinct fitness in analysing the variable input. One issue with applying Yang's model to *have* is that the theory doesn't place any conditions on which Gs are selected for competition; in other words, if all of the analyses above are plausible for *have-raising*, then they should all be available to any learner of English at any given time. If this were so, the EX-analysis should never gain any ground: it will always lose as it has no fitness (all its output could equally have been generated by HT). We propose that learners are generally biased to establish a one-to-one relationship between structures and spellout patterns, and they only consider different spellouts of the same structure if there is positive evidence to force it; call this the *isomorphism bias*.

In our case, this means that learners only entertain multiple versions of the transitive analysis if there is data which requires them, and so in the development of *have* LT will only become involved in competition once instances of *do-have* are found in the input; otherwise HT will provide an analysis of any given *have*-clause as well as the initially abundant instances of *have-X* order. Similarly, and crucially, in a pre *do-have* stage where LT is not under consideration, HT-t will be dispensed with as an analysis when the data which provides unambiguous evidence for it – *have-raising* with a definite possessum – is so sparse that it falls below some threshold which needs to be met for a grammar to be maintained. We suggest that such a situation came about in the history of English when *have got* progressed to near-completion: the rarity of the relevant examples leads to HT-t being dispensed with (HT-in-situ and HT-*got* are still being used). Our corpus data suggest that indefinite possessums may be up to three times more frequent than definites, so it is likely there will be a stage when HT-t has become very infrequent and all of its inputs involve indefinite possessums. A learner can analyse these successfully with EX-in-T, which (unlike HT-t) is not pushed out of competition by the isomorphism bias, so HT-t is given up. This is how the definiteness restriction comes about: the advance of *have got* squeezes out HT-t, EX-in-T is still under consideration, and *do-have* is not yet frequent enough for the greater fitness of LT to have forced out EX-in-T. In the talk we demonstrate how the model predicts the rise of *have got* in 19<sup>th</sup> century BrE and the eventual success of *do-have* as the dominant form.