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Input and age effects: Quo vadis?

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Nobody will deny that input plays a crucial role in language acquisition, whatever learners we talk about — notwithstanding some caricatures of generative work that may suggest otherwise. Nobody will deny that age plays a role in language acquisition, either, in that early acquisition is in general more successful than late acquisition. The question is to what extent we can reduce this asymmetry of early versus late acquisition entirely to the amount of input learners receive. Here opinions diverge. Some scholars argue that the differences between early and late acquisition are indeed epiphenomenal and can basically be reduced to input factors once we have a precise idea of the input, and factors that may hinder the input in particular circumstances (see for instance White, 2003). Others maintain that some of the age effects are real in the sense that there are qualitative differences between early and late acquisition (see for instance Meisel, 2009). On this view, learners who are entirely equal in terms of input factors may nevertheless behave differently depending on whether acquisition takes place or does not take place during a sensitive period. In fact, even much more exposure might not be helpful if a learner is no longer in this sensitive period.

The two positions are still vastly underdetermined by the facts. Good comparisons across groups and languages are difficult to get, even for relatively well-described phenomena like OV/VO, V2 and grammatical gender. This does not mean that a debate is useless or should be even evaded, since it may help us to find out what should be on the agenda of our fact-finding mission. Nor does the lack of decisive data mean that no progress has been made at all, as Tsimpli’s paper shows (Tsimpli, this volume). Tsimpli defends a subtle variant of the position that not all differences can be reduced to input effects. Here I will single out two issues that I consider important for the debate.
Exactly what is sensitive to age effects?

In the concluding remarks Tsimpli states that “macroparameters in particular and microparametric properties associated with them are sensitive to age of onset effects” (Tsimpli, this volume, p. 301), while input is considered to be decisive in phenomena that are learned relatively late (by monolinguals). “Late phenomena […] involve the contribution of semantics, pragmatics and lexical knowledge and as such they map more readily to the notion of interfaces” (Tsimpli, this volume, p. 301). Earlier in the paper (Section 3), where she discusses word order phenomena, Tsimpli (this volume) notes in the summary that age of onset effects are empirically visible in the microparametric properties of word order rather than in the macroparameter. However, Tsimpli (this volume) assumes that the macroparameter for gender does show visible age effects (namely in the case of Dutch). The question is why sometimes the microparameter, and sometimes the macroparameter shows age affects. A second look may help us to find out what exactly makes which parameter sensitive to age effects.

Note first of all that in the case of word order (Tsimpli discusses OV/VO and V2) the relevant evidence for the so-called macroparameter is fairly readily available. One page of any Dutch text probably suffices to show that this language is of the type OV and V2. This is totally different for the Dutch gender system. In other words, for directionality it is not only a matter of less evidence being needed, but also of more evidence being available in a random sample. And if indeed prosody is connected to directionality (cf. Christophe, Guasti, Nespor, & Van Ooyen, 2003), then even sentences and phrases that are only superficially analysed help learners to find out what the system is.

What turns out to take more time, even for directionality, is the morphosyntax (Tsimpli, this volume, p. 290). This makes sense, since the same page of a Dutch text will almost certainly not contain all the relevant information in this regard. A much larger sample of Dutch is needed in order to be able to find examples of all the relevant aspects, let alone acquire these aspects.

There is a potential counterexample in Tsimpli’s review of the acquisition of word order by late successive bilinguals. Blom and De Korte (2011) argue that late bilingual children acquiring Dutch place the finite verb in V2 position in embedded clauses in an elicitation task consisting of relative clauses like (1). The italic part is given by the researcher and the child has to fill in the sentence.

(1) dit is de man die een krant leest
this is the man who a newspaper reads
‘this is the man who reads a newspaper’
The problem of this elicitation task is that it might just as well trigger root clauses, since the relative pronoun in Dutch in this experiment has exactly the same form as the demonstrative pronoun that can take the first position in a root clause. Children can therefore easily avoid an embedded clause. In particular in a situation like (2) where the child does not play the game of filling in the sentence, but rather acts as if this is a natural discourse, the root sentence is perfect.

(2) Researcher: dit is de man die…
this is the man that
Child: (die) leest een krant
(that one) reads a newspaper

Videos of the task (available at the University of Amsterdam, cf. Blom, Orgassa and Polišenská, 2008) show that this is indeed a very likely interpretation, so that we can even strengthen the observation that it is not so much word order but rather the morphosyntax where the difficulties lie. For Tsimpli, the morphosyntax falls in the category of microparametric variation in word order, while it is macroparametric in gender. Apparently, the age effects are visible where the morphology comes in.

More generally, I doubt whether the distinction between macro and microparameters is more than a handy tool for (some) linguists. Even for V2, for instance, it has been argued that the parameter is set once the morphosyntax has been discovered, as pointed out in the literature Tsimpli refers to in her footnote 2. What seems to remain is that the setting of the precise morphosyntax, that is, finding out which abstract, functional features play a role in the language, is crucial. While children are surprisingly good at this (they are little “inflection machines” as Wexler (1998) has put it), late learners have serious, sometimes even long-lasting difficulties with inflection, as is often discussed (see for instance the literature on pidginization, creolization, language contact and the so-called Missing Surface Inflection Hypothesis, (Arends, Muysken and Smith, 1995; Prévost and White, 2000 and many others).

Following this track further we can get rid of a list of (innate?) macroparameters with dependent microparameters. The perspective sketched by Tsimpli makes both the macroparameters and the microparameters construction-specific and in this respect very different from the ideal of the good old GB parameters of the 1980s. As a result of the construction specificity, the number of parameters as presumably innate information will explode. Perhaps the construction-specific machinery is indeed needed to describe the attested variation, but if so we can just as well assume a route in which a learner discovers the relevant abstract functional features in the target language guided by the computational system. Arguably, this is more plausible (and more parsimonious) than assuming a learner who checks a very long innate list.
An extra argument for this approach is something that is mentioned by Tsimpli, although the consequences are not discussed. Children’s early success in inflection is also visible in their knowledge of entirely language-specific spell-out rules. Apparently, whatever they are good at is more than parameter setting. It looks as if it is the other way around: children’s sensitivity to deal with form differences in very early stages allows them to recognize not only entirely language-specific inflectional patterns, but as a consequence also possible abstract features behind these patterns as soon as this sensitivity interacts with the computational system. If the sensitivity becomes weaker as an age effect, so will the possibility to trigger the abstract functional features.

The ‘discovery procedure’ may remind us of the pre-parameter era, but it is important to add that the procedure is far more restricted given the progress that has been made in ideas about the computational system.

What evidence do we need?

That bilinguals acquiring Dutch gender may have enormous difficulty in finding out which abstract features play a role (and that this may even be a mission impossible) is in accordance with what I just suggested. It is a direct consequence of the relatively opaque character of Dutch gender and the early sensitivity. The same goes for the fact that monolingual children, on the other hand, acquire the essentials of the system (i.e. the relevant spell-out rules and the abstract features that play a role) around the age of 3. Of course, the system is equally opaque for them, but in a sensitive period they apparently receive sufficient evidence. After the age of 3 monolingual children still have a long way to go in their lexical knowledge of gender, since they have to acquire for each and every Dutch neuter root noun that it has this particular feature. In other words, Dutch monolinguals do make mistakes in grammatical gender for a relatively long period, but these mistakes are reducible to their lexical knowledge; the system is on target (Blom, Polišenská and Weerman, 2008, Polišenská, 2010).

As in many other cases, there is no easy one-to-one relation here between the facts (‘the surface’) and the analysis. What is reducible to a lexical mistake for monolinguals, may be a consequence of a different rule (or no rule) in the case of a group of bilinguals (as Blom et al., 2008 and Polišenská, 2010 suggest). Of course, the two analyses of these mistakes (‘overgeneralisations’) cannot just be notational variants: they should make different predictions, and in fact they do. Testing these predictions is by no means easy, however, and an interesting challenge for future research since lexical knowledge of gender and several sorts of possible rule-effe-
fects should be tested independently. And the results may differ from individual to individual, since lexical knowledge of gender may differ.

There are basically two related practical problems here. First of all we need much more test items to differentiate the possible analyses and this cannot be solved, moreover, by relying on a straightforward cross-sectional group design. The bilingual groups are notoriously heterogeneous and the individual differences do matter a lot. Adding up results of individuals can easily destroy the systematic characteristics of the individual systems in this case.

To return to corpus case studies does not really help. It is hardly likely that spontaneous corpus data of individuals will contain the relevant evidence, even if the corpora are ‘dense’. A possible solution is to combine group testing with some in-depth experimental studies of a couple of interesting individuals of the respective groups. As in the case of the parameters discussed above, a mixture of old and new may be helpful.

Note

1. But they manage, and they do so over generations for centuries. Tsimpli’s suggestion that there is an on-going change in the Dutch gender system is and was true for contact situations (see for instance Afrikaans) — the system is indeed vulnerable — but it is important to see that the system is learnable after all, and that it may hence survive depending on the future role of contact.

References


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