★ BRIEFS ★

A Note on the Default Values of Parameters

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Modern linguistic theory attempts to explain why language acquisition is possible despite the fact that relevant experience available to children is severely limited (coined "Plato's problem" in Chomsky 1986). The proposed answer postulates that a human child is genetically equipped with Universal Grammar (UG), the initial state of the language faculty that narrowly constrains the space of hypotheses to entertain. Under the Principles–and–Parameters (P&P) approach, UG consists of (i) a number of principles that specify the properties to be satisfied by any language and (ii) a finite collection of parameters that sharply restricts the range of possible cross-linguistic variation. Chomsky (1995: 6) argues that within this framework, the task for a child in acquiring her native language is to identify the correct settings of parameters for the community's language, as stated in (1).

(1) [Within the P&P approach — KS], language acquisition is interpreted as the process of fixing the parameters of the initial state in one of the permissible ways.

Chomsky's statement in (1) can be construed as claiming that parameter-setting is the most significant factor in explaining the observable changes in the course of acquisition.

Chomsky (2004: 104) makes an additional assumption about parameters. He suggests that all parameters of UG have a *default setting*, and are specified for certain settings prior to any linguistic experience.

(2) At S_0 [initial state — KS], all parameters are set with unmarked values.

Given these two fundamental assumptions proposed by Chomsky, the following question can be raised: Is (2) compatible with (1)? I suggest that the answer is negative.

If every parameter has a default setting, then there should be a particular grammar that corresponds exactly to the initial state (UG): There should be a language (among the possibilities permitted by UG) whose parameter settings are completely the same as the default settings. Then, when a child acquires this language, no change of parametric values would take place, for the very reason that the default values are exactly the target values. Since the correct settings are

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there from the start, the acquisition of lexical items (and probably, maturation of some UG properties) would be the only developmental factor that induces observable consequences in its acquisition.

Note that even in the acquisition of this language, a child has to figure out whether each of these default values is in fact the correct one for the target language. Yet, this process itself would not yield any observable change in this case: There is acquisitional evidence suggesting that the effects of default settings (as well as those of the target settings) are reflected in the child's utterances. Null subjects and '*wh*-copying' constructions in child English, illustrated in (3), are well-known phenomena that have been explained in terms of default settings of parameters.

(3) a. ____ want more apples. (Hyams 1986)
b. What do you think what Cookie Monster eats?
(Thornton 1990, McDaniel *et al.* 1995)

The default values relevant to (3) are incorrect for adult English, and hence the shift from the default to the target setting yields observable effects in the acquisition of English. In contrast, since these default specifications are correct for adult Spanish (in the case of null subjects) and for adult Romani (in the case of '*wh*-copying' constructions), the shift from the default to the target setting would not yield any observable change in the acquisition of these languages.

The above discussion leads to the conclusion that if all the parameters are specified for a default, there can be a language in which parameter setting plays no role in explaining the observable changes in the course of acquisition. If the proposal in (1) should be interpreted as the claim that parameter-setting is the most significant factor in explaining the observable changes in the course of acquisition, the assumption in (2) is not compatible with this claim, because the hypothesis in (2) permits a language in which parameter-setting induces no observable consequence in its acquisition. In order to maintain the fundamental idea in (1), we should abandon (2) and instead adopt a weaker assumption: There are parameters without any default specification, and with respect to these parameters, none of their values are employed until the child determines the correct settings for her target grammar. The evidence from the acquisition of preposition-stranding (P-stranding) and pied-piping reported in Sugisaki & Snyder 2003 in fact suggests that this weaker hypothesis is on the right track.

Cross-linguistically, the possibility of P-stranding in *wh*-questions is among the more exotic properties of English: While P-stranding is possible in English and in Scandinavian languages, pied-piping of prepositions is obligatory in most other languages (see the examples from Spanish in (5)). Given this cross-linguistic variation, a number of syntactic analyses (including Hornstein & Weinberg 1981, Kayne 1981, Law 1998, and Stowell 1981) have proposed a parameter with two values, one leading to the availability of P-stranding, and the other leading to obligatory pied-piping.

(4) What did they talk about *t* ?

(5) *Spanish*

a. *Cuál asunto hablaban sobre *t* ?
which subject were.they.talking about
'Which subject were they talking about?'

b. Sobre cuál asunto hablaban *t* ?
about which subject were.they.talking
'About which subject were they talking?'

If the parameter of P-stranding consists of two values, and if every parameter is specified for a default setting, then one of the following two predictions should hold with respect to the acquisition of P-stranding:

(6) a. *Prediction A*

If the P-stranding value is the default, then children learning either English *or* Spanish should use P-stranding when they first begin to apply *wh*-movement to prepositional objects.

b. *Prediction B*

If the pied-piping value is the default, then children learning English should pass through a pied-piping stage before they begin to use P-stranding.

Sugisaki & Snyder (2003) evaluated these two predictions, by analyzing the spontaneous speech data of ten English-learning children and four Spanish-learning children, selected from the CHILDES database (MacWhinney 2000). The results falsified both of these predictions. As for English, six children acquired direct-object *wh*-questions significantly earlier than P-stranding. In the utterances of these six children, no example of pied-piping appeared before the acquisition of P-stranding. As for Spanish, no single example of P-stranding was observed in children's utterances.

These results indicate that Spanish-learning children do not pass through a P-stranding stage before they acquire pied-piping, much as English-learning children do not pass through a pied-piping stage before they acquire P-stranding. Thus, children's acquisition of P-stranding in English and of pied-piping in Spanish provides clear evidence that not every parameter has a default specification: Neither pied-piping nor P-stranding is employed until the child determines the correct setting for her target grammar.

In sum, the hypothesis in (2) faces both conceptual and empirical problems. As far as I can see, there seems no reason to assume that UG corresponds to a particular grammar.

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