

Revisiting Universal Grammar¹

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1. The original access question

The theory of Universal Grammar (UG), especially in its Principles and Parameters (PPT) version, has exerted a very significant influence on research investigating second language acquisition (L2A) over the past 15 years. Yet whereas UG-based research on first language development almost unanimously agrees in viewing UG principles as constraining properties of children's grammars in essential ways, related issues are much more controversial in L2 studies. The question of whether or not UG continues to be accessible to second language learners has, in fact, been answered differently ever since it was first asked and has subsequently provoked a substantial number of conflicting suggestions and hypotheses. Approximately ten years ago, the state-of-the-art in this area of research was summarized by Eubank (1991) and by the other contributions to Eubank (ed.) (1991). It may, thus, be useful to take another look at this controversy, to ask what we have learned from it and whether it might make sense to pursue it further.

The access question is, of course, understood and answered differently as our understanding of the concept of UG changes. It has, furthermore, become obvious over the past decade that possible answers are not confined to a binary choice between all or nothing. "No access", as it appears to be understood by many, i.e. as claiming that L2 knowledge does not and cannot comprise concepts defined by UG (e.g. grammatical categories, etc.) is probably the least plausible assumption. But as far as I can see, no one is defending it, nor has anybody ever defended such a claim. Clahsen & Muysken (1986), to whom this position is frequently attributed, rather seem to be saying that L2 learners do make use of abstract grammatical categories and relations, although they also develop "rules" which do not conform to principles of UG. I doubt whether the "full access" hypothesis fares much better than "no access" in view of the many obvious and observable differences between first and second language acquisition. This is not to say that such differences must necessarily be attributed to the unavailability of UG in L2 acquisition, but they certainly ask for meaningful explanations which stand up to scrutiny. Non-specific reference to performance factors clearly does not qualify as such. "Partial access" thus seems to offer a more attractive solution to the UG paradox (Clahsen & Muysken, 1989). The term is, however, used ambiguously. Under one understanding, it is claimed that UG shapes L2 knowledge via the linguistic competence acquired in the course of L1 development; this, however, might better be referred to as "indirect access". "Partial access" then implies that some but not all principles of UG can be accessed directly, i.e. not via the L1 grammar, during L2 acquisition.

If we take these considerations into account, the issues which the original access question aimed to resolve can still be crucial ones for research on L2 acquisition. In other words, we have to reinterpret this question in the light of a different and, hopefully, better understanding of UG and of L2 acquisition, and we should consider the possibilities of indirect and partial access. In what follows I propose a number of different scenarios varying along these lines, in an attempt to avoid terminological and conceptual confusion and in order to be able to spell out explicitly some implications and consequences of the various approaches to the "access to UG" issue.

2. Reformulating the access question within Principles and Parameter Theory

As a first approximation, let us maintain the distinction between A) Full Access to UG, B) Partial Access to UG, and C) No Access to UG. Whereas (A) and (C) appear to be self-explanatory, it should be obvious without further elaboration that the intermediate position (B) needs to be further specified in a theoretically satisfactory way with respect to what kind of knowledge is accessible and what is not, in order to be able to make principled predictions which go beyond *ad hoc* claims. The distinction suggested by the Principles and Parameters Theory (PPT) between parameterized and non-parameterized principles indeed allows us to phrase the question about access to UG in a more subtle way since the answer may well depend on the kind of principle one refers to. Moreover, UG access may or may not be mediated by previously acquired languages, most likely by the grammatical knowledge about the L1. In fact, once one considers the possibility that solutions for the "access to UG" problem depend on the relevance attributed to these distinctions, i.e. parameterized *versus* non-parameterized principles and direct *versus* indirect accessibility, it immediately becomes obvious that this is not only the case for option B, Partial Access.

A) Full Access necessarily implies that learners have access to all principles and parameterized options, at every point of acquisition. But although it formulates a categorical statement, the FA hypothesis still leaves room for variation, depending on what role is attributed to previously acquired knowledge. Learners may be expected either a) to normally draw on the knowledge provided by UG, unless there exist specific reasons to first explore the possibilities offered by the L1 grammar, or b) to rely initially on previously acquired knowledge and to resort to UG knowledge only if the former fails to provide the desired results.

C) No Access obviously means that L2 learners do not have direct access to the wealth of implicit knowledge provided by UG. But here too different conclusions can be drawn regarding the knowledge sources available in L2 acquisition. a) One possibility is to maintain that L2 learners have to rely exclusively on non-linguistic, i.e. non-domain-specific cognitive operations. As mentioned above, this is how Clahsen & Muysken (1986) have sometimes been understood; but since these authors made it clear in (1989) that this is not the position they want to propagate, this scenario is apparently not defended by anyone working within a framework which postulates UG as part of the L1 learner's language making capacity. b) Another option is to argue that principles instantiated in the L1 grammar can be used in L2 acquisition, although parameter values cannot be changed since the alternative parametric options are not available any more. Principles not activated in the L1 grammar (non-parameterized and parameterized ones) are, of course, also lost. In other words, given this scenario, "no access" means that UG principles are only indirectly accessible via the L1 grammar, much like in version (b) of the "partial access" hypothesis, see below, except for the fact that parameter values are assumed to

be unchangeable. Consequently, the learners' knowledge about grammatical properties of the L2 target language may be expected to conform, in part at least, to the constraints imposed by UG on natural grammars.

B) Partial Access can focus on both the parameterized/non-parameterized distinction and the one between previously activated or not activated principles. This allows for a number of logical possibilities, though not all are of equal plausibility; (1) presents a schematized overview of the more likely ones.

(1) Scenarios involving partial access to UG knowledge in L2 acquisition

UG principles	not activated in L1	activated in L1
(a) parameterized	+	-
non-parameterized	+	-
(b) parameterized	-	+
non-parameterized	-	+
(c) parameterized	-	-
non-parameterized	+	+

(a) One imaginable scenario is that only principles not activated in the L1 grammar can still be accessed in L2A; parameterized principles would then need to be set on the appropriate target value. The idea behind such a claim is that UG principles become part of the native grammar as the L1 is acquired; in other words, UG gradually self-destructs in the course of L1 development. As for those principles activated in L1, they may or may not be available for L2 learners, but if they are, this happens via the L1 grammar. Parameter values cannot be reset since the necessary information to do so has been lost with the pristine state of UG. At any rate, this would not count as an instance of access to UG. (b) The second option is that only principles activated in the course of L1 development can also be accessed in L2 acquisition. With respect to parameterized principles this means that they can be fixed to a new value if the L2 target setting differs from the L1 setting. The rationale behind this idea is that knowledge not activated during the appropriate period of language acquisition degenerates, possibly as a result of neurological maturation. UG knowledge activated in L1, on the other hand, remains available, including the parameter values not chosen in the L1 grammar. How the latter could be possible is not obvious, however, neither from a psycholinguistic nor from a neurolinguistic point of view. (c) The third option is that only non-parameterized principles can be accessed in L2 acquisition; open parameters cannot be fixed and settings of parameter values cannot be altered. The explanation of this hypothesis relies on the assumption that only parameterized principles are subject to maturation and are thus not available any more during L2 acquisition; see Smith & Tsimpli (1995).

This schematic review of some possible scenarios shows quite clearly that the broader question of whether or not L2 learners can access UG knowledge can only be answered if a number of more specific issues are settled which are currently treated controversially in L2 research. The extent to which L1 knowledge is used in developing a L2 competence, however, is not one of them. The idea of "indirect access" via the L1 grammar is indeed compatible with all three types of approaches (A, B, C) and is thus not dependent on the access problem. The various scenarios confirm, on the other hand, that the question of whether the setting of parameter values can be changed is indeed a crucial one, although it is also important to determine whether inert UG principles can still be activated. In fact, to the extent that changing the settings of parameters requires the continued availability of information provided by UG but not instantiated in the L1 grammar, the two questions focus on different aspects of the problem, but are closely related. The two issues thus highlighted are the following:

- 1) The restructuring issue, whether parameters can be (re-)set to different values once they have been fixed.
- 2) The inertia issue, whether UG knowledge not activated during L1 development can be accessed in the course of L2 acquisition.

Not all the logically possible positions captured by these scenarios are defended in published research on L2 acquisition. It is, in fact, frequently difficult to allocate individuals or publications to a specific scenario. Let me, nevertheless, try to summarize how the two issues discussed are treated by currently debated hypotheses on L2 acquisition. The Full Access hypothesis in its various forms relies on both issues, although Aa stresses 2 (e.g. Flynn, 1996), and Ab (e.g. Schwartz & Sprouse, 1996) makes heavier use of 1. Proponents of the No Access hypothesis reject both 1 and 2. Note that the Cb scenario (Bley-Vroman, 1989; Clahsen & Muysken, 1989) actually represents the indirect access hypothesis, via the L1 grammar, although critics of C tend not to acknowledge the possibility of this option, e.g. Flynn (1996). The Incompleteness Hypothesis, suggested by Schachter (1996:170 ff.), can also be assigned to Cb. She rejects 2, arguing that UG is not available anymore to L2 learners, only a "language-specific instantiation of it will be". She allows, however, for 1, parameter resetting, in L1 acquisition as well as in child L2 acquisition, postulating a "Window of Opportunity", i.e. a period during which UG remains available; child L2 acquisition, in this case, is then like L1 development. Turning to the various versions of the Partial Access hypothesis, Ba strongly relies on 2, allowing for the setting of unset parameters while rejecting 1, i.e. resetting of fixed parameters; surprisingly, perhaps, this type of approach is apparently not explored in published work on L2 acquisition. I am not sure either about who would subscribe to Bb, supporting 1 but not 2, although this appears to be a plausible hypothesis, provided one accepts parameter resetting in L1 development. Bc, finally, rejects 1, but it accepts 2 in part, i.e. for non-parameterized principles; see Hawkins (1994) and Hawkins & Chan (1997).

3. Towards a shared research program

The purpose of this exercise, sketching a number of different scenarios and trying to identify the crucial issues on which they differ, has been to identify research questions which might be

fruitfully pursued, even by advocates of contrary hypotheses. The significance of the restructuring and the inertia issues resides in the fact that most of the above mentioned scenarios can or rather must be discarded if the questions implied in (1) and (2) are answered negatively.

- If it can be shown that parameter resetting is not possible, Full Access (Aa as well as Ab) and Partial Access in the Bb version are out.
- If setting of inert parameters (not activated in L1) is not possible in L2 acquisition, A (a and b) and Ba are out.

Given that Ca appears to be implausible for principled reasons and is not defended in current research, this would leave us with Bc and Cb. But even these two need to be specified. If, for example, parameter resetting can be shown to be impossible in L1 acquisition, too, the Window of Opportunity approach (Cb) needs to be modified with respect to its implications for child L2 acquisition. Bc, on the other hand, is not entirely independent of the inertia issue since it maintains that non-parameterized principles remain available to child and adult L2 learners.

To conclude this part of the discussion, let me add some speculations on how plausible it is that we will indeed find that the most promising candidates are either a version of the No Access hypothesis, i.e. no direct but indirect access (Cb), or a version of the Partial Access hypothesis, i.e. continued access only to non-parameterized principles (Bc). There are indeed good reasons to believe that any scenario involving parameter resetting is doomed to fail. In the present context, it is obviously not possible to substantiate this claim in any detail (see Meisel, to appear), but a number of facts and arguments certainly speak in its favor. 1) The available empirical evidence for parameter resetting is not convincing, e.g. one finds neither clustering of grammatical phenomena related to a specific parameter nor abrupt changes in L2 acquisitional patterns. 2) From a psycholinguistic perspective, major restructuring of this sort is unlikely to happen since it would be very costly in terms of processability, as has been argued by Pienemann (1998), discussing the notion of generative entrenchment. 3) Setting parameters to different values does not happen in L1 development (Clahsen 1991; Müller, 1994) and is thus highly implausible for L2 acquisition. All this is not to say, of course, that learning a second language is impossible; rather, inductive learning needs to be attributed a more important role, not only for lexical learning. As for the second issue, i.e. access to UG principles not activated during L1 development, it is more difficult to make an educated guess about how this will be solved by future research. The claim, however, that only non-parameterized principles, if anything, remain accessible to the L2 learner is theoretically plausible. It also squares with what we know about other types of genetically transmitted knowledge; i.e. sensitive periods typically relate to stimulus-dependent, externally triggered knowledge.

Let me add that both scenarios nevertheless suggest that UG shapes L2 grammatical knowledge, at least in part, i.e. learners are predicted to have indirect access to UG via the L1 grammar. Note also that L2 knowledge, following these approaches, refers, *inter alia*, to grammatical entities such as verbs and nouns; in this respect, it includes domain-specific cognitive representations and operations.

4. Reformulating the question (tentatively) in terms of the Minimalist Program

At the beginning of this discussion I stated that the question of access to UG in L2 acquisition is asked and answered differently, depending on one's understanding of the human language faculty in general and of UG in particular. The brief review of a number of approaches offered by PPT has led me to conclude that the distinction between parameterized and non-parameterized principles is a crucial one, in this respect, in that only the latter might possibly still be accessible in the successive acquisition of two or more languages. In view of recent developments in linguistic theory, the question arises, of course, whether the notion of UG, as it is developed by the Minimalist Program (Chomsky, 1995), offers different and new perspectives on the access to UG question. I believe that what has been said so far is not in conflict with these ideas, but new insights can be derived from this program which might indeed enhance our understanding of L2 acquisition. Let me therefore, in place of a more general conclusion, add some thoughts on this topic.

In terms of the Minimalist Program, the language faculty is understood as a mental organ interacting with other systems of the mind/brain which impose "legibility conditions" that i-language must satisfy in order to be usable; i.e. linguistic expressions are "read" by these external systems which must be able to use them as "instructions" at the two interface levels, one related to meaning, the other to sound. The idea of explanatory adequacy, accounting for the fact that a particular language is derived from a uniform initial state, is based on the assumption that most of language structure is invariant. Structural change, however, must explore just these "marginal" possibilities of variation. A crucial source of variation is located in the inflectional systems and thus depend on the featural composition of lexical items.

"Legibility conditions impose a three-way division among the features assembled into lexical items:

- (1) semantic features, interpreted at the semantic interface
- (2) phonetic features, interpreted at the phonetic interface
- (3) features that are not interpreted at either interface.

Independently, features are subdivided into the "formal features" that are used by the syntactic operations and others that are not. A natural principle that would sharply restrict language variation is that only inflectional properties are formal features. That seems to be correct, In a perfectly designed language, each feature would be semantic or phonetic, not merely a device to create a position or to facilitate computation. If so, there are no uninterpretable formal features. That is too strong a requirement, it seems." In other words, natural languages exhibit just this type of imperfection, i.e. grammars rely crucially on formal features. "In the syntactic computation, there seems to be a second and more dramatic imperfection in language design, at least an apparent one: the "displacement property" that is a pervasive aspect of language. ... We now have two "imperfections": uninterpretable formal features, and the displacement property. On the assumption of optimal design, we would expect them to be related, and that seems to be the case: uninterpretable formal features are the mechanism that implements the displacement property." (Chomsky, 1997a:12f)

Returning now to the accessibility question, one might ask which of these properties of language characterize L2 interlanguage expressions. My suggestion is that L2 learners operate on the interface levels. In other words, L2 knowledge cannot interpret uninterpretable formal features; see also Hawkins & Chan (1997). Consequently, inflectional properties may be expected to be ignored or to be assigned semantic or pragmatic values in L2. This seems to be supported by findings like those by Beck (1998) according to which functional categories in adult L2 acquisition are completely unspecified, and permanently so. Displacement properties, too, tend to be interpreted at the interface, attributing to them, for example, non-grammatical, configuration-specific interpretations, e.g. topic-comment, specificity, new and old information, agentive force, etc. Phenomena which cannot be interpreted in this way, e.g. verb second placement, are therefore notoriously difficult for L2 learners but not for children acquiring their L1s, as is well-documented by research on L2 German; see Meisel (1997a,b).

More research is, of course, needed in order to decide whether predictions of this sort can be corroborated. What should be emphasized, however, is that we find substantial differences between first and second language development which a satisfactory theory of second language acquisition needs to account for in a theoretically insightful fashion, rather than treating them as contingent phenomena. The suggestions made here might help to achieve this. Let me add that the principal force behind the development of the notion of Universal Grammar shares the view that L2 acquisition is radically different from L1 development:

"What about second language? That's harder. Like other kinds of growth, language acquisition happens easily at a certain age, but not later. There comes a time when the system doesn't work anymore. There are individual differences ... but for most people, after adolescence, it becomes very hard. The system is just not working for some reason, so, you have to teach the language as something strange."
(Chomsky, 1997b:128)

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Notes

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