

**Back To Basics**  
**in**  
**Generative Second Language Acquisition Research**

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**Abstract**

We argue that the psycholinguistic study of nonnative language (L2) acquisition needs to go Back to Basics. Our first point will be a call for a re-examination of what the purpose of Universal Grammar (UG) is, i.e. what UG is posited to explain, and why UG is taken to be that explanation. From there the question of whether mainstream generative L2 acquisition research is—and should be—true to that rationale will be explored in some detail. Finally we will also consider, in light of this rationale, the issue of development, both in L1 acquisition and in (adult) L2 acquisition.

**1. Introduction**

In the 1980s the central question of generative L2 acquisition research was whether Universal Grammar guides (adult) L2 acquisition, and it was assumed that the way to investigate this question was to test whether UG constraints operate in Interlanguage grammars. Now, in the late 1990s, some researchers seem to suggest that this question is passé and that the issue has become stale. The goal of this paper will be to show that the principal concern of generative research on adult L2 acquisition should still be to determine whether UG constrains adult L2 acquisition.

That is to say, the original question is still a reasonable one to ask at the present time, and the current state of linguistic theory—our current understanding of the human language potential—still warrants the original question. The logical starting point, then, is a review of what UG is for, i.e. what UG is posited to explain and why UG is taken to be that explanation. From there we turn to generative L2 acquisition research and after that on to the issue of development, both in L1 acquisition and in (adult) L2 acquisition.

## 2. UG, what's it for?

Noam Chomsky revolutionized and revitalized linguistics in the late 1950s and early 1960s by making the argument that the basis of language is genetically given (and domain-specific). (See, for example, Chomsky 1965:47-59.) The development of mainstream generative grammar since then can be seen as an attempt to work out the details of this claim. However, the basic argument remains the same: no matter which language a child is exposed to, he or she will acquire the grammar of that language, but—importantly—the input to which the child is exposed severely underdetermines the knowledge the child ends up with. It is UG that supplies that part of knowledge of language that is not actually in the input itself. Indeed, one of the central tenets of generative grammar since its inception has been that UG places severe restrictions on the class of grammars that human beings can acquire. It is this assertion that accounts, in principle, for the rapidity and apparent effortlessness with which children normally acquire their native language: since in acquiring the grammar of their L1, children are selecting from only a small subset of the logically possible formal systems—the relatively small set given by UG—exposure to random, contextualized utterances suffices as their only direct, external evidence.

That the task of acquiring language is underdetermined does not just mean that the speech stream contains no word or morpheme boundaries—much less category labels, hierarchical structure, signals for dependency relations, flags for mapping from syntax to semantics, etc. One of the best examples of underdetermination, known as the "poverty of the stimulus" argument, is knowledge of ungrammaticality (Hornstein & Lightfoot 1981): since there are no exemplars of ungrammatical utterances with a metaphorical asterisk attached, then there are likewise no data that can serve as the basis for inducing knowledge of ungrammaticality. And since there are only two parts in this equation, (i) the child's mind and (ii) the data of experience (i.e. the input), then there is only one possible source left for knowledge of ungrammaticality: the child's mind. What compels generative grammarians to designate this part of the child's

mind as UG is the domain-specific nature of linguistic knowledge.

Without UG, native language acquisition would not simply be difficult, but literally impossible. This is because the acquisition of natural language grammars exhibits a range of poverty of the stimulus problems. That is, it is not merely the case that there is little evidence available to the language acquiring child for certain syntactic paradigms, but rather there is literally no evidence for certain key contrasts. In short, the entire rationale for the existence of UG rests on the fact that linguistic systems are vastly underdetermined by the data of experience. This is, again, the argument for UG from the poverty of the stimulus.

There are different kinds of poverty of the stimulus problems in L1 acquisition. The most compelling are those that provide a paradigm of two distinct patterns that look rather mysterious if all that were involved was some sort of analogical process between one pattern and the other. In other words, if analogy were the key, then the two patterns would be expected to be more similar, and this is exactly not what in actuality occurs.

As an illustrative example, let us consider types of ellipsis, specifically, ellipsis within the domain of the verb (e.g. Lobeck 1995). Cross-linguistically, there are different ellipsis processes that target a verb and its argument. Consider the data in (1):

- (1) a. The nurse will visit today [and the doctor will \_\_\_ tomorrow].  
(elided VP: "visit")
- b. The nurse will visit today [and the doctor \_\_\_ tomorrow].  
(gap: "will visit")
- c. The nurse will visit today [because the doctor will \_\_\_ tomorrow].  
(elided VP: "visit")
- d. \*The nurse will visit today [because the doctor \_\_\_ tomorrow].  
(gap: "will visit")
- e. I said that the nurse will visit today  
[and you said [that the doctor will \_\_\_ tomorrow]].  
(elided VP: "visit")
- f. \*I said that the nurse will visit today  
[and you said [that the doctor \_\_\_ tomorrow]].  
(gap: "will visit")

What is known as VP-ellipsis is allowed in coordinate clauses, as in (1a), other connective clauses, as in (1c), and embedded contexts, as in (1e). VP-ellipsis contrasts

with gapping of verbs: gapping of verbs is—like VP-ellipsis—allowed in coordinate clauses, as in (1b); however, unlike VP-ellipsis, gapping of verbs is not allowed in other connective clauses, as in (1d) or embedded clauses, as in (1f).

The poverty of the stimulus problem here is how the learner of English comes to know that only patterns like (1d) and (1f) are impossible. The English-acquiring child may well hear utterances patterning like (1a), (1b), (1c) and (1e). And on the basis of analogy, one might likewise expect the patterns of (1d) and (1f) to also be possible, since the pattern of (1d) is superficially very similar to (1c) and the pattern of (1f) is superficially very similar to (1e). But despite this superficial similarity, the patterns of (1d) and (1f) are impossible. And all native speakers of English know this (subdoxastically).

The job of linguistic theory is to explain these types of contrasts and how the child acquiring his or her native language comes to know them. While the precise formal apparatus designed to account for this kind of syntactic paradigm may quickly evolve, the basic answer to how the L1 child comes to this knowledge is UG—that is, the explanation lies in the idea that the child comes into the world with something—a UG constraint—that in advance rules out operations that would result in patterns like (1d) and (1f). Thus poverty of the stimulus problems in native language acquisition of the type illustrated in (1) are the crux of the argument for the existence of UG.

In sum: What's UG for? UG is posited to explain the poverty of the stimulus problem in L1 acquisition, to explain how native speakers end up with knowledge which could not be acquired on the basis of primary linguistic data alone.

### 3. A brief history of generative L2 acquisition research in light of the rationale for UG

Given this rationale for UG, we should now re-assess whether in the main, generative L2 acquisition research has in fact set itself the right agenda for addressing the UG question from the 1980s: "Is Universal Grammar accessible to the (adult) L2 learner?" In what follows we will attempt to argue that despite the many advances made in the 15-year life of L2 generative research, so far we have mostly not directly addressed this question—but we still should.

The early days of generative L2 acquisition research sought to tackle the UG question empirically by way of three basic paths, listed in (2):

- (2) Addressing the "UG question" in the early days of generative L2 acquisition research
  - a. Studies on L2 parameter resetting (e.g. Liceras 1988; White 1985)
  - b. Testing for UG effects not observable in the L1 but present in the Target Language (e.g. Bley-Vroman, Felix & Ioup 1988; Schachter 1989)
  - c. Analyses of developmental Interlanguage data (e.g. Broselow & Finer 1988; duPlessis, Solin, Travis & White 1987)

Research of the type in (2a) revealed, in general, a lack of the predicted "clustering" effects; that of type (2b) produced conflicting results; and the tack of (2c) proved challenging but relatively successful: drawing on independently motivated UG mechanisms, UG-compatible analyses of Interlanguage data grabbed the attention of L2 generative research.

UG-compatible analyses of L2 data—nourished by learnability concerns (and fed substantial doses of L1 influence)—led generative L2 acquisition research into the next phase. The focus at this point shifted, importantly, to the representation of L2 knowledge and, sometimes, its etiology (e.g. Eubank 1993/94; Gair & Martohardjono 1993; Hawkins, Towell & Bazergui 1993; Hulk 1991; Klein 1993; Lakshmanan 1993/94; Schwartz & Sprouse 1994; Tsimpli & Roussou 1991; Vainikka & Young-Scholten 1994; White 1992a, 1992b). Analyses of developmental Interlanguage data were at the heart of the "UG debate," the debate centering on the role of UG in L2 acquisition: adopting linguistic (usually syntactic) analyses, researchers argued either for or against the conclusion that "UG is accessible" in (adult) L2 acquisition. Those concluding "yes" did so on the basis of UG-compatible analyses of their Interlanguage data, and those concluding "no" argued that their Interlanguage data were not amenable to UG analysis.

More recently, however, there has been a tendency for those who are persuaded that (adult) L2 acquisition is UG-constrained to eschew the "UG-debate" label and instead frame their research completely in terms of the details of linguistic analysis and learnability; and if their study also argues against X, X is more likely to be alternative UG-based positions than the idea that Interlanguage is not UG-constrained. There's no doubt that these more fine-grained analyses of Interlanguage data will lead to a better understanding of the L2 acquisition process, especially when pursued from a developmental perspective. Still, we would maintain—perhaps contra some of our peers—that this type of research is, fundamentally, a variant of the good ol' UG-debate: the very act of adopting the technicalities of linguistic theory to analyze Interlanguage data, by definition, presumes that Interlanguage representations are drawn by the very same psychological hand that draws native-language

representations. In short, such linguistically-embedded analyses of L2 data sets are (implicitly) claiming—or at least they had better be—that Interlanguage is indeed part of the language faculty, i.e. they are de-facto answering "yes" to the "UG question": "Yes, UG does constrain (adult) L2 acquisition."

There is, nevertheless, a serious potential drawback to relying on UG-compatible analyses to argue for the hypothesis that UG constrains (adult) L2 acquisition, as Schwartz & Sprouse (to appear) have recently observed: the theory of UG is continually evolving; hence, any account of a set of L2 data that inextricably depends on the technicalities of a particular linguistic analysis is vulnerable to obsolescence—as are therefore any theoretical conclusions based on that account—because those technicalities might themselves be revamped or jettisoned (in a new, improved linguistic analysis). The way to overcome this susceptibility, Schwartz & Sprouse argue, is to Go Back to Basics.

Just as the poverty of the stimulus argument is the key to establishing the existence of UG, so too should it be used to demonstrate UG's continued existence in (adult) L2 acquisition (Schwartz & Sprouse to appear). Schwartz & Sprouse go on to illustrate three types of poverty of the stimulus effects in (adult) L2 acquisition that are—importantly—derivable neither from the L1 grammar nor from input alone but which are necessarily the result of UG:

- (3) Typology of poverty of the stimulus effects in L2 acquisition (Schwartz & Sprouse to appear) derivable neither from L1 nor from input but which are necessarily the result of UG (see (2b))
  - a. knowledge of ungrammaticality in distributional syntax (e.g. Bley-Vroman, Felix & Ioup 1988; Kanno to appear; Martohardjono 1993; Schreiber & Sprouse 1998)
  - b. knowledge of ungrammaticality at the syntax-semantics interface (Dekydtspotter, Sprouse & Anderson 1997; Dekydtspotter, Sprouse & Thyre 1998a, 1998b)
  - c. properties not present in either the L1 or the Target Language, but nevertheless a reflex of the input and present in other languages (e.g. MacLaughlin 1996; Schwartz & Sprouse 1994—cf. also Broselow & Finer 1988; duPlessis et al. 1987; Hulk 1991)

In brief, Schwartz & Sprouse argue that UG-compatible analyses of Interlanguage data may be necessary, but that demonstrating L2 poverty of the stimulus effects whose source can only be UG is sufficient for empirically establishing that (adult) L2

acquisition is indeed UG-constrained.

Having outlined how to test for the operation of UG in L2 acquisition, we now turn to why we should still be concerned with this. The fundamental issue in the psycholinguistic study of (adult) nonnative language acquisition is the nature of Interlanguage representation, and testing for UG-derived poverty of the stimulus effects is one sure-fire way to find out about it. Here's why: Recall that UG is a theory about the way knowledge of native language is (and is not) represented in the mind; as already mentioned, UG is argued to be domain-specific, to be unlike other areas of cognition. Thus, to say that adult L2 acquisition is constrained by UG is to say that adult Interlanguage is knowledge having that particular, domain-specific representation. But there had then better be UG-derived poverty of the stimulus effects in adult Interlanguage, because—as we have just reviewed—poverty of the stimulus effects are precisely the explanatory burden of UG. To look at it the other way round: Imagine it were the case that all adult Interlanguage data were amenable to UG-compatible analyses but that no poverty of the stimulus problems were in evidence. Would this tell us about the nature of representation in adult Interlanguage? Probably not. Merely using the technical machinery of theories of UG to describe Interlanguage without the establishment of definite UG-derived poverty of the stimulus effects verges on a category error: an implicit claim about the nature of Interlanguage knowledge but without the crucial, defining evidence to support this claim.

To summarize the two main points of this section: in its zeal to establish parallels between the representation of L1 knowledge and the representation of (adult) Interlanguage, generative L2 acquisition research often lost sight of the sole motivation for positing UG, viz., the problem of underdetermination. UG-compatible analyses of Interlanguage data are simply not enough: in order to argue that the representation of L2 knowledge is analogous to the representation of L1 knowledge, it is imperative to document genuine UG-derived L2 poverty of the stimulus phenomena (not derivable from the L1 grammar). In a nutshell, the way to find out whether UG operates in (adult) L2 acquisition is to look for UG-derived poverty of the stimulus problems, and looking for UG-derived poverty of the stimulus problems is the way to find out about the nature of representation in adult L2 acquisition. And this is why "accessibility to UG" remains the issue of generative L2 acquisition research.

#### 4. Native and nonnative language development in light of the rationale for UG

The final point we wish to discuss is the developmental dimension of poverty of the

stimulus problems. We have already noted that the poverty of the stimulus argument is defined in terms of native language acquisition. It is also almost always advanced in regard to the final state of language acquisition: one looks at properties of the target—for example, the paradigm in (1)—and formulates theories about UG to capture the asymmetries in the paradigm—so for (1), some mechanism to rule out (1d) and (1f). Yet it is important to understand that poverty of the stimulus problems characterize the whole of the developmental process; this is to say, it is not the case that what is a poverty of the stimulus problem at the L1 final state only becomes a poverty of the stimulus problem at the final state; it's been a poverty of the stimulus problem at all points in development.

Still, the course of L1 development may also be characterized by different poverty of the stimulus problems than just those at the final state. L1 development is not instantaneous—L1 children do not immediately converge on the grammar of their input providers. In the course of acquisition, children go through stages that evidence phenomena that are not input driven—that is, phenomena that are at odds with what their input tells them is possible. For example, there is an early L1 English phase in which (at least some) children systematically fail to invert subject and auxiliary in questions. So very young children will systematically say things like in (4):

- (4) Why kitty can't stand up?  
What he can ride in? (Klima & Bellugi, 1966:205)

Utterances such as those in (4) are at variance with all the many, many questions they hear as input. Direct evidence of Subject-Aux Inversion seems to be needed to override an initial—and, for some children, perhaps only very short-lived—constraint that prevents Subject-Aux Inversion, a constraint that is active in other languages (e.g. Italian).

Another example comes from Schoenenberger's (1995, 1996) L1 acquisition study on verb placement in embedded clauses in Lucernese Swiss German. Similar to German, Lucernese has requirements on the finite verb occurring in final position in embedded clauses, schematized in (5):

- (5) Lucernese Swiss German (Schoenenberger 1995, 1996)  
a. ... complementizer S X V[+finite]  
b.\*...complementizer S V[+finite] X

Schoenenberger's two young L1 acquirers of Lucernese, however, fail to place the

finite verb in this position when required, despite the robust evidence for it in their input. In over a thousand utterances, the children use the required verb-final pattern only 3.3% of the time, producing instead (even with overt complementizers) raised finite verbs of the pattern in (5b), well into the fifth year. Here again, what the children do is in disregard of their input: they produce what is impossible in the Target Language and fail to produce what is required.

Let us summarize the point of this discussion so far. First, poverty of the stimulus problems identified at the L1 final state are also poverty of the stimulus problems throughout the course of (L1) development. Second, children acquiring their native language pass through transitional stages that evidence at least some phenomena that are clearly not input-driven, since these phenomena are nontarget-like in regard to what is both allowed and disallowed in the target. In short, there is a class of non-input-driven, poverty of the stimulus problems that characterize L1 development as it unfolds; these are additional to those characterizing the final state.

With this in mind, let us now evaluate the poverty of the stimulus typology for L2 acquisition as set out by Schwartz & Sprouse (to appear), repeated from (3):

- (3) Typology of poverty of the stimulus effects in L2 acquisition (Schwartz & Sprouse to appear) derivable neither from L1 nor from input but which are necessarily the result of UG (see (2b))
  - a. knowledge of ungrammaticality in distributional syntax (e.g. Bley-Vroman, Felix & Ioup 1988; Kanno to appear; Martohardjono 1993; Schreiber & Sprouse 1998)
  - b. knowledge of ungrammaticality at the syntax-semantics interface (Dekydtspotter, Sprouse & Anderson 1997; Dekydtspotter, Sprouse & Thyre 1998a, 1998b)
  - c. properties not present in either the L1 or the Target Language, but nevertheless a reflex of the input and present in other languages (e.g. MacLaughlin 1996; Schwartz & Sprouse 1994—cf. also Broselow & Finer 1988; duPlessis et al. 1987; Hulk 1991)

Both (3a) and (3b) are L2 poverty of the stimulus effects that look to the Target Language as the measure of underdetermination: knowledge of Target Language ungrammaticality in distributional syntax and in the mapping from syntax to semantics. These are the analogues to identifying poverty of the stimulus problems in terms of the final state of the Target Language. The third type in (3c) is different from these first two. Here the point is to identify a poverty of the stimulus effect where

Interlanguage is distinct from the Target Language, cases where the Interlanguage has properties not derivable from the L1 nor like the Target Language, but where these same properties are nevertheless in some way a reflex of the input and, importantly, instantiate a possible grammar according to the Principles of UG. Although more factors need to be taken into account in the L2 context (because of the existence of the L1 grammar), poverty of the stimulus effects of type (3c) are conceptually very close to the transitional poverty of the stimulus effects in L1 development: Interlanguage properties that are not present in the input and that are found in known natural language grammars.

## 5. Conclusion

To tie this all up: In the 1980s, we were—metaphors aside—asking the right question for adult L2 acquisition research: "Is Universal Grammar accessible to the (adult) L2 learner?" And we even had the right answer: "To find out requires testing for the operation of UG constraints." Where we got side-tracked is in not giving the argument for UG from the underdetermination problem—the bedrock of the Chomskyan paradigm—the respect it's due. It's time we should.

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