

UNIVERSAL GRAMMAR AND LANGUAGE PEDAGOGY HAS SLA RESEARCH LINKED THEORY AND PRACTICE?

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This paper will explore a potential interface between linguistic theory, second language acquisition (SLA) research, and pedagogical practice. Flynn and Martohardjono (1995) make a case for a theory driven pedagogy and cite universal grammar (UG) as a potential area of focus. Although acknowledging that previous attempts to link UG theory with pedagogy were not successful, Flynn and Martohardjono argue that the continuing development of UG theory presents renewed possibilities for fruitful links between theory and practice. It is hypothesized that in cases where a parametric value in L1 and L2 differ, the new value in L2 must in some sense be “learned”. The nature of this “learning” may have pedagogical implications. While Flynn and Martohardjono focus on what must be learned, Larsen-Freeman (1995) cites research suggesting that L2 input containing one aspect of a cluster of properties associated with a parameter might be sufficient to trigger all other aspects of the parameter. Consequently, the learner would “learn” more than what was taught.

The goal of this paper is to answer a straightforward question. Are Flynn and Martohardjono (1995) correct? Does the UG theory of parameters provide a relevant link between SLA theory and pedagogical practice? To answer this question, I reviewed a sample of the SLA literature published in the 1990-1999 time frame. The intent of the review was to focus on relatively recent data. The 1990 cut off was arbitrarily chosen in order to limit the scope of the project. Ten studies were reviewed. Although certainly not exhaustive of the published literature, the claim is made that they provide sufficient data upon which to make an informed judgement on the question at issue. The purpose of the review was neither to critique the methodologies nor to determine if the published data supported the authors’ conclusions. Although there appeared to be ample grounds for either of these endeavors, they were beyond the scope of this paper. My methodology was to accept the authors’ conclusions as stated. Then, taken as a whole, to assess the implications of this data with respect to the potential utility of UG/SLA theory to ESL pedagogy. Additionally, I reviewed the pedagogical literature to determine if there were articles addressing potential links between UG and pedagogical practice.

The paper will begin with a simplified summary of UG theory that will provide a basis for the review of the published data. Of the 10 SLA studies reviewed, five will be briefly summarized. They were selected to provide an indication of the range of published findings related to UG and SLA. The results of the remaining studies will simply be tabulated. The data from the 10 studies will then be summarized and a conclusion presented related to the potential links between UG/SLA theory and pedagogical practice. Finally, any relevant data from the review of pedagogical literature will be presented.

Cook and Newson (1996) provide an overview of Chomsky’s theory of Universal Grammar. Essentially, UG is a theory of knowledge. It is concerned with the internal structure of the human mind and not with behavior. The details of UG theory have developed and continue to be refined, but the term ‘principles and parameters’ focuses on UG’s central claim that linguistic competence consists of principles universal to all languages and parameters that vary from one language to another. Parameters account for the variation among languages and are central to this discussion.

The concept of 'head' parameter can be used to illustrate the role of parameters in UG. Sentences are constructed of phrases and phrases consist of a head and other elements called complements. The head of a phrase can occur on the left of the complements or on their right. Cook and Newson (1996) provide examples to contrast the difference between English that is 'head-left' and Japanese that is 'head-right'.

English: Noun phrase: "education for life"

The head 'education' appears to the left of the complements 'for life'.

Japanese: E wa kabe ni kakatte imasu.

(picture wall on is hanging)

The picture is hanging on the wall.

The head verb *kakatte imasu* occurs to the right of the verb complement *kabe ni* and the postposition *ni* (on) comes on the right of the PP complement *kabe*. (Cook and Newson 1996, p. 14)

These examples illustrate that there are two possibilities for the structure of phrases in human languages: head-left or head-right. This is the "head" parameter. In the UG theory of L1 acquisition, input from the ambient language, termed primary linguistic data (PLD), is sufficient to trigger the setting of parameters that define the specific characteristics of a language. Therefore, exposure to the Japanese language is all that is required in order for the "head parameter" to be set to "head-right" in the mind of a child. Likewise, a child raised in an English speaking environment would have the "head parameter" set to "head-left". Explicit information about ungrammatical syntactic structures is termed negative data (ND) in UG theory. ND is said to play no role in setting parameters in L1 acquisition.

Is this also the case in L2 acquisition? What occurs when a Japanese speaker attempts to learn English? Does the "head parameter" get reset from "head-right" to "head-left"? If so, what type of input is required in order to trigger the resetting of a parameter? Essentially, these are the types of questions that the studies reviewed in this paper attempted to answer.

Schwartz (1993) addresses the roles of PLD and ND in L2 acquisition. She hypothesizes two distinctions between linguistic knowledge and linguistic behavior. Linguistic knowledge derived from UG is termed competence. Performance is defined as behavior based on competence. Linguistic knowledge based on other cognitive systems is termed learned linguistic knowledge (LLK) and the behavior based on this knowledge is termed learned linguistic behavior (LLB). Schwartz states that language input can be dealt with solely by a language module in the mind. Processing language input is the only function that the language module performs. Schwartz proposes that only PLD can feed the language module. She states that information encapsulation blocks propositional knowledge from entering the language module. Propositional knowledge is defined as knowledge derived from ND and other explicit data consisting of information about the language. Her conclusion is that PLD alone can trigger UG. However, it is hypothesized that ND and explicit data about the language can create LLK, and LLK can influence learned linguistic behavior.

Given these conclusions, what if any are the practical applications for the ESL teacher. In short, only PLD can set the parameters that determine linguistic competence however, linguistic behavior is also influenced by LLK that can be driven by ND and explicit data. The relative influence of each type of data in relation to observable behavior remains to be determined. The practical application of these conclusions seems unclear.

Felix and Weigl (1991) investigated the effects of formal classroom instruction on SLA. Their initial position was that current data made it difficult to support either of the “extreme” (p.163) views: a) L2 learners have no access to UG whatsoever or that; b) UG information controls both L1 and L2 learning in essentially the same way. Their position was that L2 learners do have access to UG, but this access is only partial, imperfect, or blocked in ways, and by factors that are unclear. The barriers to access were assumed to be either biological or environmental. The biological barrier would relate to some difference in the properties of the mind between child L1 learners and adult L2 learners. Environmental factors would relate to the particular situational conditions under which a second language is acquired.

Felix and Weigl (1991) attempted to assess the relationship between the learning situation and UG access. Their methodology was to look at a situation in which L2 learning was solely by formal instruction in a classroom environment. Specifically, the L2 learners were 77 German high school students divided into three groups classified as beginning, intermediate and advanced learners. The teachers were nonnative English speakers and none of the students had ever spent time in an English speaking country. Their task was to correctly judge the grammaticality contrasts in a set of L2 sentences. The authors state that the results of the test were a “disaster”. (p.168)

The students did not demonstrate any access to UG. The data indicated that the errors were not random but systematic. The grammaticality judgements of the students seemed to be based on the corresponding structure in German. Additionally, there seemed to be “reverse” development. As students progressed from the beginning to the advanced level, they became less accurate in identifying grammatically “correct” sentences. The authors hypothesized that as the students progressed, they became conservative about judging anything grammatical that had not been explicitly taught.

Felix & Weigl (1991) end the study with these words. “The bad news is for language teachers and language pedagogy. Language teaching – at least in its conventional form – seems to systematically block access to UG and therefore tends to prevent rather than further the acquisition process in domains that go beyond the more accidental and superficial properties of language. The sad conclusion may be this: you really can’t learn a language successfully in the classroom.” (p.178)

The potential utility of this information to a classroom teacher is difficult to discern.

Uziel (1993) examined the hypothesis that UG is fully available to adult L2 learners. The study involved a group of Hebrew L1 and Italian L1 learners of English. The prediction was that in cases where Hebrew and Italian had the same setting on a parameter, the learners would exhibit similar results in L2 acquisition. Additionally, Uziel predicted that in cases where there was a parametric difference in the L1 and L2 settings, the L2 construction would be more difficult for the L2 learner to acquire. Uziel determined that the results of the study supported these hypotheses and consequently supported the proposition that L2 learners have full access to UG.

For the ESL teacher, the conclusion that UG is fully available to adult L2 learners could suggest that an emphasis on setting parameters is a valid focus for ESL instruction.

Clahsen and Hong (1995) conducted a study that was of particular interest. They specifically investigated the theory of clustering associated with the setting of parameters in L2 acquisition. Another factor that made the study of interest was the methodology utilized. The majority of the studies reviewed for this paper were based on some form of grammaticality judgement by the L2 learner. This study was based on reaction times in a same/different

matching task. Two sentences were flashed on a computer screen. The subjects were instructed to indicate as quickly as possible if the sentences were the same or different.

In this type of matching task, subjects exhibit shorter reaction times when matching grammatical sentences than they do when matching ungrammatical sentences. The theory is that the grammatical sentences have structure and therefore can be mentally processed as a "chunk". However, the ungrammatical sentences do not have structure and must be analyzed as individual elements consequently taking longer to process. This logic is used to determine what syntactic structures are processed as grammatical in an individual's mind. Theoretically, a reaction time test can determine what parameter settings have become a part of an individual's linguistic competence. Clahsen and Hong (1995) investigated subject-verb agreement and null subjects in German. The subjects were 33 adult Korean learners of L2 German. They were not asked to make explicit judgements about grammaticality, but simply to judge if two sentences were the same or different. An analysis of the reaction times was then used to determine if the subjects perceived the sentences to be grammatical.

The authors concluded that their results supported the weak UG view in which UG processes such as parameter setting are not at work in L2 development. In the article, Clahsen and Hong (1995) also assessed a study by Vainikka and Young-Scholten (1994) that concluded that subject-verb agreement and non pro-drop in adult L2 learners developmentally coincides in the same way that it does in child L1 learners. From this Vainikka and Young-Scholten concluded that UG parameters are fully accessible to adult L2 learners. Clahsen and Hong conducted their own analysis of the Vainikka and Young-Scholten data and determined that in fact it was not compelling in supporting a conclusion that UG is accessible in adult L2 acquisition.

In summary, Clahsen and Hong (1995) conclude that their data indicates that the UG process of parameter setting does not play a role in L2 acquisition, and they also find the Vainikka and Young-Scholten(1994) data to be less than compelling in supporting a conclusion that parameter resetting plays a role in L2 acquisition.

For the ESL teacher, these finding would simply rule out the possibility of utilizing parameter setting in the classroom.

Davies (1996) examined the null subject parameter and the associated morphological uniformity hypothesis (MUH). Under the MUH, the recognition of nonuniform verb agreement morphology is necessary and sufficient for determining that null subjects are banned. Davies determined that his data was not consistent with predictions based on the MUH. Consequently, it followed that the MUH was not valid and should be abandoned as part of UG. This conclusion would necessitate a reformulation of the Null Subject Parameter.

For the ESL teacher attempting to utilize parameter theory, these findings simply add another variable. Even if UG is accessible in L2 acquisition, the definitions of the parameters that account for the acquisition are not well defined. The findings of the other studies reviewed for this paper are tabulated below.

White (1991)

- a. L1 French learners of English initially assumed the L1 parameter setting for the verb-raising parameter. PLD alone did not result in a total resetting of this parameter to L2 values.
- b. ND appeared to assist in the learning process, but the effect was short lived.
- c. The data contained no evidence that resetting one of a cluster of properties associated with a parameter would trigger the resetting of the other properties.

- d. White, L. (1992) responded to a critique of these findings by Schwartz and Gubala-Ryzak (1992). White concluded that the negative data probably did not engage the UG. However, White stated that this does not mean that ND can never engage UG in L2 acquisition.

Trahey and White (1993)

- a. A “flood” (p.195) of L2 PLD did not totally preempt the L1 parameter settings in the L2 learners.
- b. Competing parameter settings may coexist in the interlanguage of L2 learners.

White (1995)

- a. An experiment to compare the results of explicit instruction and PLD was characterized by the author as “rather discouraging” (p.74) The treatments had no effect either positive or negative.

Hulk (1991)

- a. The data supports the theory of resetting parameters as one function of L2 acquisition.
- b. Cases in which the L2 parameter is a subset of the L1 parameter are slow to change.
- c. L2 learners appear to adopt grammars that have parameter settings that do not correspond to either L1 or L2, but which are possible within the constraints of UG.

Hawkins, Towell, and Bazergui (1993)

- a. Certain aspects of UG in second language grammars may be highly resistant to revision from the L1 settings.

What can be concluded from these studies? Selected data can be cited to support any of the following statements. UG may or may not be engaged in L2 acquisition. PLD may or may not be sufficient to reset L1 parameters. Negative data may or may not engage UG. Some parameters may be highly resistant to change by either PLD or ND. Resetting one of a cluster of properties associated with a parameter may or may not trigger the resetting of other properties associated with that parameter. The definition of the properties associated with parameters may or may not be accurate. The resetting of parameters may or may not be possible in a classroom setting.

The goal of this paper was to answer the following question. Are Flynn and Martohardjono (1995) correct? Does parameter setting provide a relevant link between UG theory and pedagogical practice? My conclusion is clear and unequivocal. Flynn and Martohardjono are quite simply wrong.

In addition to the data presented in this paper, support for this position comes from several sources. First, pedagogical literature is virtually silent on the topic of links between UG and pedagogical practice. Second, Cook (1996) authored both a text on UG and a text on second language teaching. In the text on teaching, Cook specifically cautions against using UG theory to draw conclusions about anything other than the core areas of syntax. Cook asserts that UG has little to say about classroom teaching. Finally, Ellis (1997) in addressing the topic of SLA research and language pedagogy directly challenged the conclusions of Flynn and Martohardjono (1995). In his opinion, the Flynn and Martohardjono position would require enormous “leaps of logic.” (p.74) Ellis concluded that UG based SLA research has little to offer language pedagogy. Ellis is correct.

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