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COMMENTARY

Hypotheses and Methods in Second Language Acquisition: Testing the Noun Phrase Accessibility Hierarchy on Relative Clauses

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The purpose of this commentary is to discuss some of the findings and claims of the five articles contained in this special issue that deals with the relationship between the noun phrase accessibility hierarchy (NPAH), first proposed by Keenan and Comrie (1977), and the acquisition of relative clauses (RCs) in three Asian languages—Cantonese, Japanese, and Korean. This topic is of interest to SLA theory for at least two reasons. First, as Ozeki and Shirai (this issue) pointed out, there is significant literature proposing to explain facts about the SLA of RCs involving European languages. This raises the question of whether the NPAH has the same explanatory value for languages that are genetically unrelated and geographically separated. The second reason is that Comrie (1998, 2002) recently proposed that nominal-attributive clauses in some Asian languages differ from RCs in European languages in important ways that might have an impact on whether the NPAH holds true for the acquisition of RCs in these languages.

I will discuss the articles in this issue with respect to the fundamental question raised in the contribution by Ozeki and Shirai (this issue)—namely whether the NPAH has any explanatory force when it is invoked in studies on the SLA of RCs in target languages such as Cantonese, Japanese, and Korean. Is the NPAH, as the subtitle of this issue asks, a universal in SLA? Although the articles in this issue discussed the NPAH from several vantage points, including the role of animacy, native language background, and teaching methodology,

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limitations of space will allow for my discussion to consider the claims of the five articles only in terms of what I see as two interrelated aspects of this fundamental question. The first concerns the nature of the hypotheses that have been put forth with respect to the NPAH and SLA in the studies under discussion, and the second relates to the kind of data that would bear on these hypotheses and whether that kind of data is being adduced in the studies in this issue. I take up each of these matters in the next section.

BACKGROUND

As is well known, the NPAH is a universal, implicational generalization that attempts to characterize the systematic variation found among the world's languages with respect to RCs. Furthermore, the NPAH claims that the variation found among human languages with respect to RCs can be expressed implicationally as represented by the hierarchy in (1).

(1) Noun Phrase Accessibility Hierarchy
subject (SU) > direct object (DO) > indirect object (IO) > oblique (OBL) > genitive (GEN) > object of comparison (OComp)

This being the case, the NPAH is a generalization about grammars and asserts, in effect, that the grammars of human languages are constrained in certain ways. For example, if a grammar allows a RC to be formed on the OBL position, that grammar will also necessarily allow RCs to be formed on the IO, DO, and SU positions but might not necessarily allow well-formed RCs on the GEN or OComp position.

Thus, the NPAH asserts that if a language has any RCs at all, they will be SU RCs, and that if a language allows any RCs in addition to SU relatives, it will always permit DO RCs, and so on along the hierarchy. Therefore, the NPAH claims that, with respect to RCs, only the grammar types listed in (2) will be attested in human languages.

(2) Grammar types allowed by the NPAH with respect to RCs
a. SU
b. SU + DO
c. SU + DO + IO
d. SU + DO + IO + OBL
e. SU + DO + IO + OBL + GEN
f. SU + DO + IO + OBL + GEN + OComp

Now, although there is no necessary connection between the generalization expressed by the NPAH and SLA, there is ample literature that asserts that such a connection can be hypothesized. More specifically, it has been claimed (see the review and references in Ozeki & Shirai, this issue) that various facts about the acquisition of RCs can be explained if it is hypothesized that the NPAH holds also for interlanguage (IL) grammars. Within this context, the articles in this issue investigated in various ways whether the IL gram-

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mars of learners acquiring RCs in Cantonese, Japanese, and Korean obey the NPAH.

This brings us to the second aspect of the fundamental question under discussion: What kind of data needs to be adduced in order to test the hypothesis that the NPAH holds for IL grammars. If we accept the interpretation that the NPAH is a generalization about grammars and, further, that the question being investigated by the articles in this issue is whether the NPAH is supported by IL grammars, then it follows that the data against which the NPAH is to be tested must be data from individual second language (L2) learners.[1] That is to say, the evidence must come from individual IL grammars. This conclusion, it seems to me, is inescapable given, first, that IL grammars can be situated in time and space as existing in the minds of L2 learners and, second, that there is no IL grammar of a group of learners, just as there is no mind of a group of people, at least not one that can be located in time and space. What this conclusion draws into focus, then, is that the claim that the NPAH holds for SLA cannot be tested using grouped data. Indeed, it is possible that grouped data could obscure whether the IL grammars in question actually do conform to the claims of the NPAH.

Consider a brief hypothetical example of this situation. Suppose that an investigator elicited 10 RCs of each type on the NPAH from two subjects. Also, suppose further that subject A formed all 10 of the SU, DO, and IO RCs accurately but misformed all of the OBL, GEN, and OComp clauses. Assume further still that subject B did the opposite and produced the RCs on the OBL, GEN, and OComp positions correctly but produced all of the SU, DO, and IO RCs incorrectly. These utterances would support the conclusion that the grammar of subject A adhered to the NPAH, whereas that of subject B violated it. However, if the utterances of the two subjects were grouped together, then all of the RC types on the NPAH would reflect the same score, with 10 out of 20 of each type being well formed. Depending on how one wanted to interpret 50% performance on any given RC type, it is clear that the grouped performance supports different conclusions than considering the scores of each subject individually.

Before turning to the articles in this issue, it might be useful to make one more point about the predictions of the NPAH, because it arises in several of the articles. The question is whether it necessarily follows from the NPAH that the different types of RCs will be acquired in a definite sequence. From the kinds of grammars that the NPAH allows, as shown in (2), it is tempting to conclude that the acquisition of SU RCs will precede the learning of DO RCs, which, in turn, will be acquired prior to IO and OBL RCs, and so on along the hierarchy. Although this sequence of acquisition of the various RC types is certainly consistent with the hypothesis that the NPAH holds for IL grammars, it is, of course, not necessitated by the hierarchy.

In fact, this very point is clearly made in the article by Yip and Matthews (this issue). The authors cited Hawkins (1987), in which he discussed a hypothetical implicational universal "if P then Q" and the various sequencing pos-

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sibilities that are consistent with this implication. We might attest (a) neither P nor Q, (b) Q only, or (c) both P and Q. What is excluded by the statement is (d) P only. When this reasoning is applied to the NPAH, the allowed acquisitional sequences for SU and DO relativization would be a learner's IL grammar that evidences neither type of RC, or one that shows evidence of only SU relatives, or one with both SU and DO RCs. The excluded sequence is for the DO RC type to emerge as part of the IL grammar before the SU RC type. The important point for present purposes is that an early-acquired IL grammar in which both SU and DO occur is not contrary to the NPAH.

To summarize this section briefly, I have argued that the NPAH is a universal generalization about grammars, that testing whether this hierarchy holds for the SLA of RCs entails testing the claims against individual IL grammars, and, finally, that acquisitional sequences that adhere to the order of the hierarchy as well as those in which there is simultaneous acquisition of both the implying and implied structure are consistent with the NPAH.

DISCUSSION

In this section I argue the general point that, with the exception of the contribution by Yip and Matthews (this issue), the articles in this thematic issue do not adequately test the claims of the NPAH, at least not according to the principles outlined previously. I will then conclude by outlining what I believe the studies in this issue have shown.

I begin with the introduction by Shirai and Ozeki (this issue), which, in setting the stage for the other articles, also reviewed a number of studies in both child first language (L1) acquisition and L2 learning. For example, the authors cited studies on the acquisition of RCs by English and German children conducted by Diessel and Tomasello (2000, 2005). Diessel and Tomasello reported a production frequency and an elicited-imitation accuracy for RCs that support the NPAH, in that SU relatives were produced more frequently and imitated more accurately than DO relatives, which, in turn, were produced and imitated more accurately than OBL RCs. Shirai and Ozeki then stated that the results of Diessel and Tomasello's study contrast with those of their own study (Ozeki & Shirai, 2007) on L1 Japanese children, in which the SU, DO, and OBL relatives were produced with the same frequency. The implication seems to be that Shirai and Ozeki interpreted the results from Diessel and Tomasello's studies to be supportive of the NPAH, whereas those from their own studies contrasted with those results and were therefore not supportive. My comment here is that the results from both sets of studies are supportive of the NPAH in that the OBL RC does not emerge before the DO RC, which, in turn, is not acquired before the SU relative.

The contribution by Ozeki and Shirai (this issue) reports on two studies: the first was an analysis of corpus data and the second was a sentence-combining elicitation task. Both studies were designed to test whether RC

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acquisition in L2 Japanese follows the NPAH. The authors reported that, for the corpus study, L2 learners in the early stages of learning Japanese produced SU, DO, and OBL RCs, not restricting themselves only to SU-type RCs. Furthermore, the advanced and superior L2 learners of Japanese used SU RCs with greater frequency than either DO or OBL relatives. The authors interpreted their data to show that in the early stages of the SLA of Japanese, SU RCs are not more likely to be used and that this finding is counter to the predictions of the NPAH. In the second study, Ozeki and Shirai tested two hypotheses. The first was based on their interpretation of the results of their first study and asserted that there would be no difference in the learners' accuracy of SU, DO, and OBL RCs. (The second hypothesis of the second study addressed the effect of the animacy of the head noun on the acquisition of RCs and will not be addressed in my discussion.) Regarding the results with respect to the first hypothesis, the authors calculated the mean scores across the groups of learners and found that the score for the SU-type RC was equal to that for the DO-type RC, whereas the score for the DO-type was greater than for the OBL type. The authors interpreted these results as only partially supporting the NPAH. In their view, the findings that run counter to the claims of the NPAH are that early-stage SU relatives were no more difficult than DO relatives, whereas the data that support the NPAH indicate that the advanced and superior learners did use SU relatives with greater frequency than DO and OBL relatives. The authors went on to draw the general conclusion that their two studies suggested that the NPAH might not predict the acquisition of RCs in L2 Japanese as robustly as it does in European languages.

I would argue, contrary to the interpretation of the authors, that—aggregate data aside—the results of both studies are consistent with the claims of the NPAH. With respect to the first study, the findings are not inconsistent with the NPAH because the hierarchy allows grammars to generate OBL RCs as long as those grammars also generate DO and SU RCs. I would further argue that the results of the second study support the claims of the NPAH in that the hierarchy does not exclude grammars in which both SU and DO relatives emerge simultaneously and are acquired before OBL relatives.

The article by Jeon and Kim (this issue) is an instructional study that used a pretest-posttest design to test the distinction proposed by Comrie (1998, 2002) between head-internal and head-external RCs in Korean. More specifically, the rationale of the article is that if one of the clause types does not adhere to the NPAH, then that clause type should not be classified as a RC. The authors posed three research questions, only one of which is relevant to my discussion: Do L2 learners acquire both head-internal and head-external RCs in a way that is consistent with the NPAH? The results are grouped across all 40 subjects who participated in this study. The authors concluded that the NPAH is upheld for head-external clauses but is not robustly supported by the subjects' performance for head-internal RCs. The comment that I have about this study is that the results are not reported and analyzed for individual IL grammars. Indeed, it might well turn out that the conclusions are the

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same when one considers the individual results; however, there is the possibility that, as a group, the learners' performance might be consistent with the predictions of the NPAH, whereas, individually, there might be some that are counter to these predictions and therefore require explanation.

The article by Yabuki-Soh (this issue) reported on an instructional study of L2 Japanese RCs that addressed two research questions, one of which is relevant to my discussion: Do the findings support the conclusion that formal instruction can induce generalization of RC acquisition from more marked RCs to less marked RCs? Yabuki-Soh interpreted the results as showing that the subjects' performance on the comprehension test does not follow the NPAH, whereas the scores on the sentence-combination task reflect that the SU RC was easiest, followed by the DO relative. The author stated that this result somewhat accords with the predictions of the NPAH. She concluded that the study suggests both inconsistency and partial consistency with the NPAH and that it shows similar patterns of the projection effect from more marked RCs to less marked clauses. The problem with both of these conclusions, in my view, is that they are drawn on the basis of grouped data, and so the answer to the research question must be held in abeyance until the results from individuals can be examined.

The final contribution to be discussed is the article by Kanno (this issue) that used a picture-comprehension task to investigate the role of animacy (not discussed here) and structural factors in the SLA of Japanese RCs by 78 learners from five native language backgrounds: Chinese, Vietnamese, Indonesian, Thai, and Sinhalese. The purpose of the study was to determine the role of factors such as structural distance, as proposed by O'Grady's (2001) structural distance hypothesis, in RC acquisition. This hypothesis attempts to explain certain aspects of the NPAH with regard to the asymmetry among the grammatical positions on the hierarchy in terms of the distance between them as measured by structural nodes between the head noun and the gap in the RC. From the results, Kanno drew the conclusion that the Vietnamese, Indonesian, and Thai subjects found the SU RCs easier than DO relatives, whereas there was no difference between SU and DO RCs for the Chinese and Sinhalese groups.

Kanno's results were based on grouped data, and so I would make the same comment that I have made several times: It remains to be seen, upon examination of the individual results, whether the IL grammars of the L2 learners in question support the claims of the NPAH. As the results stand, based on the aggregate data, they support the NPAH insofar as the hierarchy permits both simultaneous emergence of adjacent RC types as well as the implied RC being acquired before the implying RC.

To sum up this section, with the exception of the article by Yip and Matthews (this issue), I have critiqued the studies in this issue on two grounds. The first is for using grouped data to support their tests of the NPAH, and the second is for interpreting the NPAH as necessarily specifying a sequence of acquisition for RC types. I will conclude with a brief statement on what I believe the contribution of the studies in this issue to be.

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CONCLUSION

The articles in this issue have taken significant strides in testing the claims of the NPAH on the SLA of RCs in several Asian languages. Indeed, if the results that have been reported on the basis of aggregate data are maintained upon the subsequent examination of individual IL grammars, then the contribution of the articles in this thematic issue becomes magnified. Moreover, an important point about the explanatory value of the NPAH was made in several of the articles, and this concerns the next step in research on RC acquisition if it is found that the NPAH is not supported by the data in question. Kanno (this issue), Ozeki and Shirai (this issue), and Yip and Matthews (this issue) are correct, in my view, in stating that the ultimate task at hand is to determine what principles underlie the NPAH itself. In other words, why is it that the NPAH has been shown to be robustly supported by SLA data from European languages? If the hierarchy is not as strongly supported when other language types are brought into the data pool, then we need to make hypotheses about what kinds of principles could be postulated that would subsume both the SLA data from RC acquisition in European languages as well as the SLA data from typologically distinct languages.

NOTE

1. I hasten to add here that the study reported in Eckman, Bell, and Nelson (1988) reported conclusions based on group results and, therefore, must also endure this same criticism.

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