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# COMMENTARY

# *Second Language Acquisition of Relative Clauses*

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One of the authors of this commentary conducted her dissertation research (Gass, 1979) on relative clause (RC) acquisition and, with the exception of a pedagogical intervention study (Gass, 1982), has since then participated in the discussion of RC acquisition only from afar. Therefore, the opportunity to provide commentary is particularly welcome. The framework adopted in Gass' earlier work was the earliest formulation of the Keenan and Comrie (1977) noun phrase accessibility hierarchy (NPAH). In what follows, we build on and extend that earlier work within the context of SLA.

In our commentary, we focus on four areas. First is the general issue of directionality of research. Second is the notion of semantics, introduced in many of the articles in this issue and largely absent in some of the earlier work on second language (L2) RCs. Into this discussion we bring research from aphasia. We then discuss the role of the native language and proficiency and, finally, we consider the intersection of SLA and pedagogy within the context of RCs.

## SLA AND LINGUISTICS

How SLA intersects with other disciplines has been a topic of discussion for many years. What was once controversial (and perhaps still is in some quarters[1])—that is, whether SLA data have any bearing on linguistic constructs—is accepted as a given throughout the articles in this issue. Unlike in earlier years, when one might have had to justify the use of SLA data in understanding some linguistic approach or construct, doubt about the usefulness of such data is not apparent in this issue. What, instead, has become an underlying theme is that the range of languages used to understand linguistic constructs through SLA data is not sufficiently broad and does not

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include enough typological variety. Taking as an assumption the validity of L2 data is, in our view, a major step forward in the field. In 1993, Gass made this statement:

> Ideally, the influence among related disciplines should be multi-directional; information should flow to as well as from the various disciplines. However, to date, most of the interaction between SLA and the other disciplines has been unidirectional; that is, information has flowed from the other disciplines to SLA, but little has gone from SLA to these other disciplines. In other words, developments in other areas have had implications for theories of SLA, but SLA research has, in general, not had an impact on the development of other disciplines.
>
> An indication of this comes from a consideration of the use of external evidence in linguistics. Many types of data, for example, data from first language acquisition, language games, slips of the tongue, poetics and aphasic speech errors are used as evidence in linguistic argumentation. Even though they are at times considered suspect, these types of language behaviors have all been readily used to validate various linguistic constructs. SLA data, however, have been conspicuously absent from this prescribed list of secondary supporting evidence. (pp. 104–105)

Nearly 15 years later, this statement does not reflect this issue of *Studies in Second Language Acquisition* and even more significant is the fact that, as mentioned earlier, the use of L2 data is assumed as valid, with no need for justification. As Shirai and Ozeki (this issue) stated in the introduction, "This special issue cannot provide definite evidence for or against the question of whether noun-modifying clauses in East Asian languages are attributive clauses qualitatively different from European-type RCs as Comrie suggested." To question whether L2 data could even do this is not part of the underlying orthodoxy. Even though this special issue considers only L2 RCs, there is perhaps an implicit assumption that this relatively restricted focus is a consequence of the particular interests of these authors; there is a general recognition of the significance of L2 data to an understanding of general issues of language.

## SEMANTIC INFORMATION

The second issue we consider is the role of animacy, a topic dealt with in many of the articles. Because Comrie's (2002) new typology is at issue, we start with the assumption that there are at least two types of RCs: gap-filler relatives and gapless relatives. Gap-filler relatives are more syntactically oriented due to a necessary link between the moved position of an antecedent and the interpretable position of it in a sentence. Gapless RCs, on the other hand, are more semantically oriented because an unmoved argument has to be interpreted in its base-generated position. Many contributors in this issue pointed out the prominent role of animacy in explaining the semantics of gapless relatives, paying attention to the default linking between a subject position and an animate determiner phrase (DP) as well as to the linking between an object position and an inanimate DP. An alternative but not novel way to

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rely on animacy would be to use the notion of mapping between syntax and semantics or, in traditional terms, grammatical relations, as explored in Fillmore's (1968) deep case or in Baker's (1988) uniformity of theta assignment hypothesis. Within this paradigm, RCs can be characterized as a long-distance dependency relation, in which appropriate interpretations of RCs can be achieved only in the connection between an antecedent and its gap.

The significance of semantic information has been noted elsewhere in the L2 literature (Gass, 1987; Harrington, 1987; Sasaki, 1991, 1994). Gass, in a study conducted within the framework of the competition model, proposed that in early stages of learning, semantic information is used before syntactic information in determining the relationship among elements in a sentence. In her bidirectional study, the participants were Italian learners of English and English learners of Italian who performed a sentence interpretation task. Italian is a language that uses semantics as an important means for determining grammatical relations, whereas English relies heavily on word order. Gass found that when considering sentence interpretation, it was relatively easy to move from a syntactically dominant language to a semantically dominant one (English to Italian) but that the reverse pattern (moving from a semantically dominant language to a syntactically dominant one) took far longer. This notion is supported by the results in Kanno's study (this issue). Kanno reported that subject-gap relatives were easier to process than object-gap relatives in those instances in which semantic information was available to aid in the identification of grammatical relations, but when no semantic cue was available, results did not indicate a preference for subject-gap relatives. Thus, as has become clear through all of the contributions to this special issue, the NPAH cannot stand alone. An understanding of RC acquisition must include other interacting factors.

Of particular interest to research on RC production and comprehension is the study of Broca's aphasic patients, who are generally believed to have lesions in syntactic regions (Damasio & Damasio, 1989; Zurif, 1995). Broca's aphasia research provides insight into how people with an impaired syntactic mechanism handle mapping of the syntax-semantics interface in such cases as RCs. It is generally accepted in cognitive neuroscience that Broca's impairment leads to nonnormal-like language production and comprehension, which is assumed to be associated with syntactic representations, evidenced from both experimental (e.g., Damasio, 1992; Goodglass, 1993) and neuroimaging studies (e.g., Bookheimer, Zefiro, Gallard, & Theodore, 1993; Friederici, 1995; Just, Carpenter, Keller, Eddy, & Thulborn, 1996; Kluender & Kutas, 1993; Stromswold, Caplan, Alpert, & Rauch, 1996). More importantly, the disruption by Broca's aphasia is highly specific or linguistically selective (e.g., Grodzinsky, 1984, 2000; Piñango, 2000; Zurif & Caramazza, 1976; Zurif & Grodzinsky, 1983). In some sense, aphasic patients follow the predictions of the NPAH. For instance, first language (L1) English aphasic patients have less trouble understanding active sentences and subject relatives, whereas they have only chance performances in comprehending passive sentences and object relatives (Ansell & Flowers, 1982; Caplan & Futter, 1986; Grodzinsky, Piñango, Zurif, & Drai, 1999; Hickok & Avrutin, 1996). Interestingly, some findings of aphasia studies seem

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to be consistent with the findings of the current studies. For instance, Caramazza and Zurif (1976) showed that although Broca's aphasics were successful in comprehending semantically irreversible object relatives, they failed with semantically reversible object relatives, as also seen in Kanno's study (this issue).

## THE ROLE OF THE L1 AND PROFICIENCY

Shirai and Ozeki, in the introduction to this thematic issue, noted some of the difficulties involved in considering the role of the L1. The results in the articles are mixed. For example, Yip and Matthews (this issue) showed the influence of a bilingual child's dominant language on the pattern of RC acquisition in the nondominant language. What is particularly interesting in the present contributions is the teasing apart of L1s. What this allows us to see is the inappropriateness of looking at any one factor as the sole or even primary explanation for L2 data. For example, in their study, Ozeki and Shirai (this issue) looked at the patterns of acquisition of Japanese RCs by L2 learners from three L1 groups (Korean, Chinese, and English). Considering all of the data together, as was the case in previous studies by Gass (1982), Hamilton (1994), and Eckman, Bell, and Nelson (1988), might obscure what might otherwise be significant L1 effects. In fact, if Ozeki and Shirai had pooled their data, the differences in progression across proficiency levels would not have been evident. Similarly, had they considered pooled data, the observed differences in acquisition order between the three L1 groups at the intermediate level could not have been discerned.

However, the complexity does not stop at this point. Both Ozeki and Shirai (this issue) and Kanno (this issue) included Chinese learners in their database of learners of Japanese. Whereas the Chinese learners in Ozeki and Shirai's study showed a preference for object-gap sentences, the results from Kanno's study are not so clear-cut. A fuller understanding of these results involves an additional consideration of sentence type (the number of animate arguments); in reversible sentences (those with two animate nouns), there is a preference for object-gap sentences over subject-gap sentences, but in nonreversible sentences, the order predicted by the NPAH is found. Interestingly, however, when language differences were examined from the perspective of instruction, Yabuki-Soh (this issue) found no language effects (among Chinese, Korean, and no Asian language background groups). What this might suggest, then, is that what a learner brings to the learning situation (the classroom, in the case of Yabuki-Soh) is less important than the level of attention and detailed analyses that come about through pedagogical intervention.

Another area of importance is the level of proficiency of the learner. Unfortunately, not all of the articles in this issue dealt with proficiency levels, and the two that did used different measures of proficiency (ACTFL OPI in the case of Ozeki & Shirai, this issue, and pretest scores in the case of Jeon & Kim, this issue). These studies also focused on two different aspects of acquisition: Ozeki

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and Shirai considered proficiency by language and showed different trajectories depending on language background, whereas Jeon and Kim focused on different RC types within the L2. L2 research would benefit significantly from controlled studies that investigate proficiency and language and, in the latter case, consider language from a bidirectional perspective (i.e., speakers of language X learning language Y and speakers of language Y learning language X). In this way, some of these interacting factors can be teased apart.

## INSTRUCTED LEARNING

Interest in how people learn L2s grew out of concerns of language pedagogy, and some of the articles take us back to those concerns. In fact, SLA—similar to the Roman god Janus—is in a unique position to look in two directions and form a link between theoretical and pedagogical concerns. Early work in the acquisition of L2 RCs—namely Gass (1982) and Eckman et al. (1988)—looked at the projection from one instructed area to another. Both of these studies investigated the acquisition of RCs by English as a second language (ESL) learners and both found that maximum generalization following instruction on one RC type occurred when instruction occurred on RC types lower on the accessibility hierarchy. Similarly, Hamilton (1994), in another study using ESL learners, found that there was a general pattern for learners to generalize from the marked to the unmarked. These early studies dealt primarily with learners of English in a L2 context. In a study of Arabic learners studying English in Tunisia, Ammar and Lightbown (2004) found evidence of generalization to RC types less marked than the RC type on which they received instruction, as generally predicted, but also found evidence of generalization in the other direction, which suggests that bidirectional generalization does occur.

Previous research dealt with learners of languages that have postnominal RCs. Yabuki-Soh (this issue) considered the pedagogical effects of RC acquisition by learners of Japanese, a language with prenominal RCs. Her study was primarily focused on different treatment types (form-based, meaning-based, and a combination of form- and meaning-based) and the projection possibilities from the instructed RC (oblique) to easier as well as more difficult RC types. Particularly interesting is her discussion of projection and the observed consistency and inconsistency with the NPAH as well as some of the discrepancies between her study and earlier studies. One issue that has not been considered in the studies in this issue is that of individual differences and connections. Perhaps generalizations are not always driven by language-related issues but are mediated by an individual's capacities—working memory is a prime possibility.

## CONCLUSION

The original formulation of the NPAH did not take into account gapless relatives or noun-modifying clauses, given that each position on the NPAH assumed

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syntactic movement or at least a gap position associated with relatives. If we include gapless relatives in our discussion, it is logically possible that there are three types of languages in terms of RCs: (a) a language with only filler-gap relatives, (b) a language with both filler-gap and gapless relatives, and (c) a language with only gapless relatives. What is clear from the contributions in this special issue is that there are at least two types of language: those with filler-gap relatives and those with both filler-gap and gapless relatives. In general, L2 data suggest that when we consider relatives as constructions that contain a filler and a gap, the NPAH seems to hold across languages, including East Asian languages. The locus of mixed results seems to stem from gapless relatives.

Further research needs to address the relationship between filler-gap and gapless RCs. Do they share syntactic properties, semantic properties, or both, or are they merely two separate syntactic constructions? How do SLA data bear on the question of learnability and how can SLA data help us understand the appropriate characterization of RCs in East Asian languages? We argue that by considering the way L2 learners relate the two RC types (especially learners with L1s that have only filler-gap relatives) significantly contributes to an appropriate description of the relationship. For example, if learners treat these two types separately (i.e., if different patterns of acquisition are observed), this might suggest that there should not be a unified account.

In sum, there are a number of factors that influence the acquisition of a L2. Many of them are considered in the articles here on RCs (and probably in most areas of SLA)—namely grammatical linguistic universals, semantic information, L1, and proficiency. These factors and others (e.g., pragmatic information, individual learner capacity) all contribute to and constrain L2 learning.

## NOTES

1. Even Comrie's (2002) recent article implied a unidirectional influence (i.e., from linguistics to SLA rather than the other way around). In his words:

> While I cannot guarantee that the typological phenomena that I will discuss will turn out to be of major import for the investigation of second language acquisition, I believe that at least I will be able to present data and ideas that should point to phenomena that second language researchers should be on the look-out for in their work. (p. 19)

However, later in the same work, Comrie noted that "it should not be thought that the direction of insight is always from typology to language acquisition, or even that typologists see things this way. . ." (p. 22). He went on to provide examples "where typologists were made aware of a phenomenon, or at least of its importance by work in language acquisition" (pp. 22–23), although the example he provided came from child language data.

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