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Analysing interlanguage: how do we know what learners know?

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In this article, we address the important issue of ‘how we know what learners know’ based on evidence from second language (L2) learners’ spontaneous speech samples gathered longitudinally. We first examine some of the problems involved in the analysis of spontaneous speech, with focus on L2 studies within the generative framework. Next, we revisit the issue of the comparative fallacy in L2 research. We first consider the effects of the comparative fallacy in relation to analyses of interlanguage with a target language bias. Next, we extend the comparative fallacy to include interlanguage analysis where the bias is towards the native language. We argue that the comparative fallacy in interlanguage studies, regardless of the nature of the bias (i.e., target language or native language) can lead to the underestimation and/or overestimation of the learners’ linguistic competence.

I Introduction

Two major goals of second language acquisition (SLA) research are:

- 1) to determine the second language learner’s L2 grammatical knowledge (i.e., interlanguage competence); and
- 2) to explain how it develops over time from an initial state to an end state, often a fossilized state.

As in the case of the linguistic competence of child first language (L1) learners and adult native speakers, interlanguage competence cannot be examined directly. Instead, information about the nature of interlanguage competence can only be derived indirectly, through an examination of interlanguage performance data. Such performance data include, among others, production data (e.g., spontaneous speech, and experimentally elicited speech data), comprehension data and grammaticality judgements. Of these various types of data, production data, particularly spontaneous

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speech data, have been frequently used in SLA research.

In his article on interlanguage, where he proposed the Interlanguage Hypothesis, Selinker (1972),¹ argued that the 'psychologically relevant data' of L2 learning are those behavioural events where learners attempt to express meanings, which they may already have, in a language that they are in the process of learning (i.e., attempted meaningful performance in an L2). In the 1970s, important advances that were made in relation to L2 developmental sequences were based on (primarily) spontaneous speech samples gathered longitudinally (see, for example, Huang, 1970; Milon, 1974; Hakuta, 1974, 1976; Cancino *et al.*, 1978; Wong-Fillmore, 1976; Lightbown, 1977; Gerbault, 1978; Ravem, 1978; Wode, 1978; Felix, 1980). In the 1980s, however, the use of longitudinal data appears to have declined in popularity. This state of affairs was probably partly due to time and financial constraints and partly because of some of the obvious disadvantages of using spontaneous speech data vis-à-vis experimentally elicited production data and grammaticality judgement data (for discussion of the advantages and disadvantages of using various types of language data, see Lust *et al.*, 1999).

Since the early 1990s, SLA researchers have once again begun to use longitudinal spontaneous speech data in their attempts to determine the language learner's mental representations of the L2. This can be clearly seen, for example, in recent SLA studies within the generative framework, which have used evidence from longitudinal speech samples to address the controversial issue concerning the status of functional categories and abstract syntactic features in interlanguage grammars. In most cases, the longitudinal data on which these recent studies are based are audio-taped data that had been previously collected in the 1970s (see, for example, Lakshmanan, 1993/94; Eubank, 1993/94; 1996; Schwartz and Sprouse, 1993; 1996; Lakshmanan and Selinker, 1994; Grondin and White, 1995; Vainikka and Young-Scholten, 1996; Sprouse and Schwartz, 1998). One of the obvious disadvantages of using such data (especially for generative purposes), is that in many instances only transcripts (but not the audio-recordings themselves) are available. As such transcripts cannot be independently checked against the audio-recordings, and certainly interlanguage intentions are difficult to retrieve from such data, this could have led to an over-reliance on the interpretations provided by the original collectors of the data. Additionally, unlike in the case of existing child L1 data, the existing longitudinal L2 data are not part of

¹ Technically the interlanguage concept was first raised in the context of an article called 'Language transfer' (Selinker, 1969: footnote 4).

public databases such as those occurring in CHILDES (see MacWhinney and Snow, 1985 and later references), which in turn makes it difficult for different researchers to carry out independent analyses of the same data set and to conduct cross-linguistic comparisons.

An assumption underlying the Interlanguage Hypothesis proposed by Selinker (1972) is that interlanguage – at least partially different from the native language and the target L2 – is a linguistic system in its own right; this may be one of the few points agreed on by all SLA researchers. This suggests that in order to characterize the language learner's linguistic competence in the L2 accurately, interlanguage must be analysed in its own terms. However, this is not always an easy task to accomplish and L2 research (both in the past and present) has often succumbed to what Bley-Vroman (1983) first termed as the 'comparative fallacy'.²

According to Bley-Vroman, the comparative fallacy in interlanguage studies, which results from a concern with the target language is likely to have a disastrous effect on the investigation of interlanguage. Specifically, the use of analytical concepts defined relative to the target language scheme (such as obligatory contexts, error and target-like use) is unlikely to illuminate the nature of interlanguage competence. On the contrary, we argue that in order to make serious progress in the investigation of interlanguage, researchers should focus on the construction of linguistic descriptions of learners' languages that can shed light on their specific properties and their own logic. Back in 1976, Adjemian stressed the importance of investigating interlanguage as a linguistic system in its own terms; however, unlike Bley-Vroman, who discusses the comparative fallacy in interlanguage studies only in relation to their concern with the target language, Adjemian (1976) stressed the importance of investigating interlanguage competence independently of not only the target language system but also the native language system.

In this article, we address the important issue of 'how we know what learners know' based on evidence from L2 learners' spontaneous speech samples gathered longitudinally. The article is organized as follows. We first examine some of the problems involved in the analysis of spontaneous speech, with focus on L2 studies within the generative framework. Next, we revisit the issue of the comparative fallacy in L2 research. In so doing, we first discuss the effects of the comparative fallacy in relation to analyses

² We do not want to take a 'holier than thou' attitude here, for we know that we have been guilty of this as well (see, for example, Lakshmanan, 1991, Selinker and Lakshmanan, 1992; Kuteva *et al.*, 1996).

of interlanguage with a target language bias. Next, we extend the comparative fallacy to include those scenarios where the bias is towards the native language. We argue that the comparative fallacy in interlanguage studies, regardless of the nature of the bias (i.e., target language or native language) can lead to the underestimation and/or overestimation of the learners' linguistic competence.

II One type of data: spontaneous speech

For illustration let us use one issue that has been debated in SLA research: the mental representation of clause structure in the L2 initial state. According to proponents of the Minimal Trees/Gradual Development Hypothesis (Vainikka and Young-Scholten, 1994; 1996) functional categories – such as Inflection (Tense and Agreement) and Complementizer – and the abstract features associated with them are initially absent in the learner's interlanguage. In other words, they claim that in the L2 initial state only the lexical layer, namely the VP, is initially projected, and that the functional projections that dominate the lexical layer are gradually built up in a stepwise fashion. An obvious question that can be raised in relation to their claim is: how do they know?

What is typically cited as evidence for the absence of functional structure and functional features in the L2 initial state is the absence of criterial production rates of overt grammatical morphology (such as tense and agreement inflections). In contrast, proponents of the Full Competence Hypothesis (Lakshmanan, 1993/94; Grondin and White, 1995; Epstein *et al.*, 1996; Schwartz and Sprouse, 1996; White, 1996; Lardiere, 1998) have argued that clause structure in the L2 initial state is characterized by not only the lexical projections but also the functional projections associated with the Inflectional layer and the Complementizer layer. According to proponents of the Full Competence Hypothesis, the absence of criterial production rates of overt grammatical morphology cannot be taken as evidence for the absence of the corresponding functional structure and abstract features. Instead, they claim that the absence of criterial production rates of overt grammatical morphology such as tense and agreement is attributed to the difficulties that learners have with the overt realization of morphology.

As mentioned earlier, many of the studies on functional structure and abstract functional features have been based on spontaneous speech data, particularly longitudinal data, not necessarily collected by the analyst. There are several obvious problems in using such data to address questions pertaining to the L2 initial state. For one

thing, in many cases, the speech utterances in the earliest samples of speech gathered may not have been collected early enough and may, therefore, not necessarily be reflective of the L2 initial state. Another confounding factor is that the corpora, particularly the earliest samples gathered, may be sparse and too far between and therefore unusable. We agree with Atkinson (1996) who has stated, in a different context (namely, child L1 acquisition research), that what is needed is more hypothesis-led intensive data collection from the relevant periods of L2 acquisition in order to characterize successfully the nature of interlanguage competence in the L2 initial state.

An additional problem is that language learners, particularly child L2 learners, have been known to go through a 'silent period', during which they do not produce any utterances in the L2. We have no idea exactly what is happening here, and learners do vary here as well. For example, learners are likely to vary considerably in relation to the duration of the silent period, with some learners going through a longer silent period than others. Furthermore, one cannot rule out the fact that there may be passive acquisition of some or many aspects of the target language during the silent period. As a result, an effective comparison of the development of individual interlanguage grammars may be difficult to accomplish.

Another problem relates to the data that the researcher chooses to include or exclude for the purpose of the analysis. For example, in many studies which have addressed the issue of the representation of clause structure in the L2 initial state, utterances that do not contain a verb were excluded from the analysis. This is an arbitrary procedure and it is not surprising, therefore, that despite their different positions regarding the status of the functional layer in clauses in the L2 initial state, proponents of the Full Competence Hypothesis and the Gradual Development Hypothesis have generally assumed that a lexical layer headed by the verb (i.e., VP) is indeed projected in clauses in the L2 initial state. In what follows, we present evidence from verbless utterances in interlanguage grammars that renders this assumption questionable.

Verbless utterances – i.e., utterances where the lexical (thematic verb) is absent – have previously been observed in the case of child interlanguage grammars (e.g., Wong-Fillmore, 1976; Gerbault, 1978; Felix, 1980; Tiphine, 1983; Lakshmanan, 1993/94; Lakshmanan, 1998). Verbless utterances have also been reported for child L1 grammars of English (Bloom, 1970; Bowerman, 1973; Brown, 1973; Radford, 1990). The verbless utterances attested in child L1 acquisition are typically binominal expressions such as *Kendall bath*

(= Kendall takes a bath). As Lakshmanan (1993/94; 1998) has reported, the verbless utterances in child L2 grammars are not realized as binominal expressions. Instead, as illustrated by the examples in (1), although the transitive verb is omitted, the verbless utterances contain elements such as *for*, *with* and *and*.

- 1) a. *Marta (L1: Spanish)*:
 For Hello [= Say hello] (S1)
 This is the boy for the cookies [picture of boy eating cookies] (S2)
 The girl for tamboron [= The girl is playing the tambourine] (S2)
 For the head the little girl [in response to: What's cookie monster going to do?] (S3)
- b. *Cheo (L1: Spanish)*:
 The boy and the cookie [picture of boy eating cookies] (S4)
 The boy with the milk [picture of boy pouring milk into a glass] (S4)
- c. *Xi-Xi (L1: Chinese)*
 Boy and ball [= The boy is kicking the ball] (S1)
 This cat and car [= The cat is driving a car] (S2)
 And house [= The pig is building a house] (S2)

In her original analysis of such verbless utterances Lakshmanan (1993/94; 1998) proposed that there is an implicit verb in these utterances which heads the VP projection; as the verb does not have a proper linguistic antecedent, it cannot assign accusative case to its object. She argued that elements such as *for* and *and* in these verbless utterances are functional morphemes generated in INFL position, and that the object adjoins to VP where it is assigned accusative case by *for* in INFL.

Lakshmanan (2000), however, proposed an alternative analysis of the verbless utterances. According to the reanalysis, the verbless utterances may not in fact contain an implicit lexical verb as she had previously argued. In other words, the verbless utterances may not simply be superficially verbless; on the contrary, an implicit verb may not in fact be present and, hence, a VP may not necessarily be projected. Specifically, under the alternative analysis, the elements *for*, *and* and *with* in the verbless utterances may be viewed as 'minimal' maximal projections of a lexico-functional category bearing the categorial features [-N, -V] and the functional feature F.

As stated earlier, information about the nature of interlanguage competence can only be derived indirectly, through an examination of interlanguage performance data. In order to ensure that we do not underestimate the learner's competence, we need to compare interlanguage performance data with the performance of native speakers systematically. For example, let us suppose that, on a given

task, the performance of adult native speakers is found to be similar to the performance of L2 learners on the same task. Let us further suppose that linguistic accounts of the target L2 grammar predict that the former should in fact have behaved differently from the language learners. As the native speakers' performance was found to be similar to that of the language learners, we cannot validly attribute the interlanguage deviation (i.e., deviation from the target language grammar) to a deficit in interlanguage competence. Typically, in studies that use instruments such as the grammaticality judgement task or the sentence matching task, information in relation to the performance of a native speaker 'control' group on the same task is also obtained for the purposes of comparison. In contrast, L2 studies of spontaneous speech have tended to analyse only the language learners' speech samples; the performance of native speakers in similar or corresponding speech situations has rarely been examined systematically for the purposes of comparison with interlanguage performance. Likewise, the performance of the other interlocutors in the various sessions or transcript files (regardless of whether they are native speakers or non-native speakers of the target L2) is rarely analysed for the purpose of comparison with the performance of the subject of the study, i.e., the L2 learner. We believe that such comparisons are needed in order to determine whether or not particular phenomena observed in interlanguage performance, which deviate from an assumed norm in the target L2 grammar, can be validly used as evidence for a hypothesized mismatch between the interlanguage grammar and the adult grammar of native speakers of the target language. In what follows, we discuss this issue in relation to the phenomenon of root infinitives.

In child L1 acquisition research, it has been observed that children acquiring a variety of languages go through an initial stage – known as the root-infinitive or optional-infinitive stage – during which they produce finite verb forms and non-finite verb forms in root clauses. Various explanations for the root infinitive stage in child L1 have been proposed in the literature (Rizzi, 1993/94; Wexler, 1994; Hoekstra *et al.*, 1996; Schutze and Wexler, 1996). What these various accounts have in common is that they are all deficit-based accounts, according to which the root-infinitive stage in child language is the result of underspecification of certain syntactic properties.

Recently, the phenomenon of root infinitives has also been investigated in SLA research. Nearly all these studies have been based on longitudinal spontaneous speech data (e.g., Haznedar and Schwartz, 1997; Prevost, 1997; Prevost and White, 1999; Lakshmanan

2000). Some of these are original data, which we think is more preferable to using older data bases from which information about the learner's intentions may be difficult to retrieve.

The evidence from these studies indicate that L2 learners, like child L1 learners, also produce root clauses with a finite verb form as well as root clauses with a non-finite verb form. An issue addressed in these various studies is whether the non-finite verb forms are truly non-finite or whether they are only superficially non-finite (but finite at an abstract level). What would be a definitive argument here? It is not entirely clear but, regardless of the differences in the explanations offered for root infinitives in interlanguage, all of these studies assume that the root infinitives produced by language learners are ungrammatical from the standpoint of the target grammar. But what about from the standpoint of the independent interlanguage grammar?

In the target grammar, although root clauses can occur in the form of a root infinitive, it is generally assumed that such occurrences are restricted in meaning. For example, the root infinitive sentence *John dance* in the adult grammar is grammatical only under a modal interpretation but is ungrammatical under a past tense or present tense interpretation (*John danced/John dances*).

However, we would maintain that one cannot validly judge the root infinitives produced by language learners as being ungrammatical across the board from the standpoint of the target L2 grammar, without comparative systematic analyses of adult native speaker spoken discourse plus the input that the learners were exposed to. We argue for the latter since the speech of the other interlocutors in the longitudinal data gathered may influence the interlanguage output considered. In the case under discussion here, such analyses may reveal the presence of root infinitives (with other than a modal interpretation) in native speaker spoken discourse and in the input that these learners were exposed to. As Lasser (1998) has shown in relation to German, root infinitives in adult spoken discourse occur not only with rhetorical or imperative function, but also, contra to what is widely believed, with a declarative function and a genuine interrogative function as well. (For evidence that adult root infinitives in Russian and Dutch also occur with declarative function, see Reuland, 1983; Avrutin, 1997.) Lasser systematically compared adult root infinitives and child root infinitives. Interestingly, she found that there are, indeed, qualitative similarities, both structural and interpretive, between child root infinitives and adult root infinitives. We next turn to the issue of the 'comparative fallacy' in L2 research.

III Comparative fallacy revisited

As argued in Section II, when conducting interlanguage analysis of spontaneous speech, it is important not to judge language learner speech utterances as ungrammatical from the standpoint of the target grammar without first having compared the relevant interlanguage utterances with the related speech utterances in adult native-speaker spoken discourse. As we observed earlier, this has rarely been carried out in L2 studies of spontaneous speech. On the contrary, the tendency has largely been to judge the grammaticality/ungrammaticality of interlanguage speech utterances from the standpoint of the target grammar without a comparative analysis of, for example, the native-speaker speech input contained in the transcripts of the audio-recorded conversational interactions. This tendency can be clearly seen in relation to the concept of 'obligatory contexts', which has been widely used in both L2 as well as L1 acquisition research – both in the past and the present.

The concept of obligatory contexts has been mainly used in relation to the acquisition of functional/grammatical morphemes. One of the difficulties in identifying an obligatory context for a particular grammatical element is that the researcher has to determine what the learner meant to say in producing the utterance, i.e., what we called above 'interlanguage intention'. Although the discourse context in which the learner's utterance occurred may provide useful cues for determining the meaning of the utterance, in practice recoverability of learner intention may be quite a difficult task to accomplish. So it is not surprising, as Cook (1993) has observed, that many L2 researchers have tended to restrict Brown's (1973) definition of obligatory context to linguistic context without analysing the discourse context in which the sentence occurred.

Furthermore, the identification of obligatory contexts for the suppliance of grammatical morphemes has been typically carried out from the standpoint of the target grammar, i.e., an example of the comparative fallacy as discussed above. Thus, setting up obligatory contexts solely in terms of the target language is likely to lead to an underestimation of the knowledge of the learner, as only a subset of the contexts identified may be obligatory contexts from the standpoint of the learner's internal interlanguage system (we return to this issue later in this section).

A related problem concerns the criterion level adopted to determine whether a particular functional morpheme or feature has been acquired. A criterion that has been widely adopted in both

the L1 and L2 literature is Brown's (1973) 90% criterion level. Specifically, the point of acquisition of a grammatical morpheme is the first speech sample of three samples, such that in all three the morpheme is supplied in at least 90% of the contexts in which it is clearly required. The 90% criterion level is rather conservative and lower criterion levels, such as 80% and 60%, have also been adopted in L2 research (see, for example, studies by Lakshmanan, 1994; Vainikka and Young-Scholten, 1994). A problem in relation to the use of criterion levels (especially high criterion levels) is that one cannot conclude that the failure on the part of learners to reach the criterion level for acquisition is because of lack of knowledge. On the contrary, as Hyams and Safir (1991) have stated in their review of Lakshmanan (1991), the failure to reach high criterion levels for acquisition (e.g., 90% criterion level) probably stems from lack of mastery and not lack of knowledge. This suggests that instead of criterion levels for acquisition, alternative diagnostics may need to be used for determining learner's competence. In relation to verb inflections, Hyams and Safir (1991) recommend that instead of the 90% criterion, the following diagnostics are better indicators of a learner's knowledge of a particular grammatical element/process:

- overregularizations: e.g., **goed*;
- the absence of form/class errors: e.g., **mays*; and
- the absence of agreement errors: e.g., **I goes*.

In L2 research as in the case of L1 research, some researchers have been interested not only in when a particular grammatical element or process is acquired but also when they can be said to have emerged. Emergence, as opposed to acquisition, is particularly relevant when the issue being addressed is the developmental relationship between two or more grammatical properties. Whereas the criterion levels that have been widely adopted have been used to identify acquisition points, it is not clear what levels would be appropriate for determining emergence of a particular grammatical property.

What is clear is that even a less conservative criterion level (e.g., 60%) would not be an appropriate indicator. As has been suggested by some researchers, perhaps 'first clear use' (i.e., first clear, novel example of a grammatical element or construction) would be more appropriate in identifying emergence points (see, for example, Stromswold, 1989; 1996). We cannot entirely rule out the possibility, of course, that the criterion of 'first clear use' may be more appropriate in relation to the emergence of a particular type of syntactic construction (e.g., passives, relative clauses, long-distance

questions) than in relation to the emergence of grammatical elements such as verb inflections. At the same time, however, we believe that a change in focus (i.e., from acquisition to emergence) may be one way in which the comparative fallacy can be avoided in interlanguage analysis.

In the remainder of this section, we discuss an example from interlanguage past tense morphology to show how obligatory contexts from the target language standpoint can result in the underestimation of learners' knowledge of past tense marking.

As stated earlier, in some L2 studies of the development of functional structure, it has been assumed that the relationship between the acquisition of overt inflectional morphology and the acquisition of syntax (e.g., functional structure and abstract functional features) is a direct one (e.g., Vainikka and Young-Scholten, 1994; 1996; Eubank, 1996). In other words, it is claimed that one can conclude that learners have acquired abstract grammatical knowledge only when their productions of overt verb inflectional morphology show evidence of having reached certain criterion levels. A study we find particularly enlightening in this regard is Lardiere (1998) who challenged this methodological assumption with a study that focused on Tense and Case in the fossilized steady state of Patty, an Indonesian-born, Mandarin-speaking and Hokkein-speaking adult non-native speaker of English living in the USA where there was a large amount of positive evidence in the input. The data upon which Lardiere's study is based consists of Patty's naturalistic production data, which Lardiere collected over a period of eight years. The first set of data was collected after Patty had been exposed to English in the USA for 10 years. The second and third sets of data, which are about two months apart, were collected 8.5 years after the first data set was collected. The data consist of Patty's responses to formal interview-like questions about her language background and life history, narratives of past events in her life and discussion of her philosophical and religious views.

In order to determine Patty's suppliance rates for past tense marking in obligatory finite past contexts, Lardiere used the following method. Each verb in a finite past context which required past tense marking in the target language was checked carefully. Certain obligatory finite past contexts in which past tense marking was not supplied were eliminated from the count. Lardiere provides detailed information about the contexts that were thus excluded, which in the context of our methodological discussion is important. Some examples of these are as follows:

- a past situation context where the situation still holds true in the present and therefore a present tense temporal reference is equally possible; e.g., *She's maybe ten years older*;
- formulaic utterances;
- finite contexts that could be ambiguously interpreted as either quotations or reported speech;
- contexts in which past tense inflection would be adjacent to homophonic stops;
- utterances followed immediately by spontaneous self corrections, etc.

Lardiere's analytical method was to count past tense marking as supplied if the main verb or the auxiliary (if one were present) was modified. Importantly, past tense was considered supplied even if agreement marking was incorrect (e.g., *was* instead of *were*) or if the accompanying elements of the VP were incorrectly inflected (e.g., *did went* instead of *did go*).³

Lardiere's analysis revealed that across the three sets of the naturalistic production data, Patty's suppliance of past tense marking in obligatory finite past contexts was a stable 34%. In contrast to Patty's low suppliance rate in relation to past tense marking, Lardiere found that in relation to pronominal case marking, Patty's suppliance of nominative pronoun subjects in finite contexts was perfect (i.e., 100% nominative case in obligatory contexts). Furthermore, the distribution of nominative and accusative pronouns in Patty's data was also found to match the target grammar perfectly.

Based on her findings, Lardiere argues that the relationship between the acquisition of overt inflectional morphology and the development of the syntactic representation of functional categories, projections and features is not a direct one. Specifically, she argues that Patty's low rate of suppliance of past tense marking does not constitute evidence for the absence of the functional category of Inflection INFL, its projection and the abstract TENSE/Finiteness feature associated with it. Lardiere attributes Patty's low percentage of suppliance of past tense marking to her difficulties in mapping from the abstract functional feature TENSE to the Phonetic Form. Unlike pronominal case marking, which is

³Lakshmanan (1994: 80–81) also adopted a similar procedure to determine the acquisition of verb inflections (i.e., tense and agreement) by child L2 learners of English. Specifically, the exact lexical realization of the overt coding for tense and/or agreement was noted. However, the target language was not considered as a yardstick for inflection acquisition. Credit was given for a particular inflected form regardless of whether or not the overt realization of the inflectional features in the interlanguage lexically matched the form in the target language.

simple and invariant in English, the mapping from feature to form in relation to tense morphology is complex and variable. The complexity of the mapping could have had an impact on Patty's productions of overt past tense morphology. Lardiere argues that the fact that Patty's suppliance of nominative subject pronouns in obligatory contexts (i.e., finite contexts) was perfect is strong evidence for the availability of the abstract finiteness (TENSE) feature in Patty's English interlanguage grammar. In sum, under Lardiere's account, the deficit in relation to Patty's interlanguage grammar is restricted to overt morphology (i.e., mapping from feature to form) and does not apply to the syntactic module.

From a methodological point of view, we note the steps that Lardiere took in order to ensure not to err on the side of underestimating Patty's past tense marking. For example, the elimination of certain contexts based on specific criteria (which, we believe, is an appropriate procedure) resulted in a tendency to undercount obligatory finite past contexts in which past tense marking was probably not supplied. As Lardiere explains, the overall effect of the exclusions was 'to err on the side of overestimating the rate of suppliance of past tense marking' (1998: 15). She claims that this procedure serves to strengthen the point about Patty's fossilized tense morphology since, in spite of the undercounting of the obligatory finite past contexts, the percentage of suppliance of past tense marking still fell below the criterial production rates for acquisition assumed in certain L2 studies (i.e., 60%).

However, we believe that, despite the elimination of certain contexts, it is possible that Patty's suppliance of past tense marking may in fact have been underestimated since the setting up of the obligatory finite past contexts was done in terms of the target language and not in terms of Patty's interlanguage grammar. Because the suppliance rate for past tense marking was found to be low (i.e., in relation to the criterion assumed in the literature for past tense marking), Lardiere concludes that there is a morphological deficit (i.e., in the mapping from abstract syntactic feature to the overt form), but not a syntactic one. A problem is that in order to provide evidence that there is no deficit in relation to the abstract functional feature of IP (i.e., TENSE) that licenses nominative case, Lardiere has to rely on Patty's suppliance of nominative case in obligatory contexts. Lardiere provides her reasons for using case marking as better evidence of Patty's underlying knowledge of abstract TENSE. However, she also states that 'case marking on pronouns in English is simple and invariant' (1998: 22) and that, most probably, perfect suppliance of case marking would not have been observed in relation to a target

language with a more complex case marking system (e.g., Japanese). Lardiere is not alone, of course, in relying on nominative case marking as evidence of the language learner's knowledge of the abstract Tense feature (see, for example, Selinker and Lakshmanan, 1992; Lakshmanan, 1993/94; Haznedar and Schwartz, 1997). A question that needs to be asked is whether case marking is really indicative of the learner's underlying knowledge of Tense in English, particularly when it is viewed as the sole evidence. It is possible that the results may be deceptive because of the very fact that case marking in English is relatively simple (Paul Kane, personal communication to Usha Lakshmanan).

In what follows, we suggest one way of (possibly) strengthening Lardiere's arguments in relation to Patty's knowledge of the abstract Tense feature. Crucially, this would involve additionally setting up the obligatory finite past contexts not in terms of the target language (as was done in Lardiere's study) but also in terms of Patty's interlanguage (i.e., internal) system. Within non-generative approaches to SLA, there is a considerable body of research on the issue of the SLA of tense and aspectual morphology that could be drawn upon here. According to the Aspect Hypothesis (Andersen and Shirai, 1994; Bardovi-Harlig, 1995a; Robison, 1995; Andersen and Shirai, 1996), L2 (and L1) learners are initially influenced by the inherent semantic aspect of verbs or predicates in the acquisition of tense and aspectual morphology associated with or affixed to these verbs. Recent research on the SLA of past tense marking in English and a variety of target L2s has indicated that verbs which are lexico-semantically more event-like (i.e., achievement and accomplishment verbs) tend to be marked for past tense in obligatory past contexts at a consistently higher rate than verbs that are less event-like (i.e., activities and states), at least in the initial stages of interlanguage development (Bardovi-Harlig and Reynolds, 1995; Li and Shirai, 2000).

Additionally, integrating syntax and semantics research in the SLA of English has also found that, in addition to the inherent semantic aspect of verbs, grounding in discourse is an important factor that influences the use of past tense in interlanguage (Bardovi-Harlig, 1995b). Specifically, the past tense is used by learners to mark foregrounded (i.e., informationally salient) events/situations, which move the narrative forwards, but not backgrounded information. More recently Tickoo (2000) examined the use of past tense marking in the written narratives of Chinese learners of ESL in Hong Kong at three levels of proficiency. Across the three levels of proficiency, she found evidence that grounding distinctions (i.e., differences in informational salience) provide a

better account of learners' use of selective past tense marking than lexical aspect.⁴

Recall that the data upon which Lardiere's analysis is based consisted of not only Patty's responses to formal interview-like questions about her language background and life history, but also Patty's narratives of past events in her life and discussion of her philosophical and religious views. We think that in order not to err on the side of underestimating Patty's suppliance rate of past tense marking, Patty's use of past tense marking should also be analysed to determine whether it is being selectively used to signal grounding distinctions and/or lexico-semantic distinctions. If the analysis indicates that Patty's use of past tense marking is not random but varies in relation to the grounding distinctions and/or lexico-semantic distinctions, then, in computing her suppliance rate for past tense marking, only those contexts where the use of past tense marking is predicted in terms of her interlanguage should be considered as obligatory contexts for past tense marking. These obligatory contexts are very likely only a subset of the obligatory contexts identified in terms of the target language; thus, the overall effect of the alternative method of calculating obligatory contexts for past tense would be an increase in Patty's suppliance rate of past tense marking (possibly even to the criterial levels assumed in L2 literature). Should this turn out to be the case, then the evidence from Patty's past tense marking can be used to strengthen Lardiere's conclusion based on Patty's suppliance of nominative case that Patty's interlanguage clausal representation does, indeed, include the Inflection projection and the abstract Tense feature associated with it.

IV Comparative fallacy extended

As we stressed in the introduction, in order to characterize the language learner's linguistic competence in the L2 accurately,

⁴It is relevant to mention here that although narratives in English (as in other languages) may be told entirely in the past tense, typically there is switching back and forth between the past tense and the so-called historical present or narrative present. Crucially, the switch from past tense to the unmarked present occurs even when the temporal reference is a past context. Based on her analysis of 550 narratives produced by native speakers of American English in naturally occurring speech situations, Wolfson (1982) found that tense switching (i.e., from the past to the historical present) was a feature that characterized the narratives of most native speakers of American English. More importantly, she showed that tense switching in narrative is not a lapse or violation of discourse level constraints in English but is in fact rule governed in at least this genre. Interestingly, from our perspective, Wolfson argued that native speaker intuition is inadequate as a basis for judging discourse errors of language learners. According to Wolfson, if native speaker usage is to serve as a model for L2 learners then the researcher must know specifically how native speakers use the features that researcher wishes to investigate.

interlanguage must be analysed in its own terms, independently of not only the target language but also of the native language. Although rarely carried out (by ourselves included), this motif has been implied in the Interlanguage Hypothesis from the beginning.

An issue that continues to be debated in SLA research is the role of the native language in the subsequent acquisition of a second or subsequent language. While most researchers would not deny that the native language influences SLA, the exact nature of its influence still remains unclear, and especially in multiple language acquisition, where 'Interlanguage Transfer' sometimes 'occurs' and native language transfer is 'blocked' (Gass and Selinker, 2001: Section 5.3). Thus, a general theory of language transfer in language learning remains to be discovered.

Within generative approaches to SLA, different proposals have been made regarding the role of the L1, limited to SLA where two languages are concerned. Epstein *et al.* (1996) have argued that there is no evidence that L2 learners initially transfer the abstract structural properties of the target L2 from their L1; rather, it is claimed, in the acquisition of an L2 beyond the first, learners are able to access Universal Grammar (UG) directly without the involvement of the L1. According to the Full Transfer/Full Access model proposed by Schwartz and Sprouse (1994; 1996; Sprouse and Schwartz, 1998) all of the abstract syntactic properties of the L1 grammar are predicted to transfer and form the initial state of the interlanguage grammar. Proposals in favour of partial transfer, have also been made in the literature (e.g., Eubank, 1993/94; Vainikka and Young-Scholten, 1994; 1996). These proposals restrict the role of L1 to exclude transfer of the functional structure altogether or exclude the transfer of the functional features associated with functional structure. In what follows we discuss certain methodological issues that arise when investigating L1 transfer using longitudinal spontaneous speech data. In so doing we focus on the comparative fallacy in interlanguage analysis, which results from a bias towards the native language.

Hilles (1991) examined the longitudinal spontaneous speech data from six Spanish speakers acquiring English as L2 in order to investigate the relationship between the development between verb inflections and emergence of subjects. In what follows, we focus on Hilles' method for calculating the rate of omission of subjects from tensed clauses. In order to calculate the percentage of null subjects for each learner, Hilles used the following method:

[X] divided by the sum of [Y + X], where X = the number of actual instances of null subjects and Y = the number of instances where null subjects could have occurred but did not.

According to Hilles, the Y cases represented those tokens of subjects which would have been dropped had the conversation been in Spanish, i.e., where the identity of the referent had been clearly established in the preceding discourse and could be recovered from the verb endings. In other words, Hilles assumed that in all cases the Spanish speakers would transfer their discourse rules concerning the use of null subjects from their Spanish L1 to their English interlanguage. An outcome of Hilles' method is that the value of the denominator (the sum of Y + X) used to calculate the percentage of null subjects is considerably lower than would otherwise have been obtained had the Y cases included all clausal utterances where there was an overt subject and a verbal element (either a main verb or auxiliary) and where it would be clearly ungrammatical in the target language to omit the subject. If this alternative method had been used to calculate the Y cases, it would have increased the value of the denominator (the sum of X + Y), and thus the percentage of null subjects would have been lower than what Hilles found. A problem is that Hilles' method for the calculation of null subjects is biased in favour of her hypothesis that Spanish speakers will transfer the property of null subjects to their English interlanguage. Therefore, one cannot rule out the possibility that the percentage of subject omissions in the interlanguage of these Spanish speakers may have been overestimated as a result of the method Hilles used. Additionally, it is not evident from Hilles' study whether the X cases were analysed for whether they were appropriate deletions of the subject, i.e., whether they were identifiable. If this was not done, this would constitute another flaw in the methodology.

Lakshmanan (1994) used the alternative method outlined above in order to calculate the percentage of null subjects in the English interlanguage of child L2 learners of English. Two of the learners (Marta and Cheo) were the same individuals considered in Hilles' study. The percentage of null subjects reported by Lakshmanan for these two subjects was considerably lower than what was reported by Hilles. It is not immediately clear how one can resolve this discrepancy.

Recently, Haznedar (1997) reported the use of head final VPs in the English interlanguage of Erdem, a four-year-old native speaker of Turkish, who was acquiring English in the UK. Erdem was observed approximately three times a month over a period of 18

months. When data collection commenced, Erdem had been exposed regularly to English for approximately one-and-a-half months in nursery school. Prior to attending nursery school, Erdem was always at home with his Turkish-speaking parents. Haznedar does not state whether Erdem's parents knew English, but we assume that they probably knew some English. These data are important in that they are original data (not older data reanalysed), which were collected by Haznedar who is bilingual in Turkish and English. Thus, we assume that Haznedar had clues to interlanguage intention, although this is not reported.

Haznedar classified Erdem's utterances that contained a verb as either XV or VX, where X represents 'other VP material (e.g. a direct object or an adverbial)' (1997: 247). As there were no examples of utterances with verbs in the first two samples, the evidence that Haznedar provides for the use of head final VPs in Erdem's interlanguage is based on his productions from Samples 3 to 8, which represent the first two months of the data-collection period; see (2) below. As Haznedar reports, Erdem produced a total of 23 'verbal utterances' during this early period, of which 22 were XV utterances and 2 were VX utterances. Except for Samples 5 and 8 where the number of occurrences of XV verbal utterances was 7 and 6 respectively, the number of XV utterances in the remaining samples during the early period ranged from 1 to 3 (2 examples in each of Sample 3 and Sample 6; 3 instances in Sample 7 and 1 instance in Sample 4). The examples of the XV utterances provided by Haznedar are listed in (2):

- 2) a. Yes # # ball playing. (Sample 3)
- b. Would you like to outside ball playing (Sample 7)
- c. I something eating. (Sample 8)
- d. Yes, toys play. (Sample 3) [in response to: Shall we play with your toys?]
- e. Newcastle going (Sample 5) [in response to: Where are we going now?]
- f. fast push (Sample 5) [context: on the swing]

In Sample 9, Haznedar found that there were 22 verbal utterances, all of which were of the VX type. Based on the evidence, Haznedar argued that Erdem initially transferred the XV order from his L1 to English L2, and that the XV order is reset to the VX order in Sample 9.

We believe that Haznedar's conclusion in relation to L1 transfer is problematic for the several reasons. First, during the initial period when XV utterances occur (i.e., Samples 3 to 8), the overall number of verbal utterances produced by Erdem are sparse (only 23 verbal utterances in all). In Sample 9, where all the verbal utterances are of the VX order, the number of verbal utterances is nearly the same

as the total number of verbal utterances produced by Erdem in Samples 3 to 8. Secondly, Haznedar categorized the verbal utterances only into two types, XV or VX, where X represents VP material such as direct object or adverbial. In view of the fact that the word order of adverbial elements is typically relatively flexible, we believe that the XV utterances should have been further categorized to separate those cases where the X element was clearly a direct object (i.e., a thematic argument) of a transitive verb from other cases where the X element was, for example, an adverbial.⁵ A third problem has to do with the inclusion of ambiguous data, which are open to alternative analyses; see examples (2a), (2b), (2d–2f) above. Specifically, utterances such as ‘ball playing’ could be a nominal, and utterances such as ‘toys play’, ‘fast push’ and ‘Newcastle going’ may be topicalized constructions where the X element is topicalized. As the subject is not overt in these utterances, we have no way of determining whether the VP material is still within the VP or whether it has moved from a postverbal position to a Topic position. In contrast, an utterance such as (2c) ‘I something eating’ is a clearer example of XV order. The point that we would like to emphasize here is that if the theory predicts that syntactic properties transfer from the L1, then the decision as to what data to include in the analysis will have to be made such that it potentially works against the theory being tested and not in favour of it.

An additional problem is the nature of the speech situation when data were collected. From some of the examples presented, it is clear that Erdem’s mother was also present when Erdem was observed by Haznedar, although we are not told whether she was present during all the sessions when data were gathered or only during some of them. We assume that Erdem mainly interacted in English with Haznedar. However, some of the examples provided indicate that Erdem’s mother also interacted with Erdem. There is unfortunately no information provided about Erdem’s mother’s knowledge of English; it is possible that she did know some English. From the discussion and the examples provided by Haznedar, it is clear that Erdem’s mother spoke in Turkish to Erdem. The examples also suggest that Erdem was asked to tell the investigator (i.e., Haznedar) what his mother had said in Turkish; likewise, there are also examples where Haznedar asks Erdem to tell his mother (in Turkish) about what he had done. We believe that because the

⁵ In the example in (2b), which occurred in Sample 7, we notice that the complement of the matrix verb *like* occurs post-verbally; in other words this would be an example of a VX order. According to the results of the quantitative analysis that is provided for this same sample, however, no instances of VX utterances are listed.

speech situation appears to be characterized by code-switching/code-mixing, the data may be 'contaminated'. Crucially, the use of both Turkish and English in the same speech situation could have facilitated both of Erdem's languages (i.e., Turkish and English) to be 'on-line'. As interlanguage performance may be more susceptible to L1 influence in such situations, this could have facilitated Erdem's use of Turkish XV word order in VPs during the data-collection phase.

A similar problem exists in relation to Sprouse and Schwartz's (1998) analysis of negative utterances in the English interlanguage of four German-speaking children. Based on their analysis, Sprouse and Schwartz argue that the evidence indicates that the children's initial hypothesis in relation to the raising of finite thematic verbs is transferred from their German L1 to their English interlanguage. Specifically, they claim that the children initially assume that thematic verbs in English, like in German, also move out of VP, past the negative element to a higher functional layer. These L2 data were originally collected by Wode (1978; 1981), and hence interlanguage intention is difficult to deduce. The subjects of the original study were Wode's children. Both German and English were used at home. In addition to spontaneous speech, Wode also regularly elicited speech samples through the use of a translation task, where the children were required to translate from German to English and vice versa. Furthermore, in many cases, the sentences that the children were required to translate were negative sentences. Wode (1978) states that the two types of data (i.e., spontaneous speech and the experimentally elicited speech) were analysed separately. However, even if this was done in the analytical stage, we do not know how the alternative use of German and English could have affected the children's speech output in their L2 in spontaneous conversation in the data-collection stage.

In the same article, Sprouse and Schwartz (1998) propose a novel analysis of the negative element not in the English interlanguage of French children. These data were originally collected by Tiphine (1983) and Gerbault (1978). In French, negation is expressed through the use of two elements *ne . . . pas*. The former, which heads the Negation Phrase (NegP), is a clitic, which is not always phonetically produced. The particle *pas*, on the other hand, is not a clitic head and is located in Spec of NegP. In French negative declarative clauses, finite thematic verbs, like finite auxiliary verbs, can raise past the negative to the higher inflectional layer. When the finite verb moves past NegP, *ne*, which heads NegP, cliticizes onto the verb. As a result, the sentence is spelled out with *ne* in the

prefinite verbal position and *pas* in the postfinite verbal position. In English, on the other hand, verb raising applies only to auxiliary verbs and the negative particle *not*, unlike *ne*, is not a clitic. Sprouse and Schwartz argue that French speakers, initially assume that thematic verbs in English, as in their L1, raise overtly from within VP to the higher inflectional layer. Specifically, Sprouse and Schwartz propose that the word *not* in utterances such as *I not love you* in the English interlanguage of French speakers is not analysed as being similar to *pas*, but is misanalysed as being analogous to the negative clitic *ne*. Crucially, according to them, even though it appears superficially that raising of the thematic verb has not taken place, verb raising has indeed occurred. But the reason that the effects of thematic verb raising is not visible is because *not* has cliticized onto the verb and moves along with it as in the learners' French L1. Sprouse and Schwartz attribute the misanalysis to the phonological similarity that exists between *not* and *ne*. However, as noted above, especially in colloquial French, of the two negative elements, *ne* is typically omitted unlike *pas*. It is relevant to mention here that Tiphine (1983) explicitly states that *ne* was nearly always omitted by Jean-Marc, one of the French-speaking subjects. Crucially, of the two elements *ne* and *pas*, it is *pas* which is never omitted in French. It may, therefore, equally be argued that as *pas* is the element that is never dropped in French, French speakers are more likely to analyse *not* as being analogous to *pas*, rather than to *ne*. While we believe that Sprouse and Schwartz' analysis of the negation data from French speakers is interesting in theory, given the phonetic facts, it awaits demonstration. What is needed, we would argue, is clearer evidence that L1 transfer has indeed occurred; this would strengthen their analysis. One such type of evidence would be instances of negative utterances, where the finite verb is an auxiliary verb or copula and the negative *not* is in prefinite verbal position (e.g., *She not is going there*).

We conclude this section with an important caveat from Corder (1992), which is a reprint of an article that was originally published in 1983. Crucially, Corder makes an important theoretical distinction between 'transfer' and 'borrowing'. According to Corder, transfer is a process of learning (i.e., of discovery and creation) that takes place 'from the mental structure which is the implicit knowledge of the mother tongue to the separate and independently developing knowledge of the target language' (p. 25). Corder argues that borrowing, unlike transfer, is 'a *performance* phenomenon, not a *learning* process, a feature of language *use* and not of language structure' (p. 26). In other words, for Corder borrowing (as it

applies to interlanguage) is a ‘communicative strategy’ during which speakers use certain aspects of their mother tongue to ‘express meanings’, on-line as it were, because their interlanguage simply lacks the means to do it. This may be a central link with strategy work that has been missed.

Corder then goes on to argue that in its most extreme form, ‘borrowing’ is indistinguishable from the process of relexification. Furthermore, borrowing is also ‘highly variable’ and ‘situation dependent’, and it occurs most strongly in situations where ‘communicative pressure exceeds knowledge’. If true, then this should caution us about uncontextualized views of interlanguage. Since Corder, in turn, cautions that not all mother-tongue-like features – including persistent mother-tongue-like features in interlanguage – are necessarily the result of language transfer, then they could, on the contrary, be the result of borrowing. It must be stressed here that Corder does not underestimate the difficulty in differentiating between the results of structural transfer (a learning process) and the results of borrowing (a communicative strategy), since both lead equally to nonce errors and regular ‘errors’. If the above claims are all correct, then Borrowing (Corder goes on to speculate) may be the mechanism by which structural transfer takes place; specifically, he proposes that it is only after ‘regular, repeated and *communicatively successful use* of the borrowed items that they come to be incorporated’ into the learners’ interlanguage (1992: 28). Given the importance then of such borrowing, and the fact that it may be highly contextual, these issues in turn allow it to be argued that uncontextualized views of interlanguage would add dangers to those created by the comparative fallacy. Thus, we would argue that the theoretical distinction that Corder makes between structural transfer (a learning process) and borrowing (a communicative strategy) poses a methodological challenge for researchers seeking to investigate the role of the L1 in L2 acquisition.

V Conclusions

In this article, we have specifically investigated the role of learner spontaneous speech in the questions raised in the introduction to this issue, refining the general questions to the specific one of how we as researchers know what learners know when we use this type of data. In dealing with the detail of the comparative fallacy – both as originally proposed and in its suggested extended state here – we have delineated dangers of biases of several types if it is ignored, but we should ourselves be challenged to offer restorative suggestions. We conclude with one suggestion, which was proposed

by Corder (1981)⁶ long ago. We believe that the use of ‘bilingual researchers’ has not been seriously exploited in the field; we intend the word ‘bilingual’ in a special sense: knowing both the advanced interlanguage and more earlier stages of that interlanguage. Corder claimed, that in terms of understanding interlanguage competence, such bilingual researchers might be those who are closest to the native speaker in the classical Chomsky sense. Such researchers would know several relevant linguistic systems: the native language of the learner, a very advanced state of the interlanguage, earlier interlanguage systems and the target language itself, at least in a declarative sense.

We believe that Corder, in the spirit presented here, thus strongly argued against a purely textual approach to interlanguage data. He thought that such a bilingual (or perhaps really ‘multilingual’) would even be in a stronger position if he or she were also a teacher, or former teacher, of such students since he or she would have ‘considerable insights’ into the interlanguage of the learners being studied, having been, ‘at some point in his or her career’, a ‘native speaker’ of that learner’s interlanguage. We could train such researchers in the same way in which generative researchers have traditionally trained speakers of ‘native languages’ to analyse the languages of their communities. Corder argued that such researchers would be ‘intuitively aware of idiosyncrasy’ in the use of interlanguage forms, ‘idiosyncrasy’ in Corder’s terms meaning interlanguage-particular use, what all SLA researchers need to discover. Such a researcher, by definition, would have systematic knowledge of interlanguage intention as discussed in this article. Maybe what we should be suggesting as the only safe approach is a team approach to all such future interlanguage research, when how we know what learners know is based on evidence from learner spontaneous speech samples; such samples could, of course, in turn, be added to other relevant data types.

VI References

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⁶This article was originally published by Corder in an expanded 1972 form in which there appeared presentation of a detailed example on how to conduct such research. For a detailed discussion of this specific example, as well as the original references, see Selinker, 1992: Chapter 6.

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