INTERLANGUAGE VARIABILITY AND MAPPING PROBLEM: A COMPETENCE OR A PERFORMANCE EFFECT ?

By

FATEMEH BEHJAT *   **FIROOZ SADIGHI ****

English Language Department, Islamic Azad University, Abadeh Branch, Abadeh, Iran.
*** Islamic Azad University, Shiraz Branch, Shiraz, Iran.*

ABSTRACT

One of the intricate properties of second language acquisition is that some types of grammatical feature appear to be acquired easily and in a native-like way, while others remain persistently difficult. There is much evidence related to the issue in the current empirical studies, and the issue raises an important explanatory problem for a theory of second language acquisition. In this paper, an attempt is made to shed light on the point whether the variability in morpho-syntactic features in adults' L2 production is due to a competence or a performance effect. On the basis of the evidence gained through the literature in the field, it is concluded that both competence and performance effects are involved in the optionality of the use of inflectional morphology. This paper also reveals that through the development of interlanguage, there is nothing as impairment, whether local or global, to hinder the correct grammatical representation of underlying syntax; morphology will be learned, and morphological paradigms are gradually added to the lexicon, in the same way as words do.

Keywords: Mapping Problem, Competence and Performance Effect, Inflectional Morphology, L2 Acquisition.

INTRODUCTION

Explanations of variability in terms of mapping problems raise the question whether variability is a performance effect or a competence effect, as well as the status of grammars exemplifying mapping problems. According to Haznedar (2003), for the time being, research in second language acquisition has focused particularly how L2 learners fail to produce verbal inflectional morphology associated with functional categories. The question is whether the frequent omission of verbal inflection means that functional categories are impaired in L2 grammars.

There are two perspectives on parameters in studies related to interlanguage grammars: global impairment implying no parameters at all and local impairment or breakdown in the case of some parameters. While in some of these studies the absence of target-like inflectional suffixes has been taken as the evidence for concluding that L2 learners do not project associated functional features or categories, for others L2 learners who make no finite distinctions in L2 acquisition and L2 grammars suffer from a global impairment in the domain of abstract features. In other words, proponents of global impairment

suggest that parameters of UG break down in a global way in L2 acquisition, with the consequence that interlanguage grammars are construction specific. In the same way, other researchers argue for a local impairment according to which functional categories are available in L2 grammars, but their feature strength is impaired. For example, Beck (1998a) suggests that breakdown in interlanguage grammar is more local than previously proposed. She claims that interlanguage grammars suffer from some kind of permanent grammatical deficit as far as feature strength is concerned. However, she assumes that in other respects the interlanguage grammar will be UG-constrained. She terms this the Local Impairment Hypothesis. Such claims for impaired L2 grammars contrast with proposals that interlanguage grammars are not defective.

In the Missing Surface Inflection Hypothesis, the lack of morphological forms in interlanguage grammars reflects a problem with the realization of surface morphology, rather than an impairment in the domain of functional projections or feature strength (Haznedar & Schwartz, 1997; Prévost & White, 2000). Second language learners usually exhibit

optionality in their use of inflectional morphology, as sometimes tense and agreement markings are present and at other times absent in their L2 production. There has been much evidence as for the production of utterances such as "he buy a book" or "the girl playing with the doll." In some cases, this variability occurs during the course of acquisition, and in some other cases, the use of inflections can also be seen even in the end-state grammar. Whereas the variability is something inevitable, there is still little agreement as to whether it indicates impairment to interlanguage grammar, or whether the functional categories are indeed present, with the lack of overt inflection attributable to a competence, or a performance effect. To make this point clear, in this paper, first a distinctive line is drawn between impairment and competence/performance effect. To do so, evidence form some studies are presented. Then, competence-performance effect in the process of inflectional morphology use is specified.

1. Two Contrastive Views on Variability in Morphology: Some Evidence

On variable use of morphology among L2 learners, there are two lines of argument over the primacy of syntax or morphology in interlanguage development. Proponents of the first view which claims that there is a close relationship between acquisition of target-like inflectional morphemes and syntactic structures believe that variable use of inflectional morphemes is the result of some kind of impairment in acquiring syntactic properties. The opposite view says that abstract morpho-syntactic features may be represented in L2 grammar in absence of overt morphology. The proponents of this approach support the "Missing Inflection Hypothesis" and believe that L2 learners acquire abstract syntactic structures early, and the acquisition of L2 inflection is simply missing. According to the second view, learners are faced with what Laudiere (2000) calls a "Mapping Problem".

Prevost and White (2000) did a longitudinal study on four adults learning L2 French and German in naturalistic environments. The two learners of L2 French, Abdelmalek and Zahra, were native speakers of Moroccan Arabic. Both learners had immigrated to France from Morocco, where

they had no previous exposure to French.

Respectively, Ana and Zita, two learners of German, were native speakers of Spanish and Portuguese respectively. They were alos immigrants to Germany. All the four subjects were interviewed. Learners were interviewed on average once a month for a little less than two years. Based on the subjects' performance, Prevost and White (2000) argued that variability in adult L2 performance does not reflect a deep lack of functional categories or features associated with tense and agreement. Rather, L2 learners have difficulties with the overt realization of morphology. In general, their results differ from Meisel (1991), who reported generally low accuracy in verbal inflection. He suggested that knowledge of agreement was impaired. In contrast, Prevost and Whie (2000) agreed that the most appropriate way to determine knowledge of agreement is to look at whether a form, if inflected, shows accurate agreement. Their results suggested that agreement is in fact in place: when an inflected form is used, agreement is largely accurate. In conclusion, they argued that L2 learners' treatment of finite morphology is not arbitrary: when a verb is finite, the relevant syntactic reflexes are found, as well as appropriate agreement. They proposed that problems of adult L2 learners relate to the mapping of specific morphological forms to abstract categories. To them, there is a real difference between L1 and L2 acquirers in this domain: normal L1 acquirers always acquire the appropriate inflectional morphology of their mother tongue and use it consistently, whereas L2 learners often do not. However, despite lack of consistent use of verbal morphology, when it occurs, it is systematic, suggesting that there is no impairment at an abstract level.

As L2 acquisition presents variability in tense and agreement morphology, there are two kinds of accounts regarding variable use of inflectional morphology in L2. On the one hand, there are researchers such as Epstein et al. (1996), Haznedar and Schwartz (1997), Lardiere and Schwartz (1997) who propose that interlanguage grammars contain abstract functional categories, and that they show syntactic consequences of these properties such as verb raising, case-assignment, and null subject presence or absence. Variability in morphology is argued

to reflect difficulties in identifying the appropriate morphological realization of functional categories; that is, the problem lies in mapping from abstract features to their surface morphological manifestation. On the other hand, others like Meisel (1991), Eubank (1993), and Beck (1998b) argue that L2 grammar suffers from some form of impairment in the functional domain, resulting in variability, either permanently or temporarily.

Following Hazedar and Schwartz (1997), the first approach refers to Missing Inflection Hypothesis or Missing Surface Inflection Hypothesis (MSIH) to indicate that it is at the surface morphological level that inflection is assumed to be absent. They looked at the data from a child whose mother tongue was Turkish and was learning English as L2. They found evidence of use of both finite and non-finite verb forms. They argue that there is no evidence for a syntactic deficit, such as underspecification of Tense, in their subject's English.

Sundquist (2005) studied a Turkish native speaker, Ilhami, who arrived in Germany in 1981 at the age of 16. He had some interviews with him and based on the transcriptions, he studied verb endings and finite and non-finiteness. The result was that his use of inflectional endings was accurate, but there are a small number of clashes in person or number features in his spontaneous production data. Although he made errors, they were consistent with predictions of MSIH. As for the second aspect, the use of finite and non-finite verbs in obligatory contexts, the results showed that although Ilhami made errors in verbal inflection by inserting infinitive forms in finite contexts, he made only handful errors in opposite direction. So, the results confirmed MSIH that L2 learners make few errors by placing finite verb forms in non-finite contexts although they may overuse non-finite forms as a default in finite contexts.

Lardiere (1998) examined the L2 English of an adult Chinese-speaker, Patty, who had resided in the US for 18 years and whose grammar was at its end-state. Laudiere found that Patty's use of inflectional morphology lacks consistency, failing to mark verbs on most occasions, whereas she showed perfect knowledge in a variety of syntactic phenomenon which suggested that she had

tense and agreement, with appropriate weak values, at an abstract level. Ladiere argues that the inconsistency in realizing morphology reflects a problem in mapping from abstract syntactic knowledge to the particular surface morphology.

The accounts assuming missing surface inflection contrast with views that argue for some kind of impairment to the interlanguage grammar, at the level of functional categories or features. This position is referred to as the Impaired Representation Hypothesis (IRH). Meisel (1991) assumes that L2 grammars lack agreement and that infiniteness and verb-placement are unrelated. As he observed in two of the three adults, he concluded that Universal Grammar (UG) is no longer involved; rather the adult proceeds in terms of linear sequencing. Therefore, he supports global impairment.

A local kind of impairment is proposed by Beck (1998b) and Eubank (1994) who said that feature strength is essentially impaired or inert in the interlanguage grammar. This was originally assumed to be a temporary phase, but now it is hypothesized that it is permanent.

Referring back to Prevost and White's (2000) study, it can be claimed that variability happens regarding inflected verb forms in L2 acquisition. Both the MSIH and the IRH make similar predictions about non-finite morphology, assuming that non-finite forms will be found in finite contexts. In the case of the MSIH, this is because non-finite forms are resorted to as a default. In case of the IRH, incidence of non-finite forms in finite contexts is due to a breakdown in feature-checking mechanisms, with the consequence that non-finite forms can occur anywhere.

Where the two hypotheses differ is over their claims about finite morphology, as well as agreement. The L2 French and German data in Prevost and White's (2000) study show that finite forms do not occur in non-finite contexts: they are not found after a preposition or a negator, and they are not used along with another verb in the same clause. These results suggest that adult learners are in fact distinguishing between finite morphology and that finite forms do not substitute for non-finite. The results support the MSIH.

The findings of Prevost and White (2000) as well as of Haznedar and Schwartz (1997) suggest that non-finite

forms in L2 acquisition are syntactically finite, and Tense and Agreement are present in L2 grammar. L2 learners have abstract features for finiteness and agreement in their interlanguage representation, as evidenced by the syntactic and morphological behavior of finite verbs. They, however exhibit problems with the surface morphological realization of particular forms; in other words, there are what Laudiere (2000) calls "mapping problem" between surface forms and abstract features. The assumption can be in such a way that L2 learners have acquired the relevant features in the syntax form the L1, UG, or L2 input. In that case, successful L2 acquisition of morphology tells one nothing, indicating whether it is the result of a performance or a competence effect. Lack of success, on the other hand, is more revealing. Lack of success raises the question of what mechanisms underlie the appearance of problems.

2.Three Hypotheses on the Acquisition of Morphosyntactic Properties

2.1 The 'Failed Functional Features Hypothesis'

Hawkins and Chan's (1997) 'failed functional features hypothesis' is a representational account, claiming that advanced L2 learners have a syntactic deficit, thus fail to specify some features which are present in functional categories in the second language. The absence of such features is directly attributable to the first language: beyond some critical period in childhood, features of functional categories cease to be available. In Patty's case, although Tense in her grammar is specified for Case marking and non-raising of thematic verbs, the features [+/-past] and [+/-sing], which are not instantiated in Chinese, are not present in her construction of her grammar of English.

2.2 The 'Morphological Misreading Hypothesis'

Lardiere (1998) suggests that even though advanced L2 learners have acquired all the morpho-syntactic properties of the second language, that knowledge is not always morphophonologically realized. Lardiere claims that in Patty's case, she has acquired Case and non-raising of verbs, which are properties associated with Tense. In addition, Patty has acquired other properties associated with Tense, that is [+/-past] and [+/-sing]. However, because of the nature of the latter, mapping sometimes

breaks down, which is reflected in Patty's performance. Furthermore, Lardiere suggests that this area of knowledge is likely to be particularly subject to factors like phonological transfer.

2.3 The 'Missing Surface Inflection Hypothesis'

The 'missing surface inflection hypothesis' proposes that advanced L2 speakers acquire the full range of syntactic properties of the second language. Unlike Lardiere's account, however, there are no assumptions about morphophonological mapping. In this proposal the problem is one of lexical access; speakers sometimes select a default form than an inflected form. The selection of a default form occurs when a speaker is experiencing a communicative pressure, or is simply uncertain about the form. If the speaker selects the right inflected form, the morphology will function as normal. And if the lexical item is in the default form, it will not provide the necessary information to the morphological component, hence morphological operations cannot occur (Prevost and White, 2000).

3. Theoretical Implications in Second Language Acquisition

Distributed Morphology (Halle and Marantz, 1993) makes a clear distinction between grammatical features and the node that hosts it in the syntax. As for Distributed Morphology, each inflected form is assumed to be associated with a set of features including person, tense, gender, and number. For lexical insertion, the features of a vocabulary item must be consistent with that of the terminal node in the syntax. While the features of a syntactic node will be fully specified, those of a lexical item may be partially specified, in that some features may be lacking or unspecified. In the absence of an exact match, there is a competition between potential candidates for insertion; the winner will be the form with the most features matching the terminal node. As the learners have acquired the relevant features of a terminal node in the syntax through UG, L1 or L2 input, their problem will be with the feature specification of lexical items. Laudiere (1998) shows that tense and agreement remain variable in an end-state L2 English grammar. What happens here is that even when more fully specified forms are acquired, they

do not win the competition for lexical insertion. This suggests that sometimes access to the more fully specified lexical entries is blocked. It can be speculated that this is due to processing reasons or to communication pressure, in either case language use is affected. So, the L2 learners' treatment of finite morphology is not arbitrary: when a verb is finite, the relevant syntactic features and appropriate agreement are found. In this domain there is a big difference between L1 and L2 acquirers: L1 acquirers always acquire the appropriate inflectional morphology of their mother tongue and use it consistently, but L2 learners do not. Nevertheless, despite the lack of consistent use of verbal morphology, the problem is systematic, suggesting that there is no impairment at an abstract level whatsoever.

Ionin and Wexler (2002) examined spontaneous production data obtained from L1- Russian children acquiring English as a second language and indicated that the omission of inflection in the child's L2 data is due to problems with morphological mapping from abstract categories to their surface representations, than a general impairment. Thus, they support the idea that there is not any sort of impairment at an abstract level.

According to Ionin and Wexler (2002), functional categories are fully present and unimpaired in L2 grammar, and problems with producing proper verbal inflection are due to morphological mapping from abstract features to specific surface representations. They propose that omission of verbal inflection in L2 English can be attributed to difficulty in accessing the appropriate inflectional morphemes. Poor mapping from abstract features to specific morphemes can be referred to as a competence effect, while in the case of suppletive inflection (using the verb *be* correctly or incorrectly), the learners have difficulty in accessing the proper morpheme (*is* vs. *are*) and so resort to the use of a default (null morpheme, *be*). This happens when they are uncertain about which morphological form they need to use to instantiate particular tense and agreement features. This uncertainty results in again a competence effect than performance.

Okuwaki (2006) studied five adult speakers in their use of past tense marking in a retelling task and spontaneous speech. It was found that they did not consistently supply –*ed* on verbs successfully. Since the learners almost perfectly realized past tense on irregular forms, it was assumed that tense features are specified in their mental grammar, or competence. If this is the case, the failure of supplying -*ed* marker on regular forms can be attributed to the domain of morphology or a performance effect not the failure to acquire syntactic representation for past tense. In addition, he studied the use of –*ing* to see if learners have problems with this morphology. Interestingly, it was found that they supplied the forms successfully when they were acquired. This suggests that the problem in an inaccurate use of –*ing* is a performance effect than the competence.

Conclusion

What can be concluded from the above discussion is that in the realization of abstract morphology through syntax or surface form, there is nothing as impairment, whether local or global, to block the correct grammatical representation of underlying syntax. Morphology must be learned. That is, morphological paradigms are gradually added to the lexicon, just like words. The inappropriate use of morphology is a performance effect. L2 learners are successful in learning vocabulary. On the other hand, more abstract syntactic properties derive from UG and do not require learning. There might be occasions when these are not accessible for processing reasons; this is a temporary breakdown between syntax and lexicon which can be referred to as a competence effect in mapping. As White (2003) puts it even when learners have acquired the surface morphological manifestations of more abstract features, such that they are entered into the lexicon, they may not always be able to retrieve the proper form for lexical insertion into a syntactic representation. When the form is retrieved, overt inflection is used; when there is a retrieval failure, inflection is missing; therefore, variability is observed. Hence, the failure in retrieval can be attributed to both competence and performance. Sometimes, retrieval does not happen successfully due to psychological factors which might affect the performance of the L2 learner in his spontaneous production. In some other occasions, the environment might hinder the L2 learner

performing to the best of his language knowledge. While he knows the rules well, his language production fails to represent it. This is the result of a performance effect. In some other cases, however, as it was discussed before, the L2 learner faces a dilemma: which form is better to be used in a specific context. In that case, his reference to a default form represents that his language production has been affected by his competence.

References

[1]. **Beck, M. L. (1998a).** L2 Acquisition and Obligatory Head Movement: English-speaking learners of German and the local impairment hypothesis. *Studies in Second Language Acquisition,* 20, 311-348.

[2]. **Beck, M. L. (ed.)(1998b).** *Morphology and its interfaces in second language knowledge.* In Assessment of the full transfer account, Hyun Kyung Bong. Amsterdam: John Benjamins.

[3]. **Epstein, S., Flynn, S., & Martohadjono, G. (1996).** Second language acquisition: theoretical and experimental issues in contemporary research. *Brain and Behavioral Sciences, 19, 677-758.*

[4]. **Eubank, L. (1993).** On the transfer of parameter values in L2 development. *Language Acquisition.* 3, 183-208.

[5]. **Eubank, L. (1994).** Optionality and the initial state in L2 development. In T. Hoekstra and B.D. Schwartz (eds.), *Language acquisition studies in generative grammar.* Amsterdam: John Benjamins.

[6]. **Halle, M. & Marantz, A. (1993).** Distributed morphology and the pieces of inflection. In K. Hale and S. J. Keyser (eds.) *The view from building 20.* Cambridge, MA: MIT Press.

[7]. **Haznedar, Belma. (2003).** Missing Surface Inflection in Adult and Child L2 Acquisition. In *Proceedings of the 6th Generative Approaches to Second Language Acquisition Conference (GASLA 2002)*, ed. Juana M. Liceras et al., 140-149. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #1038.

[8]. **Haznedar, B. and Schwartz, B. (1997).** Are there optional infinitives in child L2 acquisition? In *proceedings of 21st Annual Boston University Conference on language development.*

[9]. **Hawkins, R. and Chan, C. (1997).** The partial availability of Universal Grammar in second language acquisition: the 'failed functional features hypothesis'. *Second language Research* 13, 187-226

[10]. **Ionin, T. and Wexler, K. (2002).** Children learning English: task and overgeneration of Be. *In proceedings of SLRF (2000) Bonch-Bruevich et al. (eds.)* Cascadilla Press.

[11]. **Lardiere, D. (1998).** Dissociating syntax from morphology in a divergent L2 end-state grammar. *Second Language Research,* 14(4), 359-375.

[12]. **Lardiere, D. (1998)** Case and tense in the `fossilized' steady state. *Second Language Research,*14, 1-26.

[13]. **Lardiere, D. (2000).** Mapping features to forms in second language acquisition. In *Assessment of the full transfer account,* Hyun Kyung Bong.

[14]. **Lardiere, D. and Schwartz, B.D. (1997).** Feature-marking in the L2 development of deverbal compounds. *Journal of Linguistics,* 33, 327-353.

[15]. **Meisel, J. (1991).** Principles of universal grammar and strategies of language learning: some similarities and differences between first and second language acquisition. In *The acquisition of object clitics and definite articles: evidence from Italian as L2 and L1.*Leonini, C. (2006).

[16]. **Okuwaki, N. (2006).** Realization of inflectional morphology and syntactic knowledge: the investigations into the use of morphology by Japanese speakers learning Engliish. *University of Essex: Department of language and linguistics.*

[17]. **Prevost, P. and White, L. (2000).** Missing surface inflection or impairment in SLA? Evidence from tense and agreement. *Second Language Research, 16, 103- 133.*

[18]. **Sundquist, J. D. (2005).** The mapping problem and missing surface inflection in Turkish-German interlanguage. IN *proceedings of 7th German Approaches to Second Language Acquisition Conference (GASLA).*

[19]. **White, L. (2003).** *Second language acquisition and universal grammar.* Cambridge: Cambridge University Press.

ABOUT THE AUTHORS

Fatemeh Behjat holds a Ph.D in TEFL and has been a faculty member at English Department, Islamic Azad University, Abadeh Branch, Abadeh. She also teaches English at Islamic Azad University, Shiraz branch and the Zand Institute of Higher Education in Shiraz. She has so far presented papers at International Conferences in Iran and abroad, published books and articles in Language Journals. Her main area of interest is Teaching and Language Acquisition.

Firooz Sadighi is working as a Professor of English language and linguistics at Shiraz University. He received his doctor of philosophy from the University of Illinois at Urbana-Champaign, USA. He has taught syntax, syntactic argumentation, and language acquisition in the PhD programs in TEFL. His research areas are Language Learning, L2 Acquisition, Linguistics and Psycholinguistics.