
The Acquisition of Verbal Agreement in Instructed Italian L2A

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Researchers propose that L2 learners acquire the abstract features of agreement at relatively low levels of L2 proficiency (Bruhn de Garavito, 2003a, 2003b). However, some argue that there is also evidence for the use of default forms in learners' errors (McCarthy, 2007, 2008), and that these may be predicted based on the morphological underspecification hypothesis (MUSH). Studies in Italian child L1A (e.g., Pizzuto & Caselli, 1992) and Italian adult L2A (e.g., Banfi & Bernini, 2003) have found evidence for the use of such variability and for defaults, in particular 3rd person singular forms. Similar results have been found in studies on the acquisition of L2 verbal inflection in other languages, including Spanish (McCarthy, 2007). Other views (e.g., the MSIH) propose instead that inflection is generally correct and that defaults surface as nonfinite/ bare forms not inflected ones (e.g., Prévost & White, 2000). This present study examined the acquisition of verbal agreement in both comprehension and production by 85 university-level L2 learners of Italian. By analyzing accuracy rates, evidence was found for the acquisition of agreement morphology even at low levels of proficiency, particularly in comprehension. Although error rates were generally low, patterns emerged whereby certain persons of the verb (especially the 3rd person singular) were used as defaults to replace other forms. It is argued that results provide support for no impairment in adult L2A in general, and for the MUSH in particular.

INTRODUCTION

Previous research has proposed that L2 learners acquire the abstract features of agreement at relatively low levels of L2 proficiency (Bruhn de Garavito, 2003a, 2003b). Others have argued that while this may be true there is also evidence for morphological variability (or errors) and the systematic use of certain default forms, which may be predicted based on the morphological underspecification hypothesis (MUSH) (McCarthy, 2007, 2008). Studies in Italian child L1A (e.g., Pizzuto & Caselli, 1992) and Italian adult second language acquisition (L2A) (e.g., Banfi & Bernini, 2003) have found evidence for the presence of such variability and defaults, in particular 3rd person singular forms. Studies that have examined the acquisition of L2 verbal inflection in other languages—including those typologically similar to Italian, e.g., Spanish—have reached comparable conclusions (Bruhn de Garavito, 2003b; McCarthy, 2007). And yet another line of research suggests a lack of systematicity in

L2 learners' morphological variability, proposing instead that when supplied inflection is generally correct, and that defaults surface as nonfinite/ bare forms not inflected ones (e.g., Prévost & White, 2000). For this framework, variability is not due to an underlying representational issue, as argued by the MUSH, but is instead due to production limitations stemming from communication pressure. Clearly there is a need for more research that focuses on the issues of person and number, production versus comprehension, and default morphology in the acquisition of verbal agreement in L2A.

The objective of this study, then, is principally to explore the acquisition of verbal agreement in Italian L2A—specifically the present tense indicative—and to ascertain whether default forms emerge in learners' errors in both comprehension and production across proficiency levels. As other research has shown, differences often arise between these two skills, with performance in comprehension generally better than production (e.g., McCarthy, 2007, 2008). This is not at all surprising if one considers the additional processing involved in production as compared to the comprehension of language. If we consider one of the most widely accepted models of language production—that of Levelt (1989)—we can see that in addition to understanding learners have to also conceptualize, formulate, and then articulate in order to produce a form, in this case, the correct form of the verb. This study finds support for the acquisition of agreement morphology even at low levels of proficiency, particularly in comprehension. Support is also found for the existence of default forms in errors in both production and comprehension and, therefore, for a representational account of morphological variability.

BACKGROUND

The acquisition of verbal morphology

Debate exists in L2A over the ability of second language learners (L2ers) to acquire verbal agreement morphology. Within the generativist framework, the discussion generally centers around whether there is some sort of impairment in second language learners' grammar in the domain of functional categories (e.g., Franceschina, 2001) or whether inflection errors are instead not evidence of a representational deficit at the syntactic level, but are due to a mapping problem between the interlanguage syntax and morpholexicon (e.g., Prévost & White, 2000). Through an analysis of spontaneous production data in English (Lardiere, 1998a, 1998b) as well as in French and German (Herschensohn, 2001; Prévost & White, 2000) researchers have proposed that there is evidence that L2ers acquire the abstract features of agreement and tense at relatively low levels of L2 proficiency, arguing that verbal agreement is generally accurate when present. They contend that the nonfinite/ bare forms used in the errors are in fact finite defaults whose surface

inflection is missing (the so-called ‘Missing Surface Inflection Hypothesis’ or MSIH in Prévost and White, 2000), in that they are underspecified for finiteness. In so doing, these researchers argue for a dissociation between morphology and syntax: the syntax of L2ers contains the necessary abstract features, but they may have difficulty accessing the appropriate morpholexical items (inflection), especially in speaking, when the processing load is high.

Other research that follows this line of reasoning has also been conducted in Spanish (Bruhn de Garavito, 2003a, 2003b; McCarthy, 2005, 2006, 2007). This is important given that, like Italian, Spanish is a pro-drop language with a rich verbal morphology, and so does not pose the problem of homophony between inflected and uninflected forms found in English, French, and German. Moreover, unlike these languages, it is generally accepted that there is no optional infinitive stage in the acquisition of Spanish (although not everyone agrees, see Grinstead, De la Mora, Vega-Mendoza, & Flores, 2009 for an alternative position). Bruhn de Garavito (2003a; 2003b) examined the elicited production and recognition data of 22 low-intermediate instructed L2 learners of Spanish whose native language was English. The production task involved the retelling of a story using verb prompts in the infinitive. For the recognition task participants identified the missing subject in a number of sentences containing verbs in the present indicative. Similar to results found for the non pro-drop languages, Bruhn de Garavito (2003b) found no impairment in the acquisition of inflection seen in low error rates in production and, particularly, recognition, which she took as support for the MSIH. However, learners also showed very little use of the infinitive in their errors, and, instead, made more frequent use of the 3rd person singular as their default. This finding is pertinent to the study at hand since in Italian, like Spanish, the 3rd person singular generally ends in the thematic vowel (at least for first and second class *-are* and *-ere* verbs), and is considered to possess no overt person marker (Posner, 1996).¹ It is consequently regarded as underspecified.

McCarthy (2005, 2006, 2007) found similar results. For production, she analyzed the spontaneous speech of 11 intermediate and advanced L2 Spanish learners. To measure comprehension, she had nine learners complete a written multiple-choice task similar to the one used in Bruhn de Garavito’s (2003a, 2003b) studies. The comprehension task resulted in so few errors, it was difficult for the author to reach any firm conclusions regarding morphological variability. However, as expected, learners’ production data did show a systematic use of finite forms as default forms, particularly the 3rd person singular.

McCarthy (2007) concedes that the differences between the comprehension and production results could possibly be interpreted as support for the MSIH, which predicts a lack of variability in comprehension. Nonetheless, she argues that the MSIH cannot account for the morphological variability that arose in the production data in that not all verbal agreement was correct and errors were not limited to the use of nonfinite forms in place of finite ones. Furthermore, her additional

investigation into gender agreement in Spanish L2A found comprehension and production errors to be qualitatively similar in the defaults that arose (McCarthy 2007, 2008).

Therefore, assuming a Distributed Theory of morphology (Halle & Marantz, 1993, cited in McCarthy, 2007) and following Harley and Ritter's (2002) feature-geometric approach, McCarthy (2005, 2006, 2007) has proposed the morphological underspecification hypothesis (MUSH). This hypothesis is said to account for morphological variability and predict the types of default forms we might expect to emerge in L2A based on markedness. According to the MUSH, morphological variability is a) asymmetric and systematic, b) not the result of syntactic deficits (but instead of the non-nativelike representation of morphological features), c) yields defaults that may be zero or overt, d) extends across proficiency levels, and e) may extend to comprehension (McCarthy, 2007, 2008). On the other hand, the MSIH a) makes no prediction regarding systematic or asymmetrical morphological variability between finite forms as b) errors are expected to involve only non-finite/ bare forms, and c) inflection, when supplied, is expected to be accurate; d) it predicts variability only in production, due to a high processing load because e) errors are a product of performance limitations (i.e., computation or access) and not a deficit in the representation of morphological features (McCarthy 2007, 2008). Both views agree that the deficit is not a syntactic one.

For the MUSH, defaults, then, may vary across languages and need not be uninflected forms (contra the MSIH). They tend to be errors of underspecification, i.e., the use of non-target forms whose lexical features (e.g., person, number, etc.) are underspecified compared to the relevant syntactic features. For verbal inflection, this would involve the use of singular forms in place of plural ones in general, and the 3rd person singular in particular. McCarthy (2005) explains that when the syntactic context requires, for example, a 1st person singular form, bearing the features [1] and [singular], an L2er may under circumstances as yet not fully understood insert a 3rd person singular form. This 'elsewhere' form is considered unmarked and underspecified for person, in that it bears only the [singular] feature. On the other hand, a 2nd person singular form whose features are [2] and [singular] would not be expected to be replaced by a 1st person singular due to a feature clash (i.e., 1st vs. 2nd person). As White (2009) notes, although underspecified forms are the same as those represented in adult, native-speaker grammars, it is not clear why L2ers demonstrate a tendency to overuse these forms in contexts where a more fully-specified form would be required. Such a view of defaults could also account for the results found in languages like English and French, which found that nonfinite/ bare stem forms are used in place of finite forms (cf. Prévost & White, 2000). These forms could be expected given that they are underspecified for finiteness.

Italian verbal morphology

Before analyzing in detail some of the studies that have examined the acquisition of verbal inflection in Italian, it may prove helpful to first provide a brief description of the Italian verbal system. Italian is a pro-drop language and possesses a rich system of verbal inflection. There are four elements (although these do not appear in all tenses): the stem, the thematic vowel, tense/mood/aspect markers, and person/number markers, e.g., *parlavano*, ‘they were speaking’ → *parl-* [stem] *-a* [thematic vowel] *-va* [tense/aspect marker] *-no* [person/number marker]. The verbal inflections or agreement morphemes come at the end. The paradigm for the present tense indicative is illustrated below in Table 1.

There were several reasons for the choice of the present tense indicative as the focus of study. First, the present indicative is generally the first tense presented to instructed learners due to its communicative importance. For this reason, learners at all levels have at least some knowledge of this particular form, making it possible to trace its development across increasing proficiency levels. In addition, the present tense indicative is universally basic or unmarked (Bybee, 1985), and, as Posner (1996) points out, the present indicative of Italian “tends to have the richest system of person inflections” (p. 40) of all the tenses, which mainly reflect regular derivation from Latin, making it a suitable candidate for a study on the acquisition of verbal morphology. Finally, as many instructors of Italian language can attest, even at later stages of proficiency, learners still appear to have problems with the forms of this basic tense.

I <i>parlare</i>	II <i>vendere</i>	IIIa <i>partire</i>	IIIb <i>finire</i>
parl-O	vend-O	part-O	fin-isc-O
parl-I	vend-I	part-I	fin-isc-I
parl-A	vend-E	part-E	fin-isc-E
parl-IAMO	vend-IAMO	part-IAMO	fin-IAMO
parl-ATE	vend-ETE	part-ITE	fin-ITE
parl-ANO	vend-ONO	part-ONO	fin-isc-ONO

Table 1. Summary of the Italian regular present tense indicative.

The acquisition of Italian verbal morphology

With regard to the acquisition of verbal agreement in L2 Italian, the quantity of research available is decidedly smaller than that of some other languages, especially English and Spanish. Nonetheless, there has been sufficient amount of research done in the uninstructed (informal) context to allow for a general sketch to be drawn of the basic outline of development. Banfi (1993) and Giacalone Ramat (1993,

2003a) bring together much of this research, which was conducted as part of the Pavia Project and focused principally on the acquisition of tense. Adopting a functionalist approach, a number of researchers have recorded and analyzed spontaneous speech samples of 20 immigrants from a variety of language backgrounds whose ages ranged from 12 to 48 years old at various points after their arrival in Italy. They had come to Italy for different reasons (work, study, family, or political asylum). The majority spoke little or no Italian upon arrival in Italy. Some had received or were receiving some formal language instruction at the time of the recordings.

According to a functionalist theory of acquisition, there are three main phases of language development on the road to the final result, namely, the linguistic varieties of native speakers: pre-basic, basic, and post-basic (cf. Klein & Perdue, 1997). It is in the second ('basic') phase that verbs begin to be used functionally, albeit with little or no inflection. It is only in the post-basic variety, the third phase, that learners acquire the use of finite verbs, and thus, verbal morphology. In Banfi and Bernini's (2003) study of the acquisition of Italian verbal morphology in L2A, the authors remark that, unlike in other languages, such as French and German, Italian L2ers do not typically fossilize in the 'basic' phase (p. 92). Instead, they soon pass into a 'post-basic' variety, and, therefore, closer to the native-speaker. All but one of the 11 speakers they analyzed reached the 'post-basic' stage during the recordings of their speech samples. For this reason, we can conclude that these learners had acquired the notion of inflection in their L2 grammars, albeit to varying degrees of complexity.

As Banfi and Bernini (2003) also note, it is in the 'basic' phase of development that we find learners making use of a base form, which, they argue, is used lexically and not yet grammatically. This base form would be akin to the default form discussed above. In both instances the terms essentially refer to unmarked forms. As Battistella (1990) and Bybee (1985) describe, unmarked (or base/ default) forms are more basic or general, acquired first, typologically more frequent, structurally less complex, and show a certain degree of autonomy (in the sense that they have a separate lexical entry in the internal lexicon), and are multifunctional. Based on these characteristics, Bybee (1985) asserts that the 3rd person singular of the present indicative tends to be seen as the unmarked, basic form. It is considered to possess no overt person marker, and thus, constitutes the basis on which other forms of the paradigm are reanalyzed. Similarly, Harley and Ritter's (2002) feature-geometric approach states that unmarked forms have fewer nodes (or features) and are, therefore, underspecified. Accordingly, the 3rd person and singular would be underspecified due to the absence of participant (person) and individuation/ group (number) nodes, while nonfinite forms are underspecified for finiteness. This is precisely the view adopted by McCarthy (2005, 2006, 2007), as referenced previously.

But what was the base form in the Italian L2A studies? Although the use of the infinitive is infrequent in relative terms in L2A, research shows that it tends to be

used more often than in L1A² (cf. Banfi & Bernini, 2003; Calleri, Chini, Cordin and Ferraris, 2003; Dal Negro, 1994; Giacalone Ramat, 1993). However, these researchers have suggested that the reasons for the use of the infinitive may have more to do with “external” issues rather than the acquisition process itself. They argue that the reduced form of input to which some uninstructed learners were often exposed and the communicative style of this input was a possible cause. This input is often referred to as “foreigner talk,” characterized by simplified (and typically ungrammatical) syntax and morphology. Others have indicated typological differences in the L1 as a possible influence in promoting infinitive usage (Banfi, 1993; Berretta, 1990; Giacalone Ramat & Banfi, 1990).

On the whole, research within the functionalist framework appears to concur that similar to other studies in L2A, the 3rd person singular form of the present indicative is the base form in uninstructed, adult, Italian L2A, and thus, the point of departure for the construction of the verbal paradigm (Banfi, 1993; Banfi & Bernini, 2003; Berretta, 1990; Giacalone Ramat, 1993). Giacalone Ramat (1993) maintains that this preference derives from the fact that, at least for regular first and second conjugation verbs in Italian, the 3rd person singular forms coincide with the stem plus thematic vowel (e.g., *parl-a* ‘he speaks’), which is extracted easily due to its high frequency in the input. Furthermore, Berretta (1990) notes that the use of the 3rd person singular as a base form is predictable in Italian based on Bybee’s (1985) definition that a base form is multifunctional and diachronically reanalyzed as unmarked. Therefore, although some researchers (e.g., Banfi, 1993; Banfi & Bernini, 2003; Bernini, 1990; Giacalone Ramat, 1993) have argued that the 1st person singular, 2nd person singular/ imperative, and even the infinitive may be considered as additional, auxiliary base forms, important to learners’ initial understanding of the Italian verbal system,³ the conclusion of the matter seems to be that for Italian 3rd person singular appears to be *the* base form upon which all the majority of researchers within the Pavia Project can agree.

This finding concurs with the research in Italian L1A, which also found that the 3rd person singular was the most common substitute in children’s errors in verbal agreement (Leonard, Caselli, & Devescovi, 2002; Pizzuto & Caselli, 1992). Infinitives were *not* found to be frequent substitutes for finite verbs. This result lends support to other studies that indicate the absence of an optional infinitive stage in children’s verbal morphology development in Italian, as in other pro-drop languages (Caprin & Guasti, 2009; Guasti, 2002; Hyams, 2008).

Finally, although L2A studies have shown that the 3rd person singular was the most common default, Bernini (1990) and Berretta (1990) have also shown that learners will replace plural forms with singular forms of all persons much more often than vice-versa. This has also proved to be the case in L1A (Caselli, Leonard, Volterra, & Campagnoli, 1993; Leonard et al., 2002) where in both comprehension and production singular forms are acquired before plural ones, and directional tendencies arose in errors in favor of singular for plural. This finding may also be

accounted for based on markedness, and is predicted under the MUSH (McCarthy, 2007, 2008), given that singular forms in general are underspecified for number (individuation). It is important to remember, however, that singular forms in general and 3rd person singular in particular, would not be predicted defaults under a computational account of variability, such as the MSIH. Instead, contra the MUSH, inflection when supplied should be correct, and errors are predicted to be nonfinite/bare forms limited to production data where communication pressure is high.

AIMS OF THE STUDY

This study, then, examines adult, instructed L2ers' acquisition of verbal inflection, focusing specifically on the Italian present indicative of regular verbs. The main research questions that this study addressed were:

1. Is there evidence for the acquisition of verbal agreement (in both production and comprehension) at low levels of proficiency?
2. Is there evidence for the emergence of a base (default) form in the acquisition of Italian verbal inflection in instructed, adult L2ers (for both production and comprehension)?

As Bruhn de Garavito (2003a, 2003b) points out, there is a need for more research in the acquisition of verbal morphology in pro-drop languages in order to ascertain where these languages fit in the debate surrounding the use of nonfinite/finite forms in morphological variability. This study, then, parallels and diverges from previous studies that have investigated learners' acquisition of verbal morphology in a number of ways. Most research in Italian and other languages has concentrated on spontaneous production (e.g. Prévost & White, 2000), focused on child L1A (e.g., Caselli et al., 1993), or has included relatively few participants (e.g., Lardiere, 1998a, 1998b; McCarthy, 2007). This study parallels Bruhn de Garavito (2003a, 2003b) in that it examines the acquisition of verbal agreement in both production and comprehension in a pro-drop language. The tasks used in this study, however, are more similar in nature to those used in previous Italian L1A research (e.g., Caselli et al., 1993; Leonard et al., 2002). They are essentially controlled elicitation tasks conducted using a cross-sectional design. Thus, given this design, this study cannot speak to development in the sense of complexification of the verbal system (i.e., tense, mood, etc.), as previous research in Italian L2A has done (cf. Giacalone Ramat, 2003a). This present study diverges from Bruhn de Garavito (2003a, 2003b) and McCarthy (2005, 2006, 2007) in that it includes a large pool of participants at three levels of learner proficiency (beginning, intermediate, and advanced), and it takes into account regular, present tense verbs only.

One final noteworthy difference is that previous research in Italian L2A has focused on informal (uninstructed) acquisition (e.g., Giacalone Ramat, 2003a). Many researchers have argued that instruction may have little overall effect on the route of L2A (see summary in Doughty, 2003; Giacalone Ramat, 1993). Indeed, when we take into consideration previous research in verbal inflection (e.g., Bruhn de Garavito, 2003b; Giacalone Ramat, 2003a; McCarthy, 2007), we find very similar results in both the instructed and uninstructed contexts. Consequently, although some research has suggested that we may find differences in the error patterns of instructed L2ers when compared to uninstructed, adult L2ers, and, indeed, child L1A (e.g., Pica, 1983), it is anticipated that the error patterns of participants in this study will mirror those found in previous research, i.e., 3rd person singular forms (and singular forms in general) will be used as defaults.

RESEARCH DESIGN AND METHODOLOGY

Participants

The participants ($N=85$) for this study were native speakers of English, the majority of whom were studying (or had recently completed their studies in) Italian in the undergraduate language program at a large, state university in the United States. Fifty-nine were female and 26 were male. Their ages ranged from 18 to 47 years (mean = 21.8). The vast majority (95%) reported having learned Italian primarily through classroom instruction (or a mixture of classroom instruction and interaction with Italian native speakers). The median number of semesters spent studying Italian was as follows: Beginner proficiency, 2; Intermediate, 3; Advanced, 6; overall, 4. They followed a 'typical' university-level curriculum, characterized by communicative, theme-based learning at the beginning levels, and more focused courses (conversation, grammar, literature, etc.) at the intermediate and advanced levels. Immersion experience was relatively low: 55 (or 64%) had spent some time in Italy. Of these one had spent an academic year there, 14 had spent a semester, whereas the vast majority had been there on vacation (typically for one or two weeks). Of the 85 participants, 64 (or approximately 75%) reported knowledge of a foreign language other than Italian (typically Spanish). These participants were grouped with learners of similar proficiency for analysis purposes, and their results on the tasks were comparable to those of the other participants at the same level.

Description of tasks

The materials in this study included a consent form, a language background questionnaire, a vocabulary pre-test/training, an independent measure of Italian proficiency and two main tasks—a picture description elicitation task followed by a

picture identification task (cf. Caselli et al., 1993; Leonard et al., 2002). Level of placement on the proficiency test was the independent variable; results on the picture description and identification tasks were used as dependent variables.

Vocabulary pre-test/training

The vocabulary pre-test/training was used to test participants' knowledge of the six verbs used in the trial section of the two picture tasks, and to train participants to recognize the pictures that represented these verbs and to recognize the pictures that represented the subject pronouns. The verbs used were: *guardare*, 'to watch', *mangiare*, 'to eat', *scrivere*, 'to write', *correre*, 'to run', *partire*, 'to leave', *dormire*, 'to sleep'. An additional two verbs (*ascoltare*, 'to listen to', and *leggere* 'to read') were used only in the practice and dummy sections of the experiments. To reduce the number of intervening variables, no inchoative third conjugation (*-isc-*) verbs were used. The trial verbs were chosen because they provided a representative sample of all three conjugations, were completely regular in their formation, were easily represented by simple drawings, and because they were verbs with which participants at all proficiency levels would be familiar.

During this phase participants were presented with a list (in English) of the verbs used in the study. They had to provide the Italian translations for each of these verbs, and then match each verb to the pictures that represented them. They then had to match the subject pictures to the six different persons of the Italian verbal system they represented, i.e., *io, tu, lui/lei, noi, voi, loro* (see below for examples).

Proficiency test

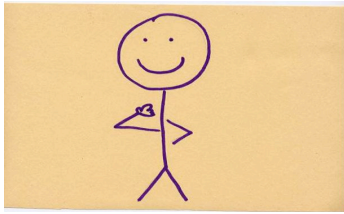
An independent measure of proficiency was administered. Because no standardized test was readily available and accessible,⁴ one had to be constructed specifically for this study—a cloze test. This measure has often been considered a viable alternative to traditional global proficiency measures (e.g., Fotos, 1991; Lennon, 1998). The one created for this study was adapted from the Italian language textbook *Espresso 2* (Bali & Rizzo, 2002, p. 72). It was not a standard cloze test but, instead, a multiple-choice rational cloze. Generally no more than one word per sentence or unit of meaning was omitted, and the spacing between omissions was kept as close to equal as possible. The words were chosen for omission on the basis that they demonstrated a variety of different morphosyntactic elements of varying degrees of difficulty. Below the passage four possible choices were provided for each blank in the cloze passage. The participants had to decide which word best fitted the context. In total, there were 21 missing words that participants had to identify.

Using the test results of all participants involved in the study a negative discriminatory analysis was conducted on the item scores to establish which items

were best able to differentiate between learners. Of the 21 items on the proficiency test, the items with the five lowest discriminatory values (< 0.3) were eliminated (item numbers 1, 9, 14, 18, and 20). The remaining 16 were then classified as items typically encountered and mastered by Beginner (6 items), Intermediate (4 items) or Advanced (6 items) level learners of Italian. This classification was then used to group participants into three proficiency levels as follows: a Beginner was someone who scored between 0 and 6 out of 16 ($n = 30$); an Intermediate learner scored between 7 and 10 ($n = 34$); and an Advanced scored between 11 and 16 ($n = 21$). The internal consistency of these 16 cloze test items proved to be relatively high, as measured by Cronbach's alpha ($= .79$).

Picture description task

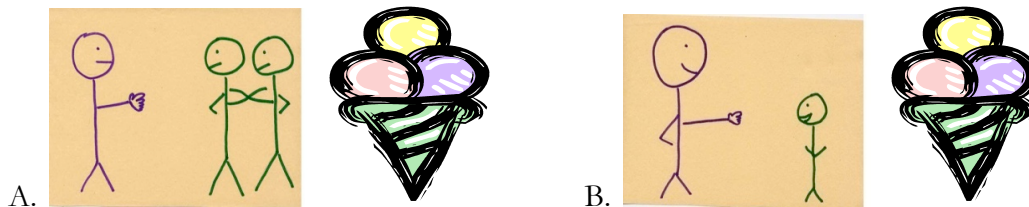
The picture description task consisted of six stick-figure like drawings representing the six different persons of the Italian verbal system (*io, tu, lui/lei, noi, voi, loro*) and six pictures representing actions (the same ones encountered by the participants during the vocabulary pre-test). Each of the six pictures depicting actions (two for each of the three conjugations) was used once in conjunction with each of the pictures depicting a person, making 36 verb forms in total to be produced by each participant in this elicitation task. As Example 1 below demonstrates, participants were asked to describe each picture by providing *only* the appropriate form of the verb to fill in the blank in the sentence underneath each set of pictures. They were told not to repeat the entire sentence in an effort to focus solely on their ability to produce verbal inflection. Each combination of person and action pictures was presented on a separate screen and students had to speak their answer into a microphone. Actual responses were recorded by hand by the researcher and on a digital voice recorder, and each participant was given a number correct out of 36. Participants had ten seconds to provide a response. The picture description task was created and run using E-prime. Both the picture description and identification tasks included practice and dummy phases, but no distracter items.

Example 1. Sample item for picture description task

_____ la TV [Answer: *guardo la TV*, 'I watch TV']

Picture identification task

The same pictures were used for the picture identification task. Each screen that the participants saw contained two sets of pictures labeled A and B, and a sentence underneath (see Example 2 below). The task was to identify the set of pictures to which the sentence referred. To do this, of course, participants had to understand the underlying verbal morphology of the sentence. Every inflection of every verb was presented once in combination with each of the other persons in the paradigm. To prevent ordering effects, the order of presentation and the correct answer was switched for the second verb of the same conjugation (in this case, *guardare*). This system was applied to all three conjugations, leading to a total of 90 combinations (items) to identify, with each person inflection presented 15 times. Participants had a maximum of ten seconds to choose the correct response. The accuracy rates were recorded by E-prime.

Example 2. Sample item for picture identification task

(On screen) *Mangiate il gelato* ('You (pl.) eat the ice-cream') [Answer: A]

RESULTS

Picture description

In the analysis of data for the picture description task, similar to other studies (Bruhn de Garavito, 2003a, 2003b), only errors in agreement were counted not formal accuracy. For example, instances in which the thematic vowel was wrong but the person agreement was correct were counted as correct (e.g., **corra* in place of *corre*, 'he runs'). Instances in which forms were impossible to interpret (e.g., **guardiave* for *guardate*, 'you (pl.) watch') or when no response was given were not counted in the calculations. When these accounted for more than one quarter of participants' responses they were eliminated from the sample. For this reason, the production data for two Beginner level participants were discarded. In the end, of the 2988 responses of 83 learners, there were 76 instances of 'no response given', and 12 of 'uninterpretable,' leaving 2900 responses (97%) that were analyzed for agreement morphology.

The overall mean for all 83 participants' production of correct agreement morphology was .87 or 87% ($SD = .15$). For each proficiency level the descriptive statistics were as follows: Beginner ($n = 28$), $M = .80$, $SD = .20$; Intermediate ($n = 34$), $M = .88$, $SD = .11$; Advanced ($n = 21$), $M = .95$, $SD = .07$. A one-way ANOVA revealed a main effect for proficiency, Welch's $F(2, 50.21) = 8.09$, $p < .01$. Planned contrasts found that although the difference between Beginner and Intermediate levels just failed to reach significance ($t(41.8) = 1.94$, $p = .06$), the other differences in proficiency levels were significant, and the effect sizes were medium to large: Intermediate vs. Advanced, $t(52.77) = 2.55$, $p < .05$, $d = .76$; Beginner vs. Advanced, $t(34.66) = 3.62$, $p < .01$, $d = 1.0$. The raw error rates for each entire group were as follows: for Beginner proficiency, 20.2% (194 out of 962 responses); for Intermediate proficiency, 11.2% (135 out of 1202 responses); and for Advanced proficiency, 4.8% (35 out of 736 responses). As stated, these rates account only for correct agreement morphology, not for *formal verbal accuracy*. In sum, the low errors rates (and high accuracy means) indicate that verbal agreement in Italian is acquired at relatively low levels of proficiency in the language, even in production, especially if we consider that the Intermediate group had an average of only 3 semesters of study in Italian. As expected, learners at higher proficiency levels demonstrate a greater ability to produce correct verbal agreement.

Table 2 provides a breakdown of the most frequently occurring errors (those that occurred more than ten times) by person. Table 3 summarizes the totals and percentages by error type.

Nonfinite forms (the infinitive and the past participle) account for less than 10% of all substitution errors. Almost all were produced by 10 Beginner level learners. On the other hand, it is clear from both tables that the greatest number of errors consisted in the use of the 3rd person (particularly singular) in place of other person forms. This was true of all proficiency levels, although the total number of errors was noticeably lower at the Advanced level. These results indicate that the 3rd person singular appears to be the base or default form in production for these L2ers of Italian.

Regarding verbal number, the means for agreement for singular forms were generally (but not significantly) higher than those for plural forms. Even though there were occasions in which singular forms replaced plural forms (e.g., 2nd singular replacing 2nd plural), these were few in number. Consequently, although number agreement was lower for plural forms, the difference was not great enough to confirm that singular forms in general are the base form for both singular and plural.

<i>Person Replacement</i>	<i>Beg</i>	<i>Int</i>	<i>Adv</i>	<i>Total</i>
1st plu replaces 2nd plu	8	4	0	12
1st plu replaces 3rd plu	10	7	0	17
2nd sing replaces 3rd sing	20	11	3	34
2nd plu replaces 3rd plu	11	19	2	32
3rd sing replaces 2nd sing	46	39	13	98
3rd plu replaces 1st plu	22	7	1	30
3rd plu replaces 2nd plu	24	33	10	67

Table 2. Most frequently occurring agreement errors in production × person

<i>Type</i>	<i>Beg</i>	<i>Int</i>	<i>Adv</i>	<i>Total</i>
1st replaces another person	30 (15.5%)	15 (11.1%)	0 (0%)	45 (12.4%)
2nd replaces another person	32 (16.5%)	33 (24.4%)	8 (22.9%)	73 (20.1%)
3rd replaces another person	102 (52.6%)	82 (60.7%)	26 (74.3%)	210 (57.7%)
Infinitive replaces conjugated verb	19 (9.8%)	3 (2.2%)	0 (0%)	22 (6%)
Past participle replaces conjugated verb	11 (5.7%)	2 (1.5%)	1 (2.9%)	14 (3.8%)
TOTAL	194	135	35	364

Table 3. Total number of agreement errors (and percentage of total errors) for each type in production

Picture identification

The mean accuracy rates for correct agreement morphology for all participants and for each proficiency level were very high: Overall ($n = 85$), $M = .97$ (or 97%), $SD = .03$; Beginner ($n = 30$), $M = .96$, $SD = .04$; Intermediate ($n = 34$), $M = .98$, $SD = .02$; Advanced ($n = 21$), $M = .99$, $SD = .01$. A one-way ANOVA revealed a main effect for proficiency, $F(2, 82) = 8.25$, $p < .01$. Planned contrasts found that although the difference between Intermediate and Advanced levels just failed to reach significance ($t(52.39) = 1.83$, $p = .07$), the other differences in proficiency levels were significant, and the effect sizes were again medium to large: Beginner vs. Intermediate, $t(41.43) = 2.69$, $p < .05$, $d = .63$; Beginner vs. Advanced, $t(34.92) = 3.81$, $p < .01$, $d = 1.02$. The raw error rates for recognition were very low overall at 2.7% (or 205 errors out 7650 responses) and for each proficiency level: Beginner, 4.3% (115 out of 2700); Intermediate, 2.1% (64 out of 3060); and Advanced, 1.4% (26 out of 1890). These rates reflect learners' ability to correctly identify verbal inflection, and include the data for all 85 participants. Interestingly, the two Beginner learners who did not produce enough analyzable responses for the production task, showed no such difficulty in the recognition task. Results for comprehension provide a definite indication for the acquisition of verbal agreement even at low levels of proficiency. The evidence is clearer, as expected due to the smaller processing load involved in the recognition task where participants need not access but simply identify the correct form. Again, as expected, learners' understanding of verbal inflection is greater—in some cases, significantly greater—at higher levels of proficiency in the language.

Previous research in Italian L1A and L2A has examined the question of substitution errors (i.e., which persons are most often used as replacements) only in reference to learners' production, not comprehension. However, research in other languages (e.g., McCarthy, 2007, 2008) has examined errors also in the context of comprehension in order to test for possible task effect differences. Similar to McCarthy, in this study a comprehension substitution error was defined as an occasion in which learners misinterpreted the morphology of the verb presented to them, in essence overextending it to another syntactic context. For example, when presented with a 3rd person singular verb, participants comprehended it as corresponding to the picture representing another person of the verb. Similar to production, the 3rd person constituted the majority of all errors made overall and at all proficiency levels: Overall, 99 out of 205 (48.3%); Beginner, 59 out of 115 (51.3%); Intermediate, 27 out of 64 (42.2%); and Advanced, 13 out of 26 errors (50%). Of the 99 errors, 64 (or 64.6%) involved the misinterpretation of a 3rd person singular form. Although these results coincide with those of the production task,

they should be approached with caution given the relatively low overall number of errors.

Regarding verbal number, similar to production, participants identified singular verb forms slightly (and not significantly) more accurately than plural verb forms, but the differences were minimal (98% vs. 97%). Again, there was no evidence of more comprehension errors when singular forms were used in context with plural forms than when they were used with other singular forms, which would indicate an overall singular default preference. For this reason, these results again cannot confirm or disprove the use of singular forms in general as a base or default form.

DISCUSSION OF RESULTS

The first main research question asked if there would be evidence of the acquisition of verbal agreement in the production and comprehension data of these Italian L2ers at low levels of proficiency. Research in languages with reduced verbal morphology has shown that agreement may be acquired relatively late—for example, third person singular *-s* in English (cf., Dulay & Burt, 1974; Lardiere, 1998a). In languages like Italian and Spanish, on the other hand, which possess a much richer inflectional system, agreement morphology appears to be developed fairly early in both L1A and L2A, instructed and uninstructed (e.g., Bruhn de Garavito, 2003a, 2003b; Caselli et al., 1993; Giacalone Ramat, 2003b). Some have suggested that the reasons for this difference may have to do with frequent and transparent morphology (cf. Banfi, 1993) or learners' awareness of the communicative importance of agreement in pro-drop languages (cf. Bruhn de Garavito, 2003b). The results of this study confirm these findings. Indeed, contrary to accounts that propose impairments in the L2 grammar prohibiting the acquisition of functional categories like agreement (Franceschina, 2001), it appears that instead learners can and do acquire agreement morphology, even at relatively low levels of proficiency.

Results showed that learners who on average had been studying Italian for three semesters and had little to no immersion experience (the Intermediate group) produced correct agreement morphology almost nine times out of 10. Even at the lowest level of proficiency, with an average of only two semesters of study, the rate of correct production was a respectable eight times out of 10. And, in fact, the difference between the means of these two lower groups was not significant. Advanced learners, as expected, performed significantly better, producing correct agreement over 95% of the time.

It is not always the case that comprehension and production tasks reveal the same findings, as stated above, perhaps due to greater processing load (cf. Prévost & White, 2000). For this reason, researchers have underlined the need to examine not only production data but also comprehension, as it may actually allow us to tap into learners' underlying competence with less performance-based 'noise' (McCarthy,

2007). If this is so, the comprehension results of this study would clearly lead us to conclude that these learners have acquired verbal agreement—even the beginning ones with an error rate of about 4%. The recognition task then confirmed the results of the production task, although performance was noticeably better in the former. A fairly strong and significant correlation of .68 ($p < .001$) between the two tasks leads us to believe that they are both equally valid, similar to Bruhn de Garavito (2003a; 2003b).

Also in accordance with the findings of Bruhn de Garavito's studies, learners showed no difference in their ability to correctly identify or produce verbal agreement based on the class of the verb. This finding would seem to argue against the role of frequency of input as a determining factor given that first class (*-are*) verbs are by far the largest and most productive of the verb classes in Italian. However, as stated before, this study examined person agreement and not formal accuracy. Instances in which the thematic vowel was wrong but the person agreement was correct were counted as correct (e.g., **corra* in place of *corre*, 'he runs'). For this reason, it is conceivable that whereas verb class did not affect person agreement, it may have had an effect on formal accuracy.

The second main research question asked if a particular default or base form would emerge in the acquisition of Italian verbal inflection in instructed, adult L2ers. Previous research had found the 3rd person singular to be the clearest candidate for this role due to its being the least marked (and least specified) of all persons of the verb. Similarly, in this study, the 3rd person singular was the most frequently used form in substitution errors in both production and comprehension. Although the number of errors (i.e., variability) decreased with proficiency, this finding held across all levels. As proposed by McCarthy (2007), the use of a certain default form should not vary with proficiency, if indeed the motivation for its use derives not from learner characteristics but from characteristics inherent in the morphology itself, i.e., underspecification. As other research in pro-drop languages has shown, the nonfinite forms did not prove to be preferred defaults in this study. This is presumably because in Italian, like Spanish, the infinitive (and the past participle) is thought to be morphologically marked, i.e., the stem vowel + the *-re* infinitival (or *-to* past participle⁵) marker.

As anticipated, these findings generally coincide with those in the uninstructed context, which also report on the successful acquisition of verbal morphology (e.g., Giacalone Ramat, 2003b). From a functionalist perspective, the 3rd person singular is used to construct the verbal paradigm, and is initially (in 'basic' varieties) used as a finiteless, lexical item, unanalyzed grammatically (Banfi & Bernini, 2003). Its use as a base form is to be expected based on principles of markedness in that it is seen as possessing no overt inflection marker (Berretta, 1990).

From a generativist perspective, these findings also lend support to McCarthy's (2005, 2006, 2007) morphological underspecification hypothesis (MUSH), which

proposes that although agreement morphology can be acquired early in L2A, it is not always correct when present, contra the MSIH proposed by Prévost & White (2000). Instead, errors (or variability) emerge and the reason for these errors may not simply be a case of missing surface inflection due to lexical access (or computation), inasmuch as they are not simply limited to the use of nonfinite forms in place of finite ones. Instead, we find systematic use of finite forms as defaults in place of other finite forms and, according to the MUSH, these tend to involve the use of unmarked or underspecified forms in place of more specified ones. Such an account could explain why in this study the fully underspecified finite or 'elsewhere' form (the 3rd person singular) comprises the majority of substitution errors.

However, unlike the explanation provided under the functionalist perspective (and indeed other generativist perspectives, such as the MSIH), the MUSH also allows for other substitutions to qualify as default forms in the form of underspecification errors. For example, we may see 3rd person plural (underspecified for person) replace other plural forms. Indeed, such errors were also found in the production (and comprehension) data in this study, and constituted the second largest number of errors after 3rd singular (see Table 2). The use of singular forms as general defaults would also be licensed under the MUSH (e.g., 1st person singular replacing 1st person plural forms) as these forms would be underspecified for number. However, as noted above, such errors constituted a very limited number of total substitution errors in this study, and, therefore, results can neither support nor disprove this hypothesis.

Default forms then were predominantly errors of underspecification in accordance with the MUSH. Nonetheless, there were also examples of feature clash errors (e.g., 2nd person replacing 3rd person forms), which could be considered problematic as these are not predicted by this hypothesis. However, feature clash errors are almost completely absent at the highest level of proficiency. It could be, as McCarthy (2007) suggests, that as L2ers become more advanced their use of defaults becomes more systematic, leading to almost total elimination of errors of feature clash. Low level proficiency learners, on the other hand, may demonstrate a certain amount of randomness in their errors. Following the feature-geometric approach of Harley and Ritter (2002), McCarthy argues that the reason for a lack of systematicity at this level may be due to the fact that these learners have not yet built up all of the necessary feature representations. Although she applies this explanation in reference to gender acquisition, we may by extension apply it to the acquisition of verbal morphology in that low proficiency learners may have acquired the feature of number (individuation/group node), but not person (participant node). Still, it is worth pointing out that even at the Beginner level, these feature clash errors constituted such a small percentage of all errors in production (and comprehension), especially compared to errors involving 3rd person singular forms (see Table 2) and 3rd person forms in general (see Table 3).

With regard to the differences between production and comprehension, as described above, the procedures involved in production are thought to involve a greater processing burden on the learner, and, for this reason it was posited that performance in comprehension would be superior to that of production. And this is what was found. If comprehension does indeed afford us a greater insight into learner competence, as is often suggested, then we could conclude that even at Beginner levels there is compelling evidence to believe learners have acquired at least the abstract notion of person agreement. If instead we wish to be more conservative, and especially if we take production results into consideration, it might be more realistic to consider the Intermediate level as providing a clearer indication that acquisition has taken place. For this reason, when as language teachers we complain that our lower proficiency students simply do not appear to 'get' agreement, it may be that we are dealing with issues related to performance and not competence, i.e., not syntactic deficits.

Performance issues, however, are not necessarily limited to production. Although performance on comprehension in this study was superior to that of production, results of the picture identification task also showed a certain amount of variability. Furthermore, the asymmetrical nature of this variability was qualitatively similar to that of the production data. Such findings are predicted by the MUSH and not by the MSIH (McCarthy 2007, 2008).

Regarding the default or base form in comprehension, it is more difficult to argue the case for one person or another based on substitution errors in identification. Given the nature of comprehension in general and the picture identification task used in this study in particular, we are unable to access the thought processes of the learners during the task. Accordingly, we can only surmise that mental substitutions have taken place based on the misinterpretations of the verb forms presented (e.g., when a 3rd person singular verb form is matched to a 2nd person singular picture). For this reason, and given the relatively low number of comprehension errors overall, the conclusions about defaults in comprehension in this particular study are still tenuous. Despite the fact that previous studies have used pictures to examine person agreement in production (Leonard et al., 2002) and gender agreement in comprehension (McCarthy, 2008), it may have proved to be an inappropriate choice for person agreement in comprehension, at least with regard to establishing a base/ default form. Nevertheless, it is worth reiterating that results for comprehension generally coincided with those of production.⁶

One other potential limitation of this study concerns the ecological validity of the measures used. With regard to proficiency, in particular, the fact that no standardized instrument was readily available for use meant that one had to be designed for this study. Reading ability and vocabulary knowledge were indirectly tested in the proficiency measure employed, but the test focused mainly on participants' morphosyntactic competency, as did the study itself. Despite this, and although the distribution of participants into proficiency groupings was done thoroughly and

conservatively, it is still conceivable that the measure used to ascertain proficiency was not as fine-tuned and encompassing as it should have been. Future research would undoubtedly benefit from the use of a standardized test of Italian L2 proficiency that allows for a more global measurement of learner proficiency. Regarding the main tasks used, it may also prove insightful for future research to employ measures that are less controlled in order to provide a more realistic picture of what learners are capable of in spontaneous production and comprehension. And, finally, regarding the focus of the study (the present indicative), future research should widen the scope to include other tenses and moods in the study of agreement so as to give a broader view on the very real problem of verbal inflection in L2A.

In sum, taking both production and comprehension results into consideration, and similar to previous studies discussed above, e.g., Bruhn de Garavito (2003a, 2003b), the L2ers in this study do not appear to be impaired in their ability to acquire native-like representations of the target language. Instead, they acquire verbal inflection at relatively early stages of development in production and, more clearly, in comprehension. Correct agreement was not always present, however, and instead a systematic and asymmetric pattern of errors arose. This is true at all levels of proficiency, albeit to varying degrees. As predicted by the MUSH, such a problem results in the surfacing of predictable underspecified default forms, most noticeably the 3rd person singular, in both production and comprehension. These results lend support to the view that the ‘deficit’ does not appear to be a syntactic one nor solely a computational (or access) one, but instead an issue of how morphological features are represented in the learner grammar. Nonetheless, as McCarthy (2007) and White (2009) point out, future research is needed to understand what exactly motivates the overuse of this underspecified morphology in contexts where more specified forms are required. Determining factors may include (but are not limited to) a processing burden or communication pressure, as Prévost and White (2000) have suggested.

The present study, then, contributes to the increasing body of research in the acquisition of verbal agreement morphology and the debate surrounding the existence of an impaired L2 grammar, and the use of nonfinite/ finite forms in morphological variability. It examines both production and comprehension in another pro-drop Romance language—a language that from a typological standpoint is understudied, as highlighted in Bruhn de Garavito (2003a, 2003b)—using a large dataset from L2 learners at multiple proficiency levels. The study confirms Bruhn de Garavito’s results by finding evidence for unimpaired L2 grammar, specifically with reference to verbal agreement. It also extends her work by linking it to that of McCarthy (2005, 2006, 2007, 2008), providing support for the claim that we can predict base or default forms in L2A on the basis of certain universal morphological features, in accordance with the MUSH.

ACKNOWLEDGEMENT

This study was originally part of my dissertation study conducted at the University of Illinois at Urbana-Champaign. I would like to thank my committee members, in particular Diane Musumeci, and the anonymous reviewers for their insightful comments and suggestions that have helped form the paper into its current version. All errors are my own.

NOTES

1. Posner (1996) points out that Italian, like Spanish and Portuguese, has adopted a zero-marker for the third person singular inflection. This is clear in the first conjugation, as only the thematic vowel (*-a*) remains. For 2nd and 3rd conjugation verbs, the Latin *-ET* and *-IT* endings fused, and, thus, we are left with only *-e* for both groups.
2. Of the 20 L2 learners analyzed in the Pavia Project, six made incorrect use of the infinitive in place of a finite verb. The greatest number came from one participant whose incorrect attempts at the present indicative consisted of infinitival forms 6.8% of the time. Italian L1A studies have shown that infinitive forms are non-existent or negligible (cf. Leonard et al., 2002).
3. The imperative forms for the second and third class verbs coincide with those of the 2nd person singular (e.g., *leggi!* ‘read!’). For first class verbs, however, the imperative coincides with the 3rd person singular (e.g., *mangia!* ‘eat!’).
4. There are, of course, standardized measures of Italian proficiency, e.g., CELI (*Certificato di conoscenza della lingua italiana*) and CILS (*Certificazione di Italiano come lingua straniera*), offered by the *Università per Stranieri di Perugia* and the *Università per Stranieri di Siena* respectively. However, for economic and pragmatic reasons, it was impossible to have all participants take the exam associated with these qualifications or others like it.
5. Regular second class (*-ere*) verbs differ in this respect, e.g., *vendere*, *venduto*, ‘to sell’, ‘sold’. The verbs used in this study actually have irregular past participles (*correre* → *corso*; *scrivere* → *scritto*). Learners made no attempt to use these irregular forms as replacements.
6. One reviewer expressed concern over whether or not the use of the drawings to refer to oneself and others may have had an effect on the picture description task too. Specifically, the reviewer noted that the error rate for 3rd person singular appeared higher than in other studies. The vocabulary training phase and the practice/dummy phases were designed to mitigate any such problems with the pictures used. Moreover, picture description has, of course, been used in studies analyzing verbal inflection in L1A (e.g., Leonard et al., 2002). Also, the number of errors in production may be greater in number simply because there were more participants in this study compared to previous studies. Finally, the results for error rates in production were in fact similar, for example, to those found in Bruhn de Garavito’s (2003b) elicited story-telling task where low intermediate learners produced an overall error rate of approximately 7% (although this was actually closer to around 30% if we include only regular verbs, as this study does), and 66% of the errors made involved 3rd person forms. In this study, the overall error rate ranged from 5% (Advanced level) to 20% (Beginner level) and approximately 58% of errors involved 3rd person forms. Nonetheless, given that studies in which spontaneous production was used to analyze inflection have led to fewer numbers of errors for 3rd person forms (e.g., Giacalone Ramat, 1993; McCarthy, 2007), it is still entirely possible that the results of this study may be due in part to task effects.

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