L2 acquisition of Italian clitic case morphology: Language transfer or continuity?

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This experimental study investigates the acquisition of Italian clitic case morphology by Anglophone speakers to determine whether clitic morphological properties are fully or partially acquired through learners' L1 grammar or through their universal knowledge. English and Italian pronominal systems are so strikingly different that an analysis of their morpho-syntactic features should provide compelling evidence to determine UG availability in adult age. Results from a grammaticality judgment task show that Italian clitic case properties are acquired in a slow but consistent manner. Such acquisition delay has been attributed to several factors: (i) difficulty to 'convert' the syntactic information into appropriate morphological forms, (ii) L1 transfer, and (iii) intrinsic complexity of the case-assignment process. Regarding UG accessibility, data justify some form of *continuity* since clitic case properties, absent in L1, can be still acquired.

1. Introduction

Investigating how learners acquire Romance clitics has always been of particular interest to L2 researchers. Recently, considerable attention has been devoted to determining when these pronouns become fully productive in L2 grammars and what acquisition process they undertake. There is a general consensus among L2 acquisitionists that Romance clitics follow a gradual and piecemeal developmental process that completes after a prolonged exposure to the target language (Granfeldt & Schlyter 2004; Herschensohn 2004; Santoro 2004, among others).

L2 acquisitionists, however, do not agree on how clitic properties and categories are acquired. Are they entirely (*Full Transfer/Full Access Hypothesis*: Schwartz and Sprouse 1994, 1996), or partially accessed through L1 categories (*Missing Surface Inflection Hypothesis*: Lardière 1998b), or derived directly from learners' universal knowledge (*Full Access Hypothesis*, Epstein et al. 1996)?

Duffield et al. (1997), for instance, exclude any L1 effects in L2 acquisition of Romance clitics. Native speakers of English (a cliticless language) and native speakers of Spanish (a language with clitics) followed similar developmental patterns in acquiring French clitics.

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The morpho-syntactic similarities of French and Spanish pronominal systems did not have any facilitating effect in the acquisition of French pronouns. Such behavior was taken as evidence to disregard any L1 influence in the acquisition of Romance clitics, which can be successfully mastered irrespective of their presence/absence in learners' L1.

In the same vein, White (1996) has shown that her two Anglophone speakers were able to learn French clitics without major difficulties. Erroneous post-verbal occurrences of French pronouns that could be attributed to English influence were rare and sporadic. Several other L2 studies (Towel and Hawkins 1994; Granfeldt & Schlyter 2004; Herschensohn 2004), on the other hand, have reported that L1 grammars play a more incisive role in L2 acquisition of Romance clitics. Ungrammatical post-verbal uses of clitics are not rare; on the contrary, they are quite frequently in L2 grammars. Actually, according to Towel and Hawkins' (1994) four-tiered clitic acquisition process, such misplacements characterize the initial stage.

As we can see, current L2 research does not seem to agree on the role L1 grammar plays in the acquisition of Romance clitics. My research wishes to shed clearer light on this particular issue that, at the moment, still appears not to be completely accounted for. I propose to investigate it by examining the acquisition of clitic case-assignment by adult English speakers learning Italian. The choice of this particular language group and the selection of this specific aspect of Italian cliticization are justified on the following grounds:

(i) English and Italian object pronominal systems are strikingly different. Italian pronouns, besides being syntactically distinct from their English counterparts, are morphologically differentiated; an option not available in English (see section 1.1 for details).

(ii) Previous L2 studies (Montrul 1996, Duffield et al. 1997, among others) have mainly investigated the acquisition of clitic placement to determine possible L1 effects. L2 researchers were mostly interested in seeing whether speakers of cliticless languages would transfer the pronominal placement of their L1. To my knowledge, there are no studies that have strictly examined the influence of learners' L1 in the acquisition of clitic case morphology, despite its complexity.

(iii) Data from L2 acquisition of Case do not lend themselves to multiple interpretations, and, as a result, could be used as compelling evidence to advance less falsifiable L2 acquisition proposals. As we have seen, there is no general consensus among L2 researchers on the frequency of post-verbal uses of Romance

clitics, and whether such errors are due to L1 transfer, or they are just a developmental phenomenon.

In sum, by taking a closer look at how English speakers deal with Italian clitic case morphology, a clearer picture should emerge of the role L1 plays in L2 development. Furthermore, my study should be able to provide more convincing evidence that could help us ascertain whether universal knowledge is still available in adult age, or L2 learners avail themselves of cognitive learning mechanisms such as analysis, analogy or hypothesis formation (*Impaired Representation Hypothesis*: Clahsen & Muysken 1996; Meisel 1997, among others).

2. A contrastive analysis

2.1. English and Italian pronominal systems

This section reviews some relevant aspects of Italian and English object pronominalization and how they differ from one another.

According to Cardinaletti & Starke (1999), Italian has basically two categories of pronouns: some essentially behave like full noun phrases (DP); others display special syntactic properties. The former have been identified as *strong pronouns*; the latter have been denominated *clitics.* A very common situation is that pronouns belonging to either class have different lexical forms. Italian strong object pronouns, for instance, are: *me* (me)*, te* (you)*, lui* (him)*, lei*(her)*, noi* (us) *voi* (you plu.)*, loro* (them). They usually occur in post-verbal position, thus displaying the same distribution as full DPs. The accusative clitics corresponding to the above strong forms are: *mi, ti, lo, la, ci, vi, li, le.* To this category, we could add a clitic paradigm showing [+dative] features, and they are as follows: *mi*, *ti*, *gli*, *le*, *ci*, *vi*, *gli/loro*. Neither accusative nor dative clitics pattern with strong pronouns. They appear pre-verbally in simple tensed clauses; this position cannot be occupied by a strong pronoun, as shown in (1) below:

(1) Maria *lei/*la* chiama. (l'amica)
M. HER/ her$_{acc}$ call-PRES (the friend)
'Maria is calling her.'

The sequence clitic + verb, or verb + clitic in imperative or non-finite clauses, cannot be interrupted by any element except by another clitic. Strong pronouns, on the other hand, can be separated from their selecting verb. This contrast is illustrated below:

(2) a. *Maria *la* solo chiama
M. her_{acc} only call-PRES
'Maria is calling only her.'

b. Maria chiama solo *lei*
M. call-PRES only HER
'Maria is calling only HER.'

Furthermore, clitics cannot be coordinated, or contrastively stressed (see 3 and 4):

(3) *Maria *lo* e *la* chiama.
M. him_{acc} and her_{acc} call-PRES
'Maria is calling him and her.'

(4) *Maria *la* chiama. (Luisa, non Mario)
M. her_{acc} call-PRES (Luisa, not Mario)
'Maria is calling her.' (Luisa not Mario)

A strong pronoun, on the contrary, can be conjoined, or contrastively stressed, as indicated in (5) and (6) below:

(5) Maria chiama *lei* e *lui*.
M. call-PRES HER and HIM
'Maria is calling HER and HIM.'

(6) Maria chiama *lei* non *lui*.
M. call-PRES HER not HIM
'Maria is calling HER not HIM.'

The peculiar syntactic behavior displayed by Italian clitics has been attributed to their impoverished internal structure. These pronouns, contrary to their strong counterparts, are not full fledged DPs, but only heads. Although there is a general consensus on their syntactic nature, researchers do not agree on how they end up in their surface position. For instance, Borer (1984) and Jaeggli (1986) believe that clitics are affix-like elements directly generated under V. Kayne (1975, 1994) and Uriagereka (1995), on other hand, claim that they are heads generated in the argument position of the selecting verb that eventually will move to some functional projection where they will check their morphological features (Chomsky 1995).

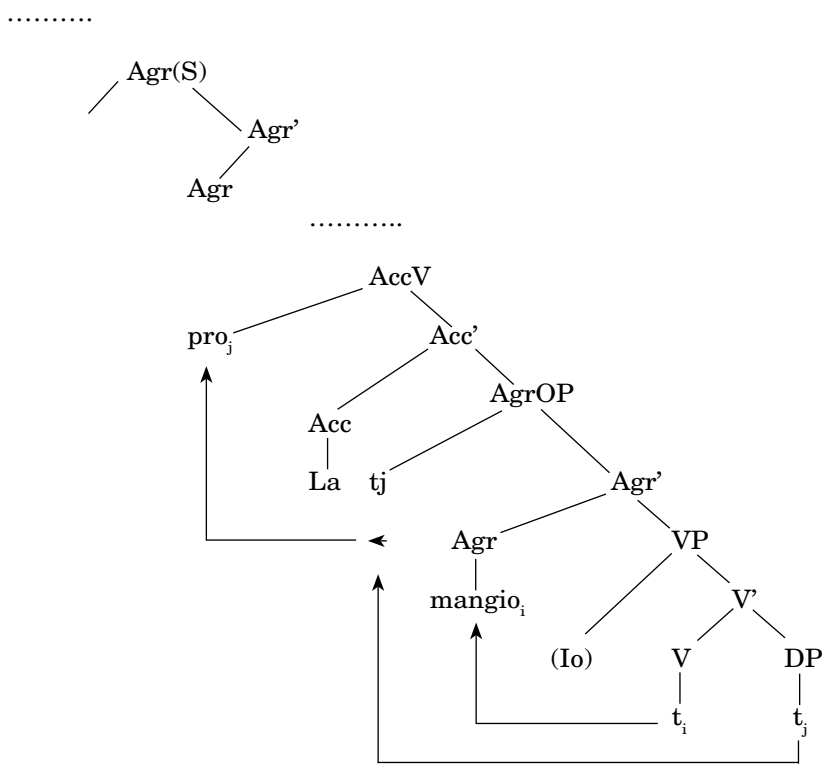
Sportiche (1996) proposes an alternative analysis that integrates the two opposing views. Although he agrees with the other analyses that clitics are just heads, he claims that they are generated where they appear. Clitics, however, are not affixes of the verb, but they head their own projections, which he calls "voices". Being just heads, they need to be licensed by an element in the structure, which

has been identified with *pro*. This empty category is located in the complement position of the selecting verb where it receives the theta-role from the predicate. At LF it moves to the Spec-position of the clitic projection where it will license the pronoun in a Spec-head configuration, as stated in the *Clitic Criterion*:

(7) *Clitic Criterion*
i. A clitic must be in a Spec-head relationship with [+F] XP at LF;
ii. A [+F] XP must be in a Spec-head relationship with a clitic at LF.
(Sportiche, 1996: 236)

The tree for the accusative clitic is given below, where the clitic voice is located higher than the relevant agreement projection (irrelevant projections omitted):

(8) (Io) *La* mangio. (la mela)
I it_{acc} eat-PRES the apple
'I am eating it'.



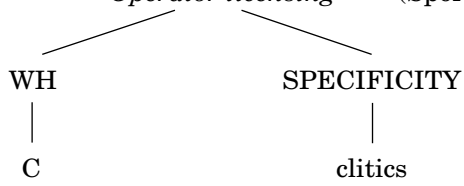
Here the agreement reflex of the Spec-head relationship is in terms of phi features (person, number, and gender).

It needs to be pointed out, however, that only those that are [+specific], inherently referential, and display structural case, i.e. nominative, accusative or genitive, are licensed in the way just described. These clitics are like [+wh] Cs that license wh-phrases. Every single scopal property of these phrases must be satisfied in a Spec-head relationship in order to satisfy the *Wh- Criterion*:

(9) *Wh-Criterion*
i. A Wh operator must be in Spec-head configuration with X_{+wh}
ii. An X_{+wh} must be in a Spec-head configuration with a Wh operator.
(Rizzi 2000:214)

If the analogy is correct, *Spec-AccV* should also function as an operator licensing the property of specificity, as shown in (10):

(10) *Operator licensing* (Sportiche, 1996:269)



Given that operators are expected to end up at LF in an A-bar position (as it is certainly the case for wh-phrases), one could safely assume that *Spec-AccV* must be a position of analogous nature.

Dative clitics also head their own 'voice' i.e. *DatV*. This functional category, however, behaves more as an agreement projection where dative case is assigned, rather than as an authentic clitic voice. There are number of reasons that justify the view that these clitics are not linked to specificity.

In all dialects of Spanish dative clitics can be paired with any object, irrespective of its features of animacy or specificity.

(11) *Le* hablé al profesor. [+spec + anim +/- def]
cl_{dat} [I] speak-PAST to-the professor
'I spoke to the professor.'

(12) No *le* hablé a nadie [-spec +anim –def]
NEG cl_{dat} speak-PAST to nobody
'I did not speak to anyone.'

Double clitic constructions with accusative pronouns are more restricted. For instance, in Porteño Spanish, the dialect spoken in Buenos Aires, accusative clitics double only with arguments that are marked as specific and animate (see 13 and 14 below: examples taken from Suñer 1990):

(13) *La* buscaban (a) una mujer que vendìa cobras. [+spec + anim - def]
[they] her$_{acc}$ look-IMPERF to a woman that sell-SUBJ copperheads
'They were looking for a woman that was selling copperheads.'

(14) **La* buscaban (a) una mujer que vendiera cobras. [-spec + anim - def]
[they] her$_{acc}$ look-IMPERF to a woman that sell-SUBJ copperheads
'They were looking for a woman that was selling copperheads.'

In (14), the object pronoun *la* is not permitted because the object of the verb (*mujer*) is not specific.

Additional evidence derives from Italian constructions featuring the auxiliary verb *avere* (have). In these structures accusative clitics, contrary to their dative counterparts, trigger morphological agreement on the past participle, as shown in (15) below:

(15) [Lui] L*e* ha mangiat*e* (le mele).
[he] them AUX-have eat-PP the apples
'He has eaten them.'

According to Kayne (1989), the appearance of the phi features of gender and number of the clitic on the past participle are the result of an 'agreement' between the past participle, which moves to the head-position of the relevant Agr-projection, and the noun phrase that passes through its Spec-position. Empirical evidence seems to support the idea that accusative Case checking and past participial agreement are two distinct operations, and may occur independently of one another. For instance, the former operation may take place in the absence of participial morphology as in cases of past participles whose object does not undergo cliticization (see 16: the uncliticized version of 15):

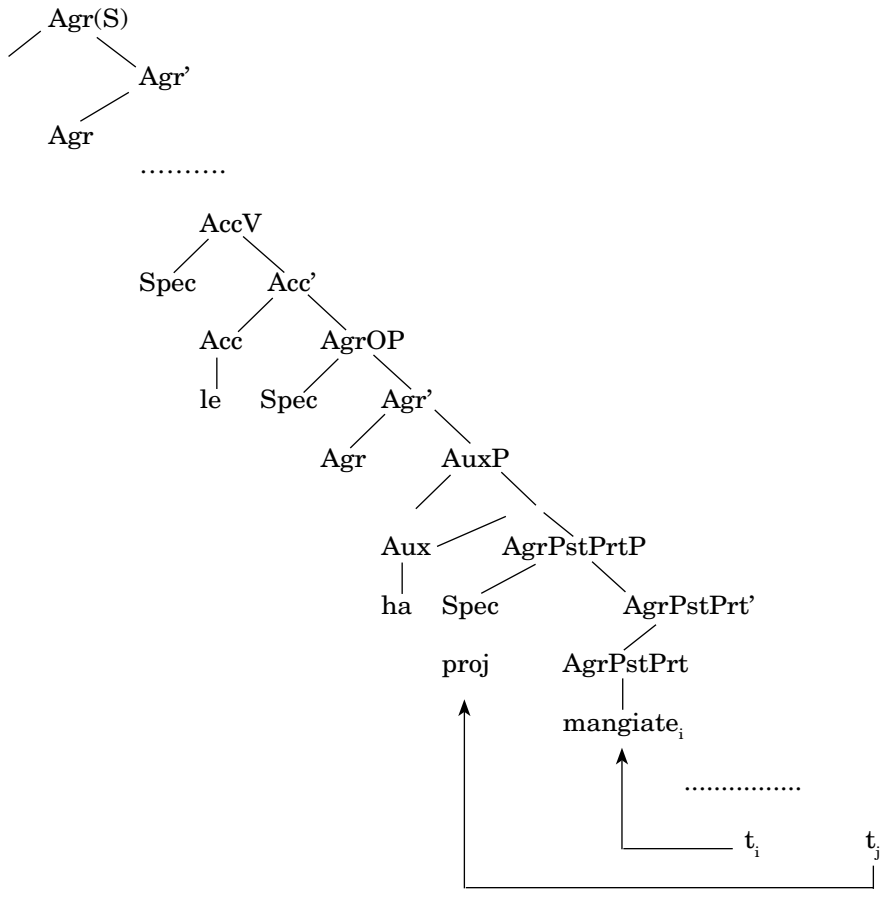
(16) [Lui] ha mangiato le mele
'He has eaten the apples.'

Conversely, past participial agreement may be found in unaccusative past participles, as in (17):

(17) Maria è arrivat*a*.
M. be-PRES arrive-PP-agr
'Mary has arrived.'

That being the case, Friedemann & Siloni (1997) and Belletti (2001) have claimed that clauses with auxiliary verbs must have at least three projections, namely AgrS, AgrO, and AgrPstPrt. What these projections have in common is that they all undergo (morphological) checking with a noun phrase filling the Spec-position of the relevant Agr-projection. In this proposal (15) will have the following syntactic representation:

(18)



Here participial agreement is sanctioned by a spec-head relationship between *pro* and the past participle. In brief, *pro* passes through the *Spec-AgrPstPrtP* before it ultimately moves to the specifier of the clitic voice where it will license the pronoun; the main verb, on the other hand, raises to *AgrPstPrt* in order to check its morphological features.

Since dative pronouns are not involved in such an operation, their related *pro* may either have skipped the intermediate step before reaching the clitic projection, or movement must have taken place covertly at LF. This is allowed only if *Spec-DatV* is an A-position. Since specificity is only licensed in A-bar positions, dative clitics must be just heads of agreement projections "devoid of interpretative consequences and assigning dative case in their A-position specifiers" (Sportiche 1996:265).

In sum, the morphological distinctiveness of these two sets of pronouns reflects specific syntactic and semantic differences.

The English pronominal system also has two categories, namely strong and weak pronouns. These two sets of pronouns, however, are not lexically differentiated; the same pronoun can be used for either form. In other words, when it occurs in syntactic contexts allowing deficient pronouns, it will behave as such, allowing contraction but disallowing modification or coordination. When, on the other hand, it occurs in syntactic contexts that require full forms, it will be used as a strong pronoun, allowing coordination or modification, but disallowing contraction. Such a contrast is displayed below (examples taken from Cardinaletti & Starke 1999):

(19)	*weak form*	*strong form*
	a. John saw 'm.	John saw him
	b. *John saw only'm.	John saw only him
	c. *John saw 'm and Mary.	John saw him and Mary
	d. *John saw 'm not Mary.	John saw him not Mary

As we can see, English weak forms, in many respects, behave similarly to Italian clitics. Contrary to Italian pronouns, however, they cannot occur pre-verbally. They can also appear as object of prepositions where they determine *stress retraction*, with the accent falling on the preposition instead of on them:

(20) I am listening tó him.

Furthermore, the two sets of pronouns are not morphologically differentiated. They only appear with accusative morphology since dative case became inactive many centuries ago (Lightfoot 1991).

From an acquisition perspective, this means that English speakers learning Italian clitics must be aware of all these differences before they are able to account for their morphological distinctiveness.

2.2. Predictions

Given these striking differences between the two pronominal systems, what predictions can be made regarding the acquisition of Italian clitic case morphology, and, most importantly, with respect to the role L1 grammar may play in its developmental process. More specifically, will L2 learners initially refer back to their L1 grammar, or to their universal knowledge to account for properties unfamiliar to them?

According to the *Full Transfer/Full Access Hypothesis* (henceforth: FT/FA), the initial state of L2A is usually the final state of L1A. In other words,

> [...] all the principle and parameter values as instantiated in the L1 grammar immediately carry over as the initial state of a new grammatical system on first exposure to input from the target language. (Schwartz & Sprouse 1996:41)

This initial state will eventually change in light of the different input from the target language. Failing to assign a representation to the L2 input based on their L1 grammar, L2 learners are forced to restructure their interlanguage until it will closely resemble their target language. These subsequent restructurings, mainly drawn from options of UG, may take place rapidly or more gradually and piecemeal. In sum, the development of L2 grammars is determined by learners' L1, as the initial stage, in part by L2 input and in part by UG properties.

With regard to the acquisition of Italian case morphology, this proposal predicts a slow and delayed developmental process. Initial L2 grammars will show extensive morphological variability, and accuracy levels will not be uniform across the different test-items, even within the same experimental group. Furthermore, the highest error rates should be noticed with the ungrammatical Italian sentences that faithfully reproduce English structures (an example is shown below):

(21) *Maria è davvero fortunata. Il suo ragazzo *la* telefona ogni giorno.
M. be-PRES really fortunate the her boyfriend her$_{acc}$ telephone-PRES every day
'Maria is very fortunate. Her boyfriend telephones her every day.

Most likely, these sentences will be judged as grammatical, since the English counterparts of the *telefonare*-type verbs select a direct object.

The *Full Access Hypothesis* (henceforth: FA), on the other hand, assumes unimpaired access to UG, even in adult age. All principles and properties available to child L1 learners are also available to adult L2 learners. As a result, features and categories, absent in their L1, may still be acquired.

Regarding the acquisition of Italian clitic case morphology, this hypothesis, contrary to the previous one, anticipates less variability and, hence, a better performance since the early acquisition stages. No major discrepancies in accuracy should be noticed among the different test-items and the two experimental groups. Once the clitic properties have been successfully acquired, the development of clitics in interlanguage grammars should proceed in a rather quick and smooth manner.

In sum, the two hypotheses make different predictions on the acquisition modalities of Italian clitic case morphology by Anglophone speakers. Their claims and predictions will be addressed in the "Discussion" section of this paper, and will be examined in view of the results reported in the experiment.

2. The experiment

1.1. Subjects

A total of 32 subjects participated in the experiment. They were adult native English speakers studying Italian in various New York City colleges. Their age ranged between 18 to 30 years. They were divided in two different groups according to their proficiency level. Their competence was determined by the number of Italian classes attended and the amount of instruction received. Subjects were categorized as: intermediates or advanced.

The intermediate group consisted of 17 subjects that had completed the first year of instruction in the target language. By the end of the first year of instruction, English learners of Italian have

been formally exposed and instructed on the use of Italian accusative and dative clitics. They are used in many different activities where unnecessary repetition of the object(s) of the person(s) described should be avoided.

The advanced group, on the other hand, consisted of 15 subjects that had completed two years of instruction. At such a high level of instruction, the use of Italian clitics is reviewed in a less formal manner. L2 learners are engaged in more challenging tasks i.e. summarizing a newspaper article, or a previously-read story where the need of pronouns in order to properly communicate is greater and more complex.

17 monolingual Italian speakers served as a control group. They were all highly educated attending various Italian universities. They ranged in age from 18 to 30 years old, closely matching our subjects' age range.

2.2. Material

The test instrument used was a Grammaticality Judgment Task (GJT). This type of experiment had already been employed in previous studies that also tested the development of Romance clitics in L2 grammars (e.g. Montrul 1996; Duffield & White 1999). The present task, however, instead of using lists of sentences, involved a timed read grammaticality judgment test. Subjects read a stimulus sentence from a computer screen; they, then, had to determine whether or not they believed the sentence to be grammatical or ungrammatical by pressing the appropriate button. Participants were presented with a new stimulus sentence every 30 seconds. After the allotted time, the sentence would disappear. This was necessary to prevent subjects from referring back to previously read sentences so that data will reflect their initial reaction, and not the one they have reconsidered and edited.

The test items consisted of grammatical and ungrammatical sentences displaying accusative or dative clitics. The experiment investigated three different variables: L1 transfer, and acquisition of accusative or dative Case. Each variable was tested in three different structures, namely (i) simple finite clause (*cl-*V_{fin}), (ii) finite clauses with an auxiliary verb (*cl-AUX* V_{pp}), and (iii) finite clauses with a modal verb (*cl-MOD* V_{inf}) examples are given in Tables 1-3 below:

Table 1. Samples of grammatical and ungrammatical stimuli testing for *L1 transfer*.

Sentence-type	*Sentence*
cl-V_{fin}	Quando Mario è al lavoro, sua moglie *gli* telefona spesso. *Quando Mario è al lavoro, sua moglie *lo* telefona spesso.
cl-AUX Vpp	Quando Mario era al lavoro, sua moglie *gli* ha telefonato ogni ora. *Quando Mario era al lavoro, sua moglie *lo* ha telefonato ogni ora.
cl-MOD-V_{inf}	Quando Mario è al lavoro, sua moglie *gli* vuole telefonare spesso. *Quando Maria è al lavoro, sua moglie *lo* vuole telefonare spesso.

Table 2. Samples of ungrammatical items testing for *accusative Case*.

Sentence-type	*Sentence*
cl-V_{fin}	*Quando Marco vedrà Lucia, *la* mostrerà le foto del compleanno.
cl-AUX Vpp	*Quando Marco ha visto Lucia, *la* ha mostrato le foto del compleanno.
cl-MOD-V_{inf}	*Quando Marco vedrà Lucia, *la* vorrà mostrare le foto del compleanno.

Table 3. Samples of ungrammatical items testing for *dative Case*.

Sentence-type	*Sentence*
cl-V_{fin}	*Quando Mario vedrà la sua ragazza, *le* bacerà con affetto.
cl-AUX Vpp	*Quando Mario ha visto la sua ragazza, *le* ha baciata con affetto.
cl-MOD-V_{inf}	*Quando Mario vedrà la sua ragazza, *le* vorrà baciare con affetto.

The first group of stimuli tested for L1 transfer, and featured 12 (4 for each sentence-type) grammatical test-items with dative clitics appearing with verbs whose English counterparts select a direct object. 12 ungrammatical sentences had the same verbs, but they erroneously appeared with accusative pronouns, faithfully reproducing English pronominal structure.

The second group of sentences tested for acquisition of accusative Case. It presented 12 ungrammatical sentences with accusative clitics erroneously used as indirect objects. Their selecting verbs, similarly to their English counterparts, would take double arguments.

The third group of sentences tested for dative Case. Dative pronouns wrongly appeared with verbs that in both languages select a direct object. Similarly to the previous group of stimuli, there were 12 ungrammatical test-items (4 for each sentence-type).

These 24 sentences were used to counterbalance the first group of test-items in order to further confirm or disconfirm its outcomes.[1]

In addition to the 48 test-items, a set of 70 sentences (48 grammatical and 24 ungrammatical) functioned as fillers or distractors, for a total of 118 stimuli. All sentences were lexically and semantically controlled in order to avoid possible misinterpretations. They were also systematically randomized.

2.3. Procedure

The GJ task was conducted individually by the experimenter using a computer program called DMASTER (Display-Master). This program was responsible for displaying the stimuli on a computer screen, and for recording subjects'responses.

Prior to the administration of the test, subjects were trained on the modalities of the experiment, and completed a practice session. In addition, they were presented with a list of Italian terms that may not be so easily recognized in the test-sentences. The unfamiliar words were translated to English.

Participants took an average of 40-45 minutes to complete the entire task. For the control group, the GJ was also administered individually with the same material. They followed the same training procedure as the other subjects. The task, however, was finished in 25-30 minutes.

3. Results

3.1. Analysis of the data

The results from the experiment reported here are based on subjects' responses to target sentences. Their responses were coded as 'correct' or 'incorrect', based on the grammaticality or ungrammaticality of a given stimulus item. Responses to filler-items were used to help determine subjects' commitment to the test. Those who reported an overall accuracy rate lower than 25 per cent (85% for natives) were excluded from the analysis. Not one English speaker was removed since they all performed within the range. Three Italian native speakers,

however, were excluded; their overall accuracy was lower than the cut-off number. The number of subjects retained for the analysis was the following: 17 natives, 17 intermediates, and 15 advanced.

Accuracy rates were then computed both across items for each participant, and across subjects for each item. Thus parallel analyses were carried out on participant-based means (t_1) and item-based means (t_2). Significance (or lack thereof) in both the t_1 and t_2 analyses means greater confidence in the replicability of the results with a different sample of participants and a different set of items.

3.2. Overall results

A general overview of the results indicates that English learners of Italian encountered a lot of difficulty in correctly judging the test-items across the three manipulation-types. Intermediates' overall accuracy rate was only 50 per cent. Advanced subjects scored slightly better (57%). Native speakers, on the other hand, were quite accurate (94%), as indicated in Table 4 below:

Table 4. Percentage of accuracy scores of the two experimental groups and Italian natives across the three manipulation-types.

Groups	*N*	*% accurate*
Intermediates	816	50
Advanced	720	57
Control	816	94

N = number of responses.

An analysis of variance of these outcomes revealed that the L2 groups differed significantly from the control group in their performance in all conditions ($p < 0.01$), indicating that L2 learners find it very troublesome acquiring Italian clitic case morphology.

The statistical analysis also reported a clear group-effect. That is to say, the three groups were visibly different in their judgments. A t-test of the grand means of the intermediate (55%) and the advanced group (57%) showed that their discrepancy was statistically significant (t_1 (1534) = 2.940, $p < .05$; t_2 (94) = 2.303, $p < .05$), suggesting that knowledge of Italian clitic case morphology substantially improves as L2 learners become more proficient in their target language. Their performance, however, after two years of formal instruction, is far from being native-like. Advanced learners, in fact, performed

visibly less accurate than the control group. The discrepancy in accuracy between the two groups was statistically significant (t_1 (1438) = 17.721, p <.001; t_2 (94) = 12.441, p <.001), indicating that the acquisition process of Italian clitic case morphology is not yet complete, despite the long period of instruction.

In sum, data indicate that the development of Italian clitics in L2 grammars is slow, but gradual and consistent reaching its completion in later acquisition stages.

3.3. Results regarding L1 transfer

As far as the presence of elements traceable to English grammar, results have shown that both L2 groups did struggle in correctly judging sentences featuring Italian verbs that do not share similar selecting requirements with their English counterparts. As Table 5 indicates, intermediates responded to test-items testing for L1 transfer at an accuracy rate of only 55 percent. Such rate did not substantially improve with the advanced group (58%). In fact, a t-test between the two grand means has indicated that their difference was statistically irrelevant (t_1, t_2 <1), suggesting that English grammar does influence the acquisition of Italian clitic case morphology, and its effects are quite persistent.

Table 5. Percentage of accuracy of items testing for *L1 Transfer*, *Accusative* and *Dative Case* reported by the two experimental groups and the Italian natives.

Groups	L1 Transfer	Accusative	Dative
	N %	*N %*	*N %*
Intermediates	408 55	204 42	204 48
Advanced	360 58	180 56	180 58
Control	408 89	204 98	204 98

N = number of responses.
% = percentage of correct responses.

It needs to be pointed out, however, that, although L2 learners found items reproducing English structures quite problematic, their performance was not much better with sentences testing for accusative or dative Case. Actually, a t-test of the accuracy rates of the items testing for L1 transfer (55%) and those testing for accusative and dative Case (45%) showed that their discrepancy was statistically significant (t_1 (814) = -2.740, p <.05; t_2 (46) = -2.394, p

<.05), suggesting that L1 is not the sole influential factor, but Italian clitic case morphology may be *per se* acquisitionally problematic irrespective of learners' linguistic background.

At the advanced level, the acquisition scenario becomes more uniform. The discrepancies in accuracy encountered early on tend to disappear. The three different types of stimuli are judged with similar degrees of accuracy (L1 transfer 58%; accusative Case 57%; dative Case 58%). English speakers' performance with items testing for accusative and dative Case has substantially improved, reaching statistical significance in either case (accusative: t_1 (382) = 2.540, p <.05; t_2 (22) = 2.322, p <.005; dative: t_1 (382) = 2.119, p <.05; t_2 (22) = 1.614, p < 1). However, as previously mentioned, a similarly visible improvement is not noticed with items testing for L1 transfer. The two experimental groups' accuracy rates are not clearly different, indicating that an additional year of instruction and exposure to the target language has not helped English speakers to finally separate themselves from what is familiar to them, i.e. their L1.

The Italian control group behaved in a quite unexpected manner. Items testing for L1 transfer were responded to with less accuracy than those testing for accusative and dative case (98%). The difference between the two grand means (89% vs. 98%) was even statistically significant (t_1 (358) = 000, p <.01; t_2 (46) = 3.261, p <. 005).

Additional statistical analysis of the data reveals some interesting results. First of all, they have indicated a general grammaticality effect. That is to say, L2 learners were very sensitive to the grammaticality of test-items. A t-test of the grand means of the grammatical and ungrammatical items testing for L1 transfer has reported a statistically significant discrepancy at any proficiency level (Intermediate: t_1 (406) = 4.365, p < 0.01; t_2 (22) = 5.071, p < 0.01; Advanced: t_1 (358) = 3.686, p < 0.01; t_2 (22) = 2.933, p < 0.01). Such 'false positives' (responses that an ungrammatical items is grammatical) may suggest that English speakers –even those in the advanced group- have internalized grammars that permit these constructions. Since the ungrammatical sentences faithfully reproduce the structures of their English counterparts, their results may further support the idea that L1 grammar plays an important role in the acquisition process of Italian clitic case morphology.

Surprisingly, analysis of variance has not indicated any structure-effect. In other words, the type of structure does not have impact on the acquisition of this morphological operation, even though earlier research (Santoro 2004) had reported a visible effect on the acquisition of clitic placement. In brief, the presence of an auxiliary

or a modal verb, and the fact that in clauses with auxiliary verbs accusative clitics are involved in additional operations do not further delay the mastery of morphological distinction of these pronouns. The three types of sentences were judged with similar degrees of accuracy. Analysis of variance of the three grand means did not report any statistical significance (t_1; t_2 <1), further supporting the idea that the intrinsic complexity of the case-checking operation may be one the leading causes for the acquisition delay irrespective of learners' language group and clause type.

To summarize given the results obtained, the following pattern can be distinguished in the data:

(i) After 12 months of L2 input (end of the first year), English speakers seem to be vaguely aware of the distinctive morphological nature of Italian clitics. However, despite the peculiarities of the pronouns they are acquiring, they do not completely rely on their L1 grammar.

(ii) After 24 months, a substantial improvement in understanding Italian clitic morphological distinction is noticed. Sentences are generally responded to more accurately. Such increase, however, is more visible with items testing for accusative and dative Case than with those testing for L1 transfer, suggesting that English speakers, despite their improved familiarity with what pronoun goes with which verb, they still struggle with Italian verbs that does not share similar selecting requirement with their English counterpart.

As we can see, the development of Italian clitic case morphology in L2 grammars is slow, but consistent. It gradually improves with time, but reaches its completion very late. In fact, after two full years of L2 input, English speakers have not yet gained full control of Italian clitic morphological distinctiveness.

4. Discussion & Conclusion

Data have highlighted two important aspects regarding the acquisition of Italian clitic case morphology: (i) it follows a slow, but gradual developmental process, and (ii) it presents some elements that can be traced back to learners' L1. This is to say that the lack of morphological distinction in English pronominal system may cause some delays on the development of clitic case morphology in Italian L2 grammars; however, it is not the sole determining factor. As we have seen, intermediate learners judged items testing for L1 transfer

at a quite low accuracy rate (55%); such a rate decreased even more with sentences that faithfully reproduced English structures (45%). Their performance, however, was not substantially different with items testing for accusative or dative Case (45% & 50%, respectively), suggesting that there must some elements intrinsic to the cliticization process that affect its development. That being the case, our data do not offer a clear-cut distinction on whether Italian clitic case morphology is attained through L1 categories and properties. English grammar does influence the acquisition of Italian case morphology, but it does not entirely constitute its initial stage, as FT/FA would predict.

Regarding the issue of whether clitic features and properties are accessed through learners' universal knowledge, or they are acquired through other cognitive processes, results seem to indicate that UG is still operative, supporting some form of continuity. If L2 learners had no access to their universal knowledge, data would have shown a totally different acquisition scenario. According to the *Impaired Representation Hypothesis* (Bley-Vroman 1989; Clahsen & Muysken 1996; Meisel 1997, among others), the linguistic knowledge that guides the acquisition of first language is not available to L2 learners. Because of this deficiency, they avail themselves of cognitive learning mechanisms that are not strictly linguistic. Bley-Vroman (1989), in fact, claims that L2 learners use general problem-solving processes such as analysis, analogy, hypothesis formation or testing as well as their L1 knowledge. In his view, aspects of L2 that are not reported in learners' L1 may be problematic to acquire due to the lack of explicit analogy between the target and the native language. Our data do show that the acquisition of Italian clitic case morphology follows a quite long developmental process. However, Italian interlanguage grammars reported less variability than one would expect if only cognitive processes of analogy and hypothesis testing had been used. Furthermore, accusative case morphology would have been acquired with less difficulty, given that both languages assign accusative Case to their pronouns. By the same token, the acquisition dative case morphology would have been very problematic and, hence, clearly delayed since dative Case is not part of English grammar. Thirdly, L1 effects would have been more pervasive than noticed.

Given that the results have shown otherwise, I am inclined to believe that English speakers must have relied on their universal knowledge to acquire Italian clitic Case properties. Although L2 learners are negatively influenced by their L1, they seem to be aware of the presence of these pronouns in L2 input from very early on.

Intermediate group's performance is not totally discouraging, and, most importantly, increases with time.

Now the following question arises: if clitic Case properties are acquired with the help of UG, why have data not reported higher degrees of accuracy at advanced proficiency levels? The answer to this question may be found in the very nature of the Case-checking process. Recent L2A research (Lardière 1998b, White 2000, among others) has highlighted an unexpected situation that seems to be common to a quite large number of advanced L2 learners. Despite their high proficiency levels, they are unable to correctly map morphological forms to the syntactic features of their target. In other words, they may be quite knowledgeable of the syntactic properties of their L2, but they may still show an erroneous and inconsistent use of its morphological forms. White (2002), for instance, has reported that her informant, an adult Turkish learner of English, despite her high L2 competence, was experiencing some problems in correctly using English inflectional and plural morphology.

According to the *Missing Surface Inflection Hypothesis* (Lardière 1998b; White & Prévost 2000b), it is in the 'conversion' procedure, rather than in the syntactic computational component, where most of the morphological spell-out problems occur. Morphology is an autonomous component of the language that 'reads' the output of lexical and syntactic derivation and determines the necessary modifications to lexemes. This modular view of language is quite compatible with recent syntactic theory. Chomsky (1995), in fact, states:

> UG must provide for a phonological component that converts the objects generated by the language L to a form [the] external system can use: PF we assume
>
> (cited in Lardière 1998b:20).

In sum, morphological errors do not necessarily presuppose syntactic impairment. They may just indicate some difficulty in translating the syntactic information acquired into the appropriate morphological forms.

This is what our data seem to indicate. English learners of Italian find it quite problematic to deal with clitic morphological distinctiveness, even though they may already be aware of the presence of clitics in L2 input. Previous L2 studies (Leonini & Belletti 2003; Santoro 2004, among others) have shown that English speakers are able to correctly place Italian clitics since the beginning,

suggesting that the syntactic properties and categories hosting these pronouns, although absent in L1, are activated early on; thus, justifying some accessibility to their universal knowledge (consonant with the *Full Access Hypothesis)*. The acquisition delay reported in our data should then be attributed not to syntactic impairment, but rather to the intrinsic complexity of this particular morphological operation.

In sum, the profile of results obtained indicates that, although there are striking morphological differences between English and Italian pronominal systems, L2 learners do not heavily rely on their L1. Clitic morphological properties and categories can be still accessed with the help of UG. Their acquisition, however, may take long time to complete. As we have seen, after two years of instruction, the use of Italian clitics is far from being native-like, suggesting that English speakers, similarly to other L2 learners have difficulties in converting the syntactic features into appropriate morphological forms.

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Appendix I: Abbreviations

Acc = accusative case
Agr = agreement
AUX = auxiliary verb
cl = clitic
COND = conditional mode
dat = dative case
FUT = future tense
IMPERF = imperfect tense
INF = infinitive
MOD = modal verb
NEG = negator
PAST = past tense
PP = past participle
PRES = present tense
SUBJ = subjunctive mood
V_{fin} = finite verb
V_{inf} = infinitival verb
V_{pp} = past participle

Notes

[1] For the second and third group of sentences only ungrammatical stimuli were selected in order to limit.

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