

Subject-to-subject raising and the syntax of tense in L2 Spanish: A Full Access approach*

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This paper investigates the acquisition of syntax in L2 grammars. We tested adult L2 speakers of Spanish (English L1) on the feature specification of T(ense), which is different in English and Spanish in so-called subject-to-subject raising structures. We present experimental results with the verb parecer “to seem/to appear” in different tenses, with and without experiencers, and with Tense Phrase (TP), verb phrase (vP) and Adjectival Phrase (AP) complements. The results show that advanced L2 learners can perform just like native Spanish speakers regarding grammatical knowledge in this domain, although the subtle differences between both languages are not explicitly taught. We argue that these results support Full Access approaches to Universal Grammar (UG) in L2 acquisition, by providing evidence that uninterpretable syntactic features can be learned in adult L2, even when such features are not directly instantiated in the same grammatical domain in the L1 grammar.

Keywords: acquisition, syntax, raising, Spanish, English

1. Introduction: UG and L2 acquisition

Within the generative Minimalist framework, it has been proposed that the generation of expressions in each natural language results from a minimal universal set of syntactic operations – Agree, (External) Merge and Move/Internal Merge (e.g., Chomsky, 2001, 2007, 2008; also Adger, 2003, and references therein) – which are constrained by a universal set of principles (e.g., principles enforcing cyclicity and locality in the application of syntactic operations and the generation of syntactic structures). Under this approach, syntactic operations are also driven by the need for checking or valuation of formal features, a superset or universal inventory of which is hypothesized to be part of the innate endowment of Universal Grammar (UG). The learning task for children developing different grammars (e.g., English, Spanish, Chinese, Arabic, etc.) is similar in that they have to acquire the specification/values of formal features that will underlie their individual adult grammar. Universal syntactic features (e.g., person, number, Case) are among the formal features available for the child in the task of developing a particular

natural language grammar. The chore of the child is that of selecting the appropriate subset of formal features (or their specific values) from this universal set, as triggered by the environmental primary linguistic data (input), in order to construct his/her language-specific mental lexicon. The selection of features by the child is ultimately responsible for the make-up of the particular syntax that the child attains and, at the same time, this process results in and explains the possibility of different grammars emerging from the same underlying universal endowment. In other words, cross-linguistic variation or parameterization can be understood as the consequence of different mental lexicons, consisting of distinct subsets of universal features or feature specifications.

The learning task of converging on a second language (L2) syntax in adulthood is arguably not different than the one for child first language (L1) acquisition. Nevertheless, if one considers an approach involving full transfer of the L1 morphosyntactic system at the initial state of L2 acquisition, the starting point or initial state of acquisition in the two cases is remarkably different (see e.g., Schwartz & Sprouse, 1996; White, 2003, but compare e.g., Epstein, Flynn & Martohardjono, 1996; Vainikka & Young-Scholten, 1994, for alternative models). Among other distinctions between the groups, initial state differences are hypothesized to be one contributing factor in the explanation of L1/L2 acquisition asymmetries in developmental route and end state knowledge.

Beyond the issue of L1 influence/transfer, which the present article also examines regarding advanced L2

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grammars, a major ongoing debate within generative second language acquisition research raises questions about the extent to which the universal set of features described above is still available in adulthood. Regardless of the particular theoretical approach one considers, researchers generally acknowledge the observed differences in developmental path and ultimate attainment that distinguish adult L2 from child L1 acquisition. While child L1 acquisition is characterized by successful and relatively uniform convergence on the target grammar, irrespective of social or psychological factors (barring pathology, e.g., abnormalities such as Specific Language Impairment (SLI); it has been commonly observed that adults rarely attain target or native-like mastery of an L2 and, more often than not, show considerable variation as groups with respect to overall degree of attainment (see e.g., Birdsong, 1999; Han, 2004; Johnson & Newport, 1989; Long, 2005; Rothman, 2008). At some point in generative second language research, the issue of this observed divergence was centered on the then-called UG-access problem (White, 2003), but currently there seems to be broader agreement that principles of UG are operative in L2 acquisition, and that interlanguage grammars are indeed UG-constrained (but see e.g., Clahsen & Hong, 1995; Meisel, 1997). Within this context, a substantial body of research over the past decade has considered more fine-grained approaches to this same issue, moving beyond the earlier question of UG-accessibility in binary terms and the position that differences in the initial state (e.g., resulting from L1 transfer) would be able to account for all, or even most, L2 differences.

Research taking the position that adults have full access to UG, therefore accessing the entire UG-superset of formal features, has focused in recent years on accounting for the observed differences in ultimate attainment. Such endeavors propose alternatives to the notion that the explanation of observable L2 differences will result from inaccessibility to universal features. For instance, Slabakova (2008) proposes the Bottleneck Hypothesis, citing the ubiquitous problems in L2 morphological production, in line with current Minimalist proposals that the locus of parametric variation resides in the encoding of formal features in the target lexicon. She maintains that the source of the acquisition problem is morphology itself, and not the formal features phonologically licensed by overt morphology.

As the name would suggest, Full Access (FA) approaches maintain that adult learners retain the ability to directly access the full spectrum of linguistic properties that are available to the child learner from the language faculty. In other words, FA approaches predict that there are no so-called critical period effects specifically pertaining only to the language faculty or to cognitive accessibility to it (i.e., Universal Grammar itself remains

completely intact in adulthood). Full accessibility is not a single approach, but rather various hypotheses that claim full access to UG in adulthood. Approaches differ regarding their predictions about developmental sequencing and ultimate attainment, considering the extent to which they argue L1 transfer combines with full accessibility, starting from the initial state for L2 learning. For example, Epstein et al. (1996) maintain that there is full accessibility to UG but that the underlying structure of the L1 is not transferred in L2 acquisition. This has the consequence of proposing that the initial states for L1 and L2 are essentially the same, i.e., not qualitatively different. As a result, the possibility of L2 convergence is predicted to be high; parsing failures that drive acquisition should be relatively unproblematic and acquisition should take place successfully to the extent that quantity and quality of input is available in the L2 context. Alternatively, Schwartz and Sprouse's (1996, 2000) Full Transfer/Full Access model proposes that the L1 syntactic system constitutes the initial state of adult L2 acquisition. As a result, L2 convergence is constrained by the L1/L2 pairing on a property-by-property basis. For example, when the L1 constitutes a subset to the L2 superset regarding the distinct grammatical properties that need to be acquired, then acquisition should take place over time, although the developmental patterns should be partially constrained by the L1. Conversely, when an L1 property is a superset to the target L2 subset, acquisition is predicted to not obtain under a FA approach. Although UG is fully accessible to each learner, accessing UG to reconfigure the transferred L1 grammar occurs as needed by parsing failures. If the L1 system blocks or prevents the flow of relevant input for L2 acquisition directly to the language faculty, as would be the case when the L1 constitutes a superset, parsing failures do not obtain and UG is never accessed in such cases. In other words, in such cases it is predicted that the L1 grammar does not allow for all parsing failures that are needed for L2 grammatical restructuring. There are other approaches that advocate partial L1 transfer but also maintain that UG is fully accessible (e.g., Vainikka & Young-Scholten, 1996). Crucially, all approaches advocating full accessibility agree that the L2 underlying representation is not fated to be that of the transferred L1, but rather that new target L2 mental representations are possible given a hypothesized fully intact and accessible language faculty into adulthood.

However, other theories that have emerged as an attempt to refine the nature of UG-accessibility have proposed that while UG principles and some features remain available in adulthood, purely syntactic features, that is, uninterpretable features that are not part of the particular subset of syntactic features of the L1, do not remain available to learners after the proposed age of a critical period (e.g., Hawkins & Hattori, 2006; Tsimpli, 2003; Tsimpli & Dimitrakopoulou, 2007).

Such theories are often referred to in the literature as Representational Deficit (RD) accounts. This is a label that acknowledges their common position with respect to inaccessibility to syntactic features, although there are significant differences in argumentation that distinguish them.

So-called RD accounts do not necessarily argue that surface reflexes of the acquisition of new L2 uninterpretable features cannot be attested. Crucially, however, they claim that such knowledge is learned as a type of domain-general learning, and not acquired. Consequently, the underlying mental representation of syntax that generates such properties is distinct from native speakers of the target language.¹ For example, Hawkins and Hattori (2006) do not deny that Japanese native speakers of L2 English show some production evidence of knowledge of *wh*-movement, a property whose target mental representation is contingent upon the acquisition of uninterpretable features lacking in their L1. Under their approach, apparent convergence on the L2 grammar regarding such phenomena is not due to an L2 target-like syntactic representation (although still UG-complying), but is accounted for by compensatory mechanisms through which especially advanced learners seem to attain an apparent mastery of certain linguistic properties, albeit by means such as statistical learning, explicit instruction and the use of syntactic operations possible in the learner's L1. These compensatory mechanisms give the surface impression of L2 convergence (e.g., adjunction of a *wh*-element as opposed to movement, in the case of L2 English by Japanese native speakers).

More importantly, it is normally understood that under RD approaches the reason why L2 learners do not converge on the target L1 grammar in certain respects is because they do not have access in the L1 to the specification of uninterpretable features that are part of the target grammar, and are no longer able to acquire this feature specification in the L2. The strongest interpretation of the RD approaches would take the specification of these features to be entirely absent from the L1 (we will refer to this position as the GLOBAL RD APPROACH). However, we will argue in Section 3 that in fact not all RD approaches can maintain this strong position in order to account for the empirical differences they identify between the target L2 grammars and the L1 grammars. We will argue that at least the RD approach developed by Hawkins and Hattori (2006) is actually compatible only with a scenario in which the necessary targeted specification of the uninterpretable features is absent from the target L2 syntactic domain being acquired,

but is actually found elsewhere in the target grammar (we will refer to this as the LOCAL RD APPROACH).^{2,3}

To fully test the explanatory adequacy of theories such as RD that claim inaccessibility to L2 uninterpretable features over accounts that maintain full feature accessibility, it is necessary to test L2 learners on properties meeting three conditions: (i) properties that are dependent on the acquisition of new uninterpretable features in the L2, where novelty needs to be understood either in terms of a global-deficit or a local-deficit approach; (ii) properties that are not learnable via target input frequency, corresponding to structures that are grammatical in the L1 but are ungrammatical and, therefore, lacking in L2 input; and (iii) properties not explicitly taught to L2 learners, in the usual cases.

The goal of this study, then, is to explore the mental representation of L2 grammars, by investigating the syntactic acquisition of properties that meet the aforementioned criteria. We tested English native speakers who are advanced L2 Spanish speakers, regarding phenomena that involve the feature specification of T(ense), especially in subordinate clauses (embedded T). We examined the syntactic reflexes of the featural composition of embedded T in complement clauses to the verb *parecer* “to seem”, which are different in English and Spanish, by testing the properties of subject-to-subject (henceforth, StoS) raising structures with and without an interceding dative experiencer. We present here experimental results from the test of various condition types involving different tenses (present and perfective past) and different experiencer realizations, for Tense Phrase (TP), verb phrase (*v*P) and Adjectival Phrase (AP) complements of the raising verb *parecer* “to seem”.

Crucially, our results will show that advanced adult L2 speakers of Spanish whose native L1 is English can perform just like native Spanish speakers (NSs) regarding knowledge of what is and is not grammatically possible for Spanish TP complements in this domain. This is despite the fact English and Spanish differ in crucial ways in

¹ This goes back to an old issue of acquisition–learning distinction as early as the 1970s.

² A reviewer emphasizes that it is important to make a distinction between syntactic theory questions concerning what features the grammars of English and Spanish have, and issues concerning the L2 acquisition of such features. The RD approaches we evaluate here make the assumption that the failure/deficit in the acquisition of certain properties of the L2 grammar is dependent upon featural differences between the two target grammars, in ways in which we make precise in Sections 1 and 3 below. We also make clear in Sections 2 and 3 below how the grammars of English and Spanish differ regarding the featural properties of *parecer*-clauses, but show how these differences are not sufficient to yield failure in the acquisition of the corresponding properties of L2 Spanish by English L1 speakers, contrary to what RD approaches would predict.

³ See Section 3 for a precise characterization of the notion of syntactic domain considered in our evaluation of RD approaches.

this domain and the fact that these subtle differences are not explicitly taught. In addition, the AP complement cases that were used for a counterbalanced control will show one additional result that is very important: the advanced second language speakers (L2ers) also accept those cases in a similar way to the NSs, indicating that like NSs they make a clear distinction between the two types of complements (TP vs. AP) for the raising verb *parecer*. Considering the syntactic properties we propose for the learning task in the tested domain, we interpret these results to provide evidence that reconfiguration of uninterpretable syntactic features in the L2 is indeed possible in adulthood, after the proposed age of a critical period, even when such features are not instantiated in the same domain in the L1 grammar. Here we will argue precisely in favor of Full Access (FA) approaches in this domain, and provide arguments for the inadequacy of Local RD approaches (as previously defined), also raising questions about the scope of Global RD approaches.

Section 2 provides the syntactic analysis we assume for the relevant raising structures in English and Spanish. Based on Section 2, Section 3 spells out the learning task for L1 English learners of L2 Spanish and the hypotheses being tested in this study. Sections 4 and 5 provide the details of the empirical study's methodology and results. Section 5 offers further discussion based on the data as well as broader conclusions.

2. Raising structures with “seem” in English and Spanish

Raising phenomena have long attracted linguists' attention, due to their relevance to the analysis of syntactic movement and also to the salient surface similarities they share with control phenomena, in spite of their quite different syntactic behavior (see e.g., Chomsky, 1986, 1995; Epstein, Pires & Seely, 2005; Epstein & Seely, 2006; Hornstein, 2003; Lasnik, 1999; see also Davies & Dubinsky, 2004, for extensive review and additional references). We would like to stress an important asymmetry that takes place between English and Spanish, involving StoS raising across an argument interpreted as an experiencer (henceforth, REXP). More precisely, in this paper, REXP corresponds to D(eterminer) P(hrase)-raising from embedded Spec,TP to matrix Spec,TP, across an experiencer. As discussed, e.g., in Torrego (1996) and Ausín and Depiante (2000), StoS raising has been argued to be blocked in Spanish when there is an overt experiencer, unlike in English.

This empirical difference between the two languages offers an important ground for comparison in the context of L2 acquisition, and can provide relevant insights into the nature of the mental representation of L2ers, especially in terms of feature configuration, as we will explore in detail next.

2.1 Subject-to-subject raising across an experiencer

It has been argued that, in Spanish, when the raising verb *parecer* “to seem” co-occurs with a non-clitic experiencer in the same clause, the experiencer must be doubled through a dative clitic (compare (1) to (3) below). However, the clitic experiencer can occur alone without being a double to a non-clitic DP, or the experiencer can be entirely omitted in certain tenses (2):⁴

- (1) A Pedro le parece que María
to Pedro.EXP 3P.SG.CL.EXP seems that María
es bella.
is beautiful
“It seems to Pedro that María is beautiful.”
- (2) (le) parece que María es bella.
3P.SG.CL.EXP seems that María is beautiful
“It seems to him/her that María is beautiful.”
- (3) *A Pedro Ø parece que María es bella.
to Pedro.EXP seems that María is beautiful
“It seems to Pedro that María is beautiful.”

Apart from the fact that English does not show experiencer clitic doubling, it has been argued that a crucial asymmetry arises between English and Spanish, in that English allows REXP, whereas Spanish bans such raising across an experiencer clitic (Torrego, 1996). As can be seen in the contrast between (4) and (5) below, in English, raising of *Peter* can occur across the overt pronominal experiencer *to me* in the matrix clause, (5). However, in Spanish raising of the embedded subject *Pedro* to the matrix clause cannot take place across the overt experiencer clitic *me* “to me”.

- (4) *Pedro_i me parece [_i amar a María].
Pedro me.EXP seems to.love to María
“Pedro seems to me to love María.”
- (5) Peter_i seems to me [_i to love Mary].
me.EXP

Part of the theoretical relevance of this contrast has to do with the fact that the experiencer is taken to c-command the embedded clause, due to evidence of a violation of Binding Condition C as in (6). The experiencer (*to her*) cannot be coreferential with the embedded object *Mary*, which is taken to indicate that it c-commands *Mary*, given

⁴ Torrego (1996, p. 102) argues that the overt experiencer can be entirely omitted (also without a clitic) in the present and imperfect verbs forms, but not in the preterit.

Condition C (see e.g., Chomsky, 1995; Kitahara, 1997, and discussion in Ausín & Depiante, 2000).

(6) *Peter_i seems to her_k [to love Mary_k].

However, it has been argued that only in the case of Spanish does the intervening experiencer block StoS raising of the subject from embedded Spec,TP (RExp), as formally represented in (7).

(7) *Pedro_i me parece [TP *t_i* amar a
Pedro me.EXP seems to.love to
María]. (= (4))
María
“Pedro seems to me to love María.”

A possible approach is that, at least in the case of Spanish, a locality condition such as Relativized Minimality or the Minimal Link Condition is at play, in that the raising subject cannot raise to the matrix Spec,TP because a closer competitor structurally intervenes, corresponding to the clitic experiencer (see e.g., Rizzi, 1990). However, this requires independent motivation for why the intervention does not take place in English. According to an alternative proposal by Ausín & Depiante (2000) that we adopt here, and under the assumption that a locality condition applies crosslinguistically, both in English and in Spanish, the source of the asymmetry in grammaticality between Spanish (4) and English (5) is the result of a difference in feature specification in the complement clause of *parecer* “to seem”. It has been argued in different guises that in cases of StoS raising in English, embedded T is defective (T_{def}) (see e.g., Chomsky, 2001; Epstein & Seely, 2006; Epstein et al., 2005, and references therein). For Ausín and Depiante (2000), English T is defective because it is specified as [–finite, –tense], preventing it from assigning/valuing the nominative Case of *Peter*.⁵ As a consequence, *Peter* overtly raises in (5) and (6), and has its Case checked/valued by the non-defective T of the *seems*-clause, as illustrated in (8).^{6,7}

⁵ Ausín and Depiante (2000) follow e.g., Chomsky (1995) and Martin (1996) in this treatment of tense. However, see Pires (2006), for evidence against the approach to tense in these proposals.

⁶ Whether DP-raising is e.g., Case-driven or EPP-driven has been the object of extensive debate that is orthogonal to the goals of the current study (see Epstein & Seely, 2006; also Chomsky, 2001, and references therein for different approaches).

⁷ Torrego (1996) proposes that StoS raising across the experiencer is possible in English because the experiencer is adjoined to the lower clause, and does not count as a potential antecedent for the NP trace of the raised subject. However, Torrego (1998) proposes that the experiencer in Spanish is merged in a different position, in the Specifier of a *p* projection that intervenes between the matrix Spec,T and the subject of the embedded clause, blocking raising under the Minimal Link Condition. Although Torrego’s proposals provide a structural distinction account for the asymmetry between English and

(8) Peter_i seems to me [TP *t_i* T_{def} to love Mary]. (= (5))
me.EXP

Crucially, Ausín and Depiante (2000) argue that embedded T in Spanish as in (4) is always non-defective (T_{non-def}), so it must assign/value the Case feature of an embedded subject.⁸ Therefore, the difference in the grammaticality of RExp in these two languages resides on the feature specification of embedded T. In English, T can be defective, or [–finite], whereas in Spanish, it is always non-defective, or [+finite]. As a result, (4) is ungrammatical in Spanish because RExp is blocked, due to the lack of an embedded defective T in Spanish that would allow raising to take place, as shown in (9):

(9) *Pedro_i me parece [TP T_[non-def] *t_i*
Pedro me.EXP seems
amar a María]. (= (4))
to.love to María
“Pedro seems to me to love María.”

However, provided StoS raising does not take place, clauses with *parecer* “to seem” can select for embedded clauses, and also take an experiencer, as shown by the grammaticality of (1) and (2) above. This is possible because in such cases the complement clause corresponds to a morphosyntactically non-defective, or [+finite] T, which as a consequence also projects to a CP, as shown in (10):

(10) A Pedro le parece
to Pedro.EXP 3P.SG.CL.EXP seems
[CP[TP que María T_{non-def} es bella]. (= (1))
that María is beautiful
“It seems to Pedro that María is beautiful.”

Therefore, this approach provides an explanation, based on a distinction in the functional- feature specification of the embedded clause, for why clauses with *parecer* “to seem” that occur with an experiencer block RExp in Spanish. This explanation is an alternative

Spanish, it raises questions as to why the experiencer must merge in different structural positions, in different clauses, in the two languages. In addition, under Torrego’s proposal the only difference between (4) and (5) would be the presence of the experiencer, triggering the grammaticality distinction. However, as Ausín and Depiante (2000) discuss in detail, and as we review in this paper, there are other differences between the two cases that support the formal analysis Ausín and Depiante propose, and which we assume here.

⁸ Non-defective domains include control clauses in Ausín and Depiante’s (2000) approach, in that they argue that T in those clauses carries [+tense] but assigns null Case. We do not adopt their approach to Control, given that it does not bear directly on the results we present here, considering the Local RD approach we specified in Sections 1 and 3. See Pires (2006) for problems with the null Case approach to control clauses.

to an approach in which the source of this impossibility would be linked to the presence of the experiencer alone.

However, it is still necessary to explain under this account why sentences with *parecer* “to seem” are grammatical in Spanish with an overt DP in the Specifier of the *seem*-clause, despite the fact that *seem* co-occurs with an infinitive verb, as in (11). Ausín & Depiante (2000) argue that this does not constitute a counter-example to their analysis blocking StoS raising across the board with *parecer*-clauses in Spanish, because their analysis includes, but is not restricted to, clauses with an intervening experiencer.

- (11) [TP Pedro parece [_{VP} amar a María]].
 Pedro seems to.love to María
 “Pedro seems to love María.”

Considering the properties of *parecer*-clauses discussed in this section, Ausín and Depiante (2000) argue that there are in fact two distinct verbs *parecer* “to seem” in Spanish. The first one, corresponding to cases such as (1)–(2) above, is a main verb that selects for an embedded CP with a non-defective T, as in (10), and which can also project an experiencer in the main clause. The second verb *parecer*, corresponding to (11) above, is argued by Ausín & Depiante to be a modal verb that cannot project an experiencer in its clause, as shown in (4)/(9). In addition, under this analysis, the structure of (4)/(9) and (11) must in fact be monoclausal, and the infinitival verb *amar* “love” is not part of an embedded TP, but projects at most to a *v*P, as shown in the bracketed structure in (11), where only *parece* “seems” heads a TP projection.⁹ Notice that neither case of *parecer* assigns an independent theta-role to the DP that is realized in the matrix Spec,TP, but they differ regarding whether *parecer* takes as a complement a full clause projecting to a CP, as in (1)/(10)–(2) or whether it takes only a *v*P complement as in (11). In addition, this analysis leads to the conclusion that Spanish *parecer* cannot subcategorize for a TP directly. We argue that, as a consequence of Ausín and Depiante’s (2000) analysis, that Spanish *parecer* cannot subcategorize for a TP directly because it cannot take a defective/infinitival TP as a complement, making (4)/(9) ungrammatical.¹⁰

⁹ One can still argue that *Pedro* undergoes raising to Spec,TP, given that it is base generated *v*P-internally, but this does not constitute a case of RExp, or Spec,TP-to-Spec,TP subject raising, which is blocked in Spanish, according to this analysis.

¹⁰ In addition, this approach shows a clear connection to the Feature Inheritance approach developed in Chomsky (2008), if we argue that the fact that Spanish *parecer* cannot directly subcategorize for a TP complement is because it can only subcategorize for a TP that is non-defective. As a consequence, given the argument proposed in Chomsky (2008) that a non-defective TP can only project if it is subcategorized by a C (from which it inherits its uninterpretable phi-features), *parecer* can only occur with a TP-complement if a complement CP also projects as in (1)–(2).

Ausín and Depiante’s distinction between main verb *parecer* (1)/(10)–(2) and modal *parecer* (11) can account for other grammaticality distinctions that were pointed out by Torrego (1996) between the two types of structures, correlating with the presence or absence of an experiencer, respectively. For instance, if there is no experiencer, both Torrego (1996) and Ausín and Depiante (2000) agree that *parecer* cannot appear in the simple past (preterit) (12), present progressive or past perfect.¹¹ For Ausín and Depiante this restriction applies only to the modal *parecer*, which also blocks experiencers, as illustrated in (9) above. However, when the main verb *parecer* occurs, these tense possibilities are acceptable, although an experiencer is then obligatory, as illustrated in (13).

- (12) *Pareció que Juan estaba enfermo.
 seemed that Juan was sick
 “It seemed that Juan was sick.”
- (13) Nos pareció que Juan estaba enfermo.
 us.CL.EXP seemed that Juan was sick
 “It seemed to us that Juan was sick.”

The argument that a tense restriction with *parecer* occurs when it projects as a modal verb finds some independent support in the observation that another modal verb in Spanish, *poder* “can”, can occur in the present (see (14)), but not in the simple past (see (15)), present progressive or past progressive, as Ausín and Depiante (2000, p. 160) illustrate:

- (14) Puede que Juan esté enfermo.
 can.PRES that Juan is sick
 “It might be that Juan is sick.”
- (15) *Pudo que Juan estuviera enfermo.
 can.PAST that Juan was sick
 “It could be that Juan was sick.”

We follow Ausín and Depiante’s (2000) analysis as their proposal provides a principled explanation for the formal representation and restrictions on RExp structures in Spanish, allowing us to develop an approach to the mental representation of advanced L2ers in terms of functional feature distinctions among different

¹¹ The ungrammaticality of modal *parecer* with present progressive and present perfect is also illustrated below (Ausín & Depiante, 2000, p. 160):

- (i) *Está pareciendo que Juan cocina muy bien.
 “*(It) is seeming that Juan cooks very well.”
- (ii) *Ha parecido que Juan los había encontrado.
 “(It) has seemed that Juan had found them.”

structures, as expected within Minimalist approaches to crosslinguistic variation.

As we propose in the following section, assuming Ausín and Depiante's analysis, if advanced L1 English/L2 Spanish learners can recognize the ungrammaticality of sentences like (4)/(9) in Spanish, differently from (5)/(8) in English, this will provide evidence that the feature specification in T can be reset in their interlanguage, so that learners abandon the feature specification that characterizes L1 English in favor of the L2 feature specification. If the feature specification re-setting that is at play involves a reconfiguration of uninterpretable features in the target L2 structures, that provides evidence in favor of Full Access approaches, but against Representational Deficit (RD) approaches to L2 acquisition (exploring the distinction that we specified in Section 1 and further explore in the next section between a global and a local interpretation of RD). Conversely, if learners at these advanced stages are not able to reset the corresponding feature specification, it will provide evidence consistent with Representational Deficit accounts claiming that L2 narrow syntax is permanently constrained by the feature specification of their L1 (English in this case).

3. The L2 learning task and research question: L1 English – L2 Spanish

Given the grammatical properties summarized in Section 2, the task of acquiring the distinct feature specification of raising verbs in English and Spanish is indeed quite complex. The L1 English learner of Spanish must learn the form and distribution of the dative clitics *me* "me", *te* "you", *le* "him/her", *nos* (*os* in Peninsular Spanish) "us", and *les* "them". They also need to learn that overt non-clitic experiencers must be doubled by these clitics and that the non-clitic experiencer itself can optionally be dropped.¹² Crucially, for fully proficient L2 acquisition in this domain, learners also need to reconfigure the feature specification of the embedded T complement of the verb *parecer* "to seem" when it co-occurs with an experiencer, so that blocking of RExp can also take place in these cases in L2 Spanish. In both languages it is the main verb *parecer/seem* that subcategorizes for an embedded clause and can co-occur with an experiencer. However, in English, if *seem* + Experiencer shows RExp, it has to subcategorize for an embedded defective T, as shown in (16a). In Spanish, main verb *parecer* "to seem" + Experiencer can only subcategorize for a non-defective T (more specifically,

a complement CP, see Section 2 above), and RExp is blocked, as shown in (16b).

- (16) a. English *seem* with experiencer, subcategorizing for defective T [-Agr, +/-Tense] directly. RExp is required.
- b. Spanish *parecer* with experiencer (main verb): only subcategorizes for non-defective T [+Agr, +Tense], indirectly through an embedded C. RExp is blocked.

L1 English speakers acquiring L2 Spanish need to successfully acquire this feature reconfiguration (i.e., they need to switch to the feature specification of Spanish in (16b)) in order to master the corresponding properties of Spanish main verb *parecer* "to seem" with experiencers. If they are successful in reconfiguring this feature specification, they are predicted to disallow RExp (DP-raising from embedded Spec,TP to matrix Spec,TP) in the complement of *parecer* "to seem" in Spanish, contrary to English. If this reconfiguration is possible, we argue that it most likely takes place through unconscious learning, even in the context of adult L2 acquisition.

The learning task can result from exposure to positive primary linguistic data from Spanish, representing the feature specifications in (16b) for main verb *parecer* "to seem". This corresponds for instance to (1)/(10), (2) and (13), which project experiencers but in which *parecer* "to seem" subcategorizes for a non-defective CP/TP clausal complement, thus blocking DP-raising that would be necessary for RExp (4)/(9). Crucially, the subtleties of these properties are not expected to be the object of direct instruction in language classrooms.¹³ In addition, given that these properties also correspond to negative data regarding the blocking of structures such as (4)/(9), they are not expected to be encountered unambiguously as part of the general input for L2 acquisition of Spanish by L1 English speakers. Finally, although RExp renders a sentence such as (4)/(9) ungrammatical, it is not likely to yield communication breakdown. Therefore, it is unlikely that L2ers that produce a Spanish *parecer* + Experiencer sentence with RExp, thus transferring their L1 by matching the feature specification of English (16a), will get any kind of explicit negative feedback, at least consistently. In fact, as will be seen later in the results from our L1 Spanish controls, the degree of native rejection of this kind of sentence was not as high as with other violations, further suggesting that learners are not likely to receive negative feedback regarding their unacceptability.

Finally, notice that under the approach adopted here, Spanish modal *parecer* "to seem" as in (11), which blocks experiencers, does not involve an embedded T of any kind,

¹² In addition, learners have to acquire the feature specification that underlies the restriction that *parecer*-clauses (main verb *parecer*) cannot occur in the past tense, progressive or perfective forms without an experiencer.

¹³ To the best of our knowledge, there are no language learning textbooks that address such restrictions.

as we discussed, so it does not fall under the scope of (16). As a consequence of the feature configuration of main verb *parecer* and modal verb *parecer* in Spanish, there are no defective/raising TP infinitivals in Spanish, and infinitival complements occur only as *v*Ps. This highlights not only the subtle complexities involved, but also the fact that input available regarding the distribution of raising properties related to the verb *parecer* presents an additional challenging ambiguity for English learners of L2 Spanish.

Focusing primarily on the task restricted to the learning of the properties of Spanish highlighted in (16b), the specific research question of this study can be formulated as follows:

Do advanced L1 English/L2 Spanish speakers reject subject-to-subject raising across experiencers (RExp), i.e., do they reconfigure the possible feature specifications of embedded T?

With this question in mind, we consider the predictions put forth by the two approaches mentioned before: Full Access (FA) approaches and Representational Deficit (RD) accounts. If feature reconfiguration is possible in L2 acquisition, it also has as a consequence one change in the syntactic category of the infinitival complement of *parecer*, from a TP with defective T in English to *v*P in Spanish (only with modal *parecer*).

Put briefly, FA approaches predict that convergence on the L2 grammar is possible. Therefore, L2ers should be able, in principle, to show sensitivity to constraints on sentences with RExp, similarly to the native controls.

On the other hand, RD accounts would predict that since acquisition of purely syntactic (uninterpretable) feature specifications is only possible before the so-called critical period, adult L2ers will be stuck with the feature configuration as instantiated in their L1. Therefore, they would most likely judge the sentences based on their native language's distinct feature specification for embedded T. However, there are two different perspectives in which RD approaches need to be understood. Under the first perspective, which we defined as GLOBAL RD APPROACH, acquisition of new uninterpretable features in the L2 is hypothesized to be impossible if the learners would need to acquire feature specifications of uninterpretable features that do not occur at all in their L1. In other words, Global RD approaches claim that uninterpretable features and their specifications lacking in the L1 for a particular syntactic domain but present elsewhere in the L1 for other properties can be successfully reallocated to new syntactic domains in the L2 where they would be needed for convergence (see e.g., Tsimplici & Dimitrakopoulou, 2007). This is the way RD approaches are normally taken to be instantiated in different proposals.

However, under an alternative perspective, which we refer to as the LOCAL RD APPROACH, L2 convergence

is not possible even when the target L2 specification for the uninterpretable features can be found elsewhere in the L1, but not in the specific syntactic domain being acquired. Therefore, under the Local RD approach the uninterpretable feature specification in question cannot be successfully acquired for the target L2 grammatical structures, although the L2 learners would have access to these uninterpretable features in other syntactic domains of their L1 grammars.

Before we proceed, we clarify that the notion syntactic domain should be understood here as the set of syntactic structures in which a given subset *S* of lexical features are instantiated in a particular grammar (i.e., the grammar of English, Spanish, etc). In the case of the phenomena that are the object of investigation in this paper, the syntactic domain under consideration corresponds to embedded *v*(P) and T(P) projections (projecting or not to a CP) that are subcategorized for by modal and main verb *parecer* "to seem" in Spanish. Therefore, a syntactic domain can be understood as a domain in which a formally specifiable subset of lexical features occurs to form a subset of syntactic structures. To the extent that a syntactic domain as just defined can be formally identified and mapped in the primary linguistic data, it constitutes a formal domain that is accessible in the course of the acquisition task.

One might argue that under the Local RD approach the learning task would not really require overcoming a representational deficit, because the learner would be able to transfer the corresponding feature specification from a different grammatical domain of their L1 grammar into the new domain being acquired in the L2.¹⁴ However, when we consider for instance the RD approach developed in Hawkins and Hattori (2006) for the acquisition of *wh*-movement in L2 English by L1 speakers of Japanese, it is actually possible to argue that the learning task in their case only requires overcoming a local deficit. This has to do with the way they define an uninterpretable feature as "new" in the L2 grammar of English as compared

¹⁴ One reviewer correctly points out that from the perspective of the initial knowledge state as defined by Universal Grammar, there can be no representational deficit regarding feature inventories, in that any individual, by having access to UG at the initial state of their L1, has access to the full inventory of lexical features allowed by UG. Under this perspective, Global Representational Deficit (Global RD) would have to be understood as a loss of access to UG features if they are not required in the L1. Once features become inaccessible after the critical period for L1 acquisition, they would remain inaccessible in the course of adult L2 acquisition. Whether Global RD is indeed possible in the context of L2 acquisition is a question that deserves further investigation. In this paper we focus primarily on evaluating the role of representational deficit in L2 acquisition by considering the specific case of Local RD, as defined in Sections 1 and 2. In the case of Local RD, there is in fact never a point at which the relevant features become entirely inaccessible, since they remain active in one or more syntactic domains in the L1. This is compatible with our results, which will show that Local RD can be overcome in the course of L2 acquisition.

to the grammar of L1 Japanese. They argue that in *wh*-questions L1 Japanese lacks, differently from English, an uninterpretable *wh*-feature that can drive overt movement, which they refer to as *uWh** (with the asterisk indicating the trigger for overt movement), following an approach by Adger (2003). Hawkins and Hattori (2006) argue that this feature is absent from the L1 Japanese speakers' grammar, and these speakers would have to acquire it as a new feature in their L2 English grammar. Their results indicate that these L2 learners fail to master properties of the grammar of English that they link to the role of this uninterpretable feature. They take this to serve as evidence that these L2 learners show a representational deficit regarding the specification of this feature:

[W]hile both Japanese and English interrogative complementizers have the uninterpretable feature [*uwh*] that ensures that a *wh*-word/phrase is selected . . . , English has a further uninterpretable feature that forces *wh*-word/phrase movement. An alternative way of viewing this is to take the requirement for local valuing of [*uwh*] as involving a separate feature. For Chomsky . . . this is an uninterpretable EPP (extended projection principle) feature. It is assumed here that Chomsky's EPP feature and Adger's asterisk are notational equivalents.

(Hawkins & Hattori, 2006, p. 276)

However, given the above, one can actually argue, contrary to Hawkins and Hattori, that the uninterpretable feature in question is not entirely absent from the grammar of Japanese, given that other functional heads can have EPP features that drive overt movement. This is for instance what is necessary to derive overt subject raising to Spec,TP in Japanese, by adopting the approach that T in Japanese has an EPP feature that can drive overt movement of the subject (e.g., Hirata, 2006; Kishimoto, 2001, and references therein). However, this indicates that Japanese does not lack an EPP feature in its grammar to trigger overt movement, but simply instantiates it in a different functional head (T) than the one that would trigger overt *wh*-movement. This undermines the view that the representational deficit that Hawkins and Hattori have in mind can only be restricted to Global RD as stated before. It clearly corresponds to the more circumscribed LOCAL RD APPROACH that we defined before, making it a relevant perspective under which RD approaches can be formally evaluated, alternatively to a Global RD approach.

In fact, we argue that the learning task involved in the acquisition of *parecer*-clauses in L2 Spanish by L1 English speakers requires the learners to overcome a type of Local RD as well. This is because this task, as characterized in (16), requires the acquisition of properties of TPs as complements to *parecer*-clauses with a make-up on uninterpretable features that is distinct from the corresponding feature specification for English. In our perspective, the learning task then requires a type of local reconfiguration of the uninterpretable features of T heads

that occur as complements of *parecer* "to seem" in L2 Spanish, when it is learned by L1 English speakers.

In our view, the learning task specified here does not require that L1 English speakers acquiring L2 Spanish overcome a Global RD, given that English independently instantiates the uninterpretable [+Agr] features that more restrictively represent the non-defective complement TP of *parecer* in Spanish. However, we do take the learning task to require the learner to overcome a Local RD of the same type that formally characterizes the L2 acquisition of overt *wh*-movement in English by L1 speakers of Japanese, as we discussed before. Therefore, in the remainder of this paper we will restrict our discussion regarding RD approaches to the more restrictive Local RD approach as specified before.

Turning back to the FA approaches, they predict that sentences like (4)/(9), repeated as (9) below, can come to be rejected by L2ers, similarly to native speakers, while the Local RD approach predicts that they will be (variably) accepted by L2ers to a degree that would be different in a statistically significant way from what is shown by native speakers.

- (9) *Pedro_i me parece [_{TP}T_[non-def]t_i
 Pedro me.EXP seems
 amar a María]. (= (4))
 to.love to María
 "Pedro seems to me to love María."

In the next sections, we present the methodology and results of our experimental study of the L2 Spanish acquisition of *parecer*-clauses by L1 English speakers.

4. Methods

4.1 Participants

A total of 17 L1 English/L2 Spanish speakers residing in the US participated in the study. Their proficiency level was independently measured by a proficiency test based on the DELE (Diploma of Spanish as a Foreign Language), commonly used in many published generative L2 Spanish studies over the past decade. This proficiency test consists of two parts, a holistic grammar/lexicon component and a cloze test. The combined total maximum score is 50. Given the theoretical models we test here and specifically the claims about the potential for ultimate attainment, we are interested in advanced L2 learners for the purposes of this study. As such, we only included participants whose score fell into the advanced range of 40–50. In other words, data from subjects who performed lower than the 40–50 proficiency range were not included in the present research results. All the participants included in the results scored between 41 and 49 ($M = 44.3$, $SD = 2.6$). Their mean age was 26 years, their mean age of onset was 14.7

Table 1. *Conditions.*

Structure/ tense of <i>parecer</i>	Experiencer + TP complement	No experiencer + ν P complement	Experiencer + AP complement
Simple past	1. Ungrammatical	3. Ungrammatical	5. Grammatical
Present	2. Ungrammatical	4. Grammatical	6. Grammatical

years, and the range of age of onset was between 12 and 19 ($SD = 2.31$).¹⁵ There were 17 monolingual native speaker controls (13 males and 4 females). Their mean age was 32.8 years ($SD = 10.7$) and their range of age was 23–59 years.

4.2 The experiment: Sentence evaluation task

The experiment consisted of a scalar grammaticality acceptability task, in which the participants read a sentence and evaluated it according to how they perceived its naturalness on a scale from 1 (“odd, strange”) to 5 (“completely natural”). The intermediate ratings (from 2 to 4) were specified only with the integer, without a linguistic description. The experiment included six conditions in a 3×2 design: verbal complement (with experiencer) \times ν P-infinitive complement (no experiencer) \times adjectival complement (with experiencer) and simple past/preterit \times simple present. None of the conditions considered clitic doubling of a full DP experiencer. Each of the six conditions is described in this section, below, and exemplified later, in (17)–(22). A summary is presented in Table 1, identifying which conditions were predicted to be grammatical or not for native speakers.

All the conditions had an overt DP in the Spec,TP of *parecer*, which required a StoS raising analysis corresponding to main verb *parecer* in all the cases in which an experiencer was present (Conditions 1, 2, 5 and 6 – see below).

A total of 25 filler sentences were included as part of the experiment (12 grammatical and 13 ungrammatical) and they contained no raising verbs, infinitival complements, or experiencers. For each of the six conditions mentioned, four exemplars were included, two with proper name subjects and two with other non-pronominal subject DPs.

Conditions 1 and 2: TP complement with experiencer

Conditions 1 and 2 correspond to cases of *parecer* subcategorizing for an embedded TP complement,

¹⁵ Initial exposure to extensive native speaker speech outside classroom settings took place after age 18 for all participants. Two of the L2 learners lived in a Spanish-speaking country for two years, one for one year, six spent around a semester in a Spanish-speaking country, and eight spent no time or only a couple of weeks in a Spanish-speaking country.

projecting an experiencer. If subjects accepted these sentences as grammatical, they would need to be analyzed as RExp, resulting from raising of the subject DP from an embedded Spec,TP to the matrix Spec,TP. However, this raising is predicted to be ungrammatical in Spanish, given the arguments we discussed in Section 2 that Spanish does not project embedded defective/infinitival TPs IN THIS DOMAIN, which would be necessary to allow this Spec,T to Spec,T raising (as A-movement):

CONDITION 1: TP COMPLEMENT WITH EXPERIENCER, SIMPLE PAST (henceforth, TP EXP S.PAST)

- (17) *Pedro me pareció tener dudas.
Pedro me.EXP seemed to.have doubts
“Pedro seemed to me to have doubts.”

CONDITION 2: TP COMPLEMENT WITH EXPERIENCER, PRESENT (henceforth, TP EXP PRES) (= (4))

- (18) *Pedro me parece [TP amar a María].
Pedro me.CL.EXP seems to.love to María
“Pedro seems to me to love María.”

As indicated, Conditions 1 and 2 are predicted to result in ungrammaticality with *parecer* either in the present or in the simple past, due to the impossibility in general of subject DP-raising from an embedded TP-domain in Spanish, as explained before. In addition, Conditions 1 and 2 must have the main verb *parecer*, since this is the only one that can co-occur with an overt experiencer.

While the goal of this study was to find out whether L2ers indeed rejected sentences in present tense with experiencers and TP complements (Condition 2), we added the other five conditions to establish appropriate points of comparison, manipulating the following properties: presence vs. absence of an experiencer; simple present vs. simple past; ν P-only vs. TP complement; and verbal (ν P or TP) vs. adjectival complement. This allowed us to evaluate whether rejection of RExp, Spec,TP-to-Spec,TP subject raising, as in Condition 2 could indeed be taken as a reflex of feature reconfiguration in the L2ers’ grammar, rather than simply reaction to individual

properties, such as presence of an overt experiencer intervening in subject raising, the choice of tense with *parecer*, or presence of a verbal complement to *parecer* (either TP or ν P).

Conditions 3 and 4: ν P-complement, no experiencer

Condition 3 was predicted to yield ungrammaticality despite the lack of an overt experiencer. This results from two main properties argued for before: (i) *parecer* with an overt DP subject and an infinitival complement can only be a modal; and (ii) modal *parecer* was argued by Ausín and Depiante (2000, following Torrego, 1996) not to be possible in a tense such as the preterit (e.g., example (12) above), a prediction which was specifically tested by this condition:

CONDITION 3: ν P-COMPLEMENT, NO EXPERIENCER, SIMPLE PAST (henceforth, ν P NO EXP S.PAST)

- (19) *Jorge pareció [ν P necesitar ayuda].
 Jorge seemed to.need help
 “Jorge seemed to need help.”

On the other hand, it should be expected that tense restrictions such as this do not apply when *parecer* is acting as a main verb, provided no subject raising from a TP domain is taking place. The latter is tested directly by Condition 5.

In order to test whether the critical characteristic that would make L2ers reject test sentences in Condition 2 was the presence of an overt experiencer, in Condition 4 we included similar sentences where the only variation was the absence of an experiencer, maintaining the verbal complement, which corresponded only to a ν P:

CONDITION 4: ν P-COMPLEMENT, NO EXPERIENCER, PRESENT (henceforth, ν P NO EXP PRES)

- (20) Cristina parece [ν P necesitar algo].
 Cristina seems to.need something
 “Cristina seems to need something.”

Crucially, under the analysis we adopt in Section 2 above, Condition 4 cases such as (20) do not involve StoS RExp, since *parecer* in this case is a modal verb heading a monoclausal structure, with no projection of an embedded TP (i.e., *parecer* subcategorizes for a ν P). Given this, our hypothesis is that both NSs and advanced L2 speakers of Spanish will consider Condition 4 sentences grammatical.

Conditions 5 and 6: Adjective Phrase complement, with experiencer

Sentences in Condition 5 and 6 had AP complements. The standard analysis of these cases has a small clause

domain corresponding to an AP as a complement to *parecer*.

CONDITION 5: AP COMPLEMENT, EXPERIENCER, SIMPLE PAST (henceforth, AP EXP S.PAST)

- (21) Juan me pareció [_{AP} contento].
 Juan me.EXP seemed happy
 “Juan seemed to me to be happy.”

CONDITION 6: AP COMPLEMENT, EXPERIENCER, PRESENT (henceforth, AP EXP PRES)

- (22) Juan me parece [_{AP} cansado].
 Juan me.EXP seems tired
 “Juan seems to me to be tired.”

Given that Conditions 5 and 6 do not project an embedded TP, they are predicted to be grammatical and allow a DP subject in matrix Spec,TP. Crucially, these cases involve subject DP-raising from the small clause (AP) domain. However, given that such raising does not take place from an embedded TP to a matrix TP domain, it is predicted to be possible in Spanish as a result of the analysis we adopt, which blocks raising only from embedded TPs, under the analysis that TP complements of *parecer* (differently from APs) cannot be defective in this language.

Acceptance of sentences in Conditions 5 and 6 is expected to independently support the argument that Spec,TP-to-Spec,TP subject DP-raising (across an experiencer) is only ungrammatical because of the lack of non-defective TP as the complement of *parecer* in Spanish, and not because of impossibility of DP-raising to Spec,TP in general.

Crucially, Conditions 5 and 6 correspond to main verb *parecer*, as in Conditions 1 and 2, given the impossibility of modal *parecer* with an AP complement. However, given that no TP is involved in Conditions 5 and 6, raising from the embedded AP domain is predicted to be grammatical, contrary to Conditions 1 and 2. If raising across an experiencer is indeed possible in Conditions 5 and 6, different from Conditions 1 and 2, this will provide further evidence that it is the feature configuration of the embedded domain (AP vs. defective TP) that accounts for the contrast in grammaticality, and not the presence of the overt experiencer. In addition, given that this is expected to be main verb *parecer*, and not its modal counterpart, the prediction from Ausín & Depiante’s (2000) analysis is that it should be allowed both in the present and in the simple past, differently from Condition 4 with modal *parecer*. In sum, if L2ers correctly attribute the possibility of DP-raising across an experiencer to the feature make-up of the embedded domain (AP but not TP), they should correctly accept sentences in Conditions 5 and 6 since

there is no embedded T involved and *parecer* is acting as a main/lexical verb.

5. Results

As previously stated, we are testing and comparing the predictions of two formal approaches to L2 acquisition: Full Access and Representational Deficits. Recall that FA approaches predict that the advanced L2ers in the present study should in principle be able to acquire the abstract featural representation they would need to reject ungrammatical sentences and accept grammatical ones in a way similar to the NSs and, if the syntactic analysis is on the right track, in line with the descriptions offered in Sections 2 and 4 above. On the other hand, RD approaches, specifically considering Local RD, predict the possibility that the relevant ungrammatical sentences will be consistently rated in a similar way to grammatical ones or at least with some level of variability, deviating from the NSs' behavior. This prediction follows from the RD's prediction that L2ers should be unable to reconfigure the feature specification of embedded T from English to Spanish, as summarized in (16). For instance, one of the predictions that we evaluate and which would follow from the RD approach is whether subjects who reject cases of RExp across a TP complement will also reject (incorrectly) AP complements with an experiencer. In addition, should target-deviant variation obtain for the ungrammatical sentences in the sense of apparent partial or lingering L1 effects, this too could follow from both FA and RD approaches, but for different reasons. Full Access approaches would argue that variation might obtain as a natural byproduct of interlanguage development, whereas RD would contend that compensatory mechanisms (i.e., linear/statistical learning) could conspire to result in some evidence of ostensible but variable L2 acquisition in this domain. It is for this reason that we focus exclusively on highly advanced L2 learners since we seek to gauge knowledge at a steady state of L2 acquisition or as close to that point as possible (i.e., advanced stages of interlanguage development). Crucially, however, only FA approaches predict the possibility of L2ers showing evidence of L1-like acquisition in this domain. We must keep in mind that such evidence can only obtain from the ungrammatical sentences (Conditions 1, 2 and 3). For the sentences in the grammatical conditions (i.e. Conditions 4, 5 and 6), both approaches predict the possibility of target-like behavior, since these complement types are also grammatical in English as described in Section 2. However, all conditions tested herein are necessary; bringing together the results from all conditions provides a more accurate snapshot of L2 competence in the sense of ascertaining not only what the L2 grammars permit, but also what they restrict.

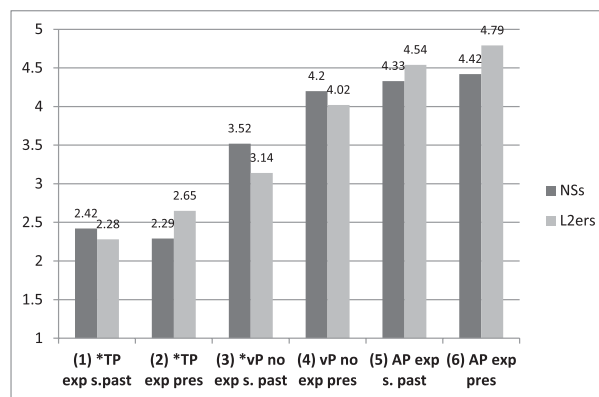


Figure 1. Mean scores for each condition.

The remainder of this section is organized as follows. We present the group results for each condition in descriptive terms and then report the results from a paired-sample *t*-test to verify whether the observed differences in means are statistically significant. We further analyze the overall performance of both groups, and report on the statistical findings. We will examine the L2 group's behavior more closely by making intragroup comparisons, and finally we discuss individual performance in both groups but focusing on the main conditions of interest (Conditions 1 and 2, DP subject + Experiencer + *parecer* + TP). In order to evaluate the statistical significance of the observed values, a repeated-measures ANOVA was performed with "type-of-complement" as a within-subjects variable and "group" as a between-subjects variable. For all statistical tests, we used an alpha level of .05. As the assumption of sphericity was violated for the main effects of "type-of-complement", $\chi^2(14) = 49.97, p < .001$, degrees of freedom were corrected using Greenhouse-Geisser estimates of sphericity ($\epsilon = .89$).

We will start by comparing the mean acceptability ratings obtained by each group in all six conditions. As in Section 4.2 above, recall that the acceptability scale was such that 5 meant "completely natural" and 1 meant "odd/strange". As can be seen in the averages in Figure 1, both groups show remarkably similar performance and make the distinctions expected from the syntactic analysis we explored in Section 2. In what follows, we consider these observations by means of a statistical analysis.

5.1 Ungrammatical conditions: Conditions 1–3

In Figure 1, reading from left to right, we first see the mean group ratings for sentences in Condition 1, *TP EXP S.PAST. As expected, NSs rejected sentences in this condition ($M = 2.42, SD = 1.13$). Similarly, L2ers also rejected them ($M = 2.28$) but with a slightly higher degree of variation in their responses ($SD = 1.59$). It should be recalled that sentences in this condition are

ungrammatical on two grounds: impossibility of having RExp and restriction against (modal) *parecer* with an overt experiencer and in simple past. A paired *t*-test revealed that the differences between groups in this condition were not significant ($t(16) = .384, p = .70$).

In Condition 2, *TP EXP PRES, we have the second of the two conditions of critical interest for this study. As can be seen, NSs reject this type of sentence ($M = 2.29, SD = 1.00$), as predicted by the literature. Likewise, L2ers also reject them ($M = 2.65$), although showing slightly more variability in their responses as a group ($SD = 1.57$). However, a paired *t*-test revealed that these observed differences were not significant ($t(16) = -9.89, p = .33$) between the native speakers and non-native speakers.

In Condition 3, *vP NO EXP S.PAST, NSs do not rate the naturalness of these sentences as low as we might have expected, judging them on the lower end of grammatically acceptable ($M = 3.52, SD = 1.11$). The same pattern seems to hold for the L2ers ($M = 3.14$), although with a higher group standard deviation ($SD = 1.73$). A paired *t*-test revealed that these observed differences were not significant ($t(16) = .756, p = .46$). However, it is prudent to point out that although both groups assign higher ratings to these sentences than the theoretical literature predicts, we will see that the ratings are significantly degraded when compared to Conditions 4, 5 and 6, which are predicted to be grammatical. We return to this point next.

For the remaining three (grammatical) conditions (i.e. Conditions 4, 5 and 6), we see that they are rated highly by both groups, as follows.

5.2 Grammatical conditions: Conditions 4–6

In Condition 4, vP NO EXP PRES, NSs behaved as expected by accepting sentences in this condition ($M = 4.20, SD = 1.04$). Similarly, L2ers accepted these sentences ($M = 4.02$), but with a higher degree of variation in their responses ($SD = 1.57$). A paired *t*-test revealed that these observed differences were not significant ($t(16) = .504, p = .62$).

In Condition 5, AP EXP S.PAST, NSs behaved as expected ($M = 4.33$), and showed less variation than for the other conditions ($SD = 0.92$). L2ers's rating was very high ($M = 4.54$), and their degree of variation was also smaller than for any of the other conditions ($SD = 0.95$). A paired *t*-test revealed that the observed differences between groups were not significant ($t(16) = -1.562, p = .13$).

Finally, in Condition 6, AP EXP PRES, NS controls rated this complement type highly ($M = 4.42, SD = .0.75$), and L2ers also did so ($M = 4.79, SD = 0.65$). However, a paired *t*-test still revealed that the observed difference between both groups was significant ($t(16) = -2.891, p = .011$).

Table 2. Summary of means and standard deviations for each condition.

	Group	<i>M</i>	<i>SD</i>
Condition 1	NSs	2.42	1.13
*TP exp s.past	L2ers	2.28	1.59
Condition 2	NSs	2.29	1.00
*TP exp pres	L2ers	2.65	1.57
Condition 3	NSs	3.52	1.11
*vP noexp s.past	L2ers	3.14	1.73
Condition 4	NSs	4.20	1.04
vP noexp pres	L2ers	4.02	1.57
Condition 5	NSs	4.33	.92
AP exp s.past	L2ers	4.54	.95
Condition 6	NSs	4.42	.75
AP exp pres	L2ers	4.79	.65

Note that Conditions 4 to 6 do not differ in the grammars of English and Spanish, regarding the possibility of *parecer/seem* with a verbal or an adjectival complement (nor regarding the possibility of an experiencer with AP complements) and thus are not the primary focus of this study. Nevertheless, these conditions do constitute a necessary counterbalance to the properties we focus on, which we further discuss in what follows. A summary of the descriptive analysis is provided in Table 2.

5.3 Group results

A between-subjects test revealed that there was in fact no main effect for group, $F(1,134) = .09, p = .76$, confirming the conclusions from the descriptive analysis and the series of paired-sample *t*-tests. However, within each group, the overall differences among the ratings of the different conditions was found to be significant, $F(4.44, 59) = 113.4, p < .001$. Likewise, a significant main effect was found for “type-of-complement” \times group interaction, $F(4.46, 595.76) = 2.904, p = .017$, confirming that, across groups, there were differences in ratings among the different conditions.

In summary, for the sentences in the ungrammatical conditions (Conditions 1 and 2), we observe that they are consistently rejected by both groups to the same statistically significant degree, supporting the predictions of FA approaches that L2ers would be able to converge on the L2 grammar or reset the featural composition of embedded T.

Sentences in the grammatical conditions (Conditions 4, 5, and 6) are accepted by both groups highly and to the same degree, conforming to the formal analysis indicated on the literature on L1 Spanish and to the expectations from the two L2 acquisition approaches considered here.

Table 3. *Pairwise comparisons.*

	Condition 1 *TP exp s.past	Condition 2 *TP exp pres	Condition 3 *vP no exp s.past	Condition 4 vP no exp pres	Condition 5: AP exp s.past	Condition 6: AP exp pres
Condition 1 *TP exp s.past	–	1.00	.00	.00	.00	.00
Condition 2 *TP exp pres	–	–	.00	.00	.00	.00
Condition 3 *vP no exp s.past	–	–	–	.00	.00	.00
Condition 4 vP no exp pres	–	–	–	–	.21	.00
Condition 5 AP exp s.past	–	–	–	–	–	.94
Condition 6 AP exp pres	–	–	–	–	–	–

A partially unexpected outcome occurred in Condition 3, *TP NO EXP S.PAST, whereby neither group rejected this complement to the degree that we might have expected. Nonetheless, for the purposes of this study, we would like to remind the reader that sentences in this condition do not involve RExp but rather should obtain in view of the distinction between *parecer* as a main/lexical verb and as a modal verb proposed in Ausín and Depiante's (2000) analysis. Given this distinction, test items in this condition should be rejected due to the impossibility of modal *parecer* in the past tense. Therefore this result, although interesting, does not compromise the main findings we report, as we further discuss later on.

Further pairwise comparisons indicated that, with a couple of exceptions, both groups make marked differences between counterbalanced conditions when they differ in acceptability (grammatical vs. ungrammatical), and that they rate any other two relevant conditions similarly when they share acceptability. However, of all comparisons, two unexpected patterns occurred (see values in bold in Table 3).

The first unexpected result was that, as mentioned before, Condition 3, *TP NO EXP S.PAST, was rated significantly different from the other two ungrammatical conditions (Conditions 1 and 2) ($p < .001$). At the same time (and expectedly), it was also significantly different from the three grammatical conditions, and therefore, it did not pattern with any other condition in the study. Thus, the observed group means for this condition (around 3 and 3.5), are indeed indicative of most participants' uncertainty about the grammaticality of this condition. It is possible that the results in the case of Condition 3 were partially affected by a psycholinguistic task-effect for both groups, since all subjects saw items from all the conditions in the course of the experiment. It is possible that the ratings assigned for Condition 3 were somewhat higher, given that this condition can be taken as involving only one grammatical violation resulting from the use of the simple past, whereas Conditions 1 and 2 were ungrammatical on several grounds, as discussed before. Crucially, neither group assigns ratings that show unequivocal acceptance of Condition 3 test items. Independently of the precise

reason for the relatively higher acceptability reasons for this condition, this difference does not affect the overall conclusions regarding the results.

The other unexpected result is that there is a significant difference between Conditions 4 and 6, even though they are grammatical in both English and Spanish, and therefore the expectation was that they would pattern together.¹⁶ In addition, the mean scores for these two conditions (and for both groups) are within the range of acceptance (above 4 for both groups). We do not take this to be a problem, since this was true for both the L2ers and the native controls, albeit to different degrees. In the spirit of the comparative fallacy (e.g., Bley-Vroman, 1983) it is not necessary to show that L2ers perform exactly like native speakers per se (although largely speaking our L2 participants happen to do so), but crucially that the L2 learners make the same relevant distinctions as the native speakers across counterbalanced properties. It is patently clear from comparing Conditions 1 and 2 against 4, 5 and 6 within the L2 group that such distinctions are robustly present, a point to which we return in the next paragraph. All of this is summarized in Table 3.

In order to examine more closely whether L2ers make significant intra-group distinctions, two paired *t*-tests were performed to compare between the conditions *TP EXP PRES and vP NO EXP PRES, confirming that L2ers do make a contrast between the two conditions ($t(16) = -3.82, p = .001$). The other *t*-test compared *TP EXP PRES against AP EXP PRES, also confirming that the differences observed are significantly different ($t(16) = -6.72, p < .001$). Both these contrasts indicate that L2ers were clearly sensitive to the occurrence of StoS RExp across an infinitival TP complement, which is expected to be blocked due to a difference in the make-up of uninterpretable features (phi-features) of embedded TP in English and Spanish.

¹⁶ Recall from above that the only condition where the two groups seemed to behave differently was Condition 6, AP EXP PRES, although it was the structure that was more often accepted as grammatical by both groups, as compared to their ratings of test sentences in other conditions (see Figure 1 above). We conclude that this was clearly the most acceptable of all six conditions, since it has, overall and for both groups, the highest rating and the smallest *SD*.

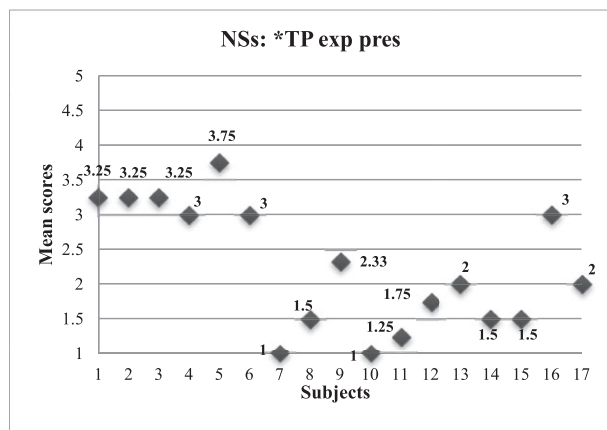


Figure 2. Plot of individual ratings for Spanish native speaker controls (NSs; Condition 2).

5.4 Individual results

According to the analysis we adopt, the ungrammaticality of the main condition of interest in this study (Condition 2, *TP EXP PRES) stems solely from the difference in the featural composition of embedded T between English and Spanish, resulting in the absence of defective TP as the complement of *parecer* in Spanish. In order to focus more narrowly on how L2ers rated this condition, we plotted individual results for each participant’s mean score. We compared this with the individual results from the native controls. In Figure 2, we show the plot for the native controls.

As shown in Figure 2, most NSs, but certainly not all, rated sentences in this complement type quite low. Some of them, however, showed some uncertainty about the oddity/naturalness of this structure, but crucially, with one single exception, no one had a mean score rating these sentences as “natural” (no mean scores equal or above 3.5). As can be observed, the full range of mean scores by the NSs goes from 1 to 3.25, with a single exception at 3.75.

On the other hand, the L2ers’ responses give us a slightly different pattern of distribution for the individual results in Condition 2, despite the fact that there was no significant group difference between the NSs and L2ers in this condition (see Sections 5.1 and 5.3 above). Mean scores seem to be more scattered, as shown in Figure 3, and this relates to the previously mentioned observation that this group had a higher *SD* than the NSs. However, we can still observe that about half of the L2ers’ rated sentences in this structure quite low (mean scores between 1 and 2.5), and that three of them straightforwardly rejected them with the lowest possible score. It is possible, then, that the apparent scattered ratings provided by the L2ers corresponds to the existence of subgroups, in a somewhat more marked way than the NSs.

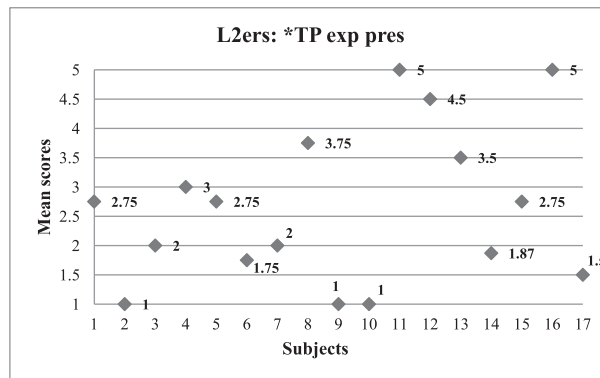


Figure 3. Plot of individual ratings for L2 Spanish speakers (L2ers; Condition 2).

Table 4. Mean ratings for *TP exp pres.

	Number of L2ers	Number of NSs
Rejection (equal to or below 2.5)	8	10
Mean scores between 2.6 and 3.4	4	6
Acceptance (equal to or higher than 3.5)	5	1

However, as we consider the actual number of L2ers whose scores were within the NS range, we can note that 14 out of 17 make the cut. Another way to look at this is by counting the number of subjects whose scores for this condition fell within what we considered in the course of this section as the range for REJECTION and ACCEPTANCE. As summarized in Table 4, what we obtain is that a similar number of L2ers and NSs (8 vs. 10) consistently rejected sentences of the *TP EXP PRES complement type. At the same time, only four of the L2ers gave a mean rating above 3.5 in this condition (one of them at 3.75).

Such findings are compatible with our conclusion that the FA approach finds support in the data set provided. Whereas both approaches make claims about potential for L2 convergence for individuals, neither predicts perfect symmetry in developmental sequence between NSs and L2ers. As such, it is possible that not all L2 participants are at a steady state grammar in this domain. Notwithstanding, given the results of the majority of the L2 learners reported herein it is clear that full convergence in this domain is possible, which only supports FA approaches. Conversely, RD approaches predict at least some degree of target-deviant variability for all learners, who should, a priori, not be able to reconfigure the featural composition of embedded T as transferred from their L1. This clearly is not the case at the group and at the individual levels, as already shown.

6. Conclusion

To our knowledge, this study is unique in the investigation of DP-raising across different complements as a domain for comparing and contrasting the predictions of FA and RD approaches. As detailed in Section 5, the overall picture that emerges from this study is that advanced L2ers and NSs pattern together when taken as a group and in most cases as individuals in making the relevant distinctions among the conditions, and crucially in rejecting sentences of the *TP_{EXP} PRES condition where the relevant difference between English and Spanish is the featural composition of embedded T. Under the analysis we adopt, the L2 task (as discussed in Section 3) involved the reconfiguration from an embedded defective T of English to an embedded non-defective T in Spanish, blocking the possibility of subject raising from Spec,TP to Spec,TP across an experiencer (RExp).

Our results indicate that this L2 feature reconfiguration learning task was accomplished by the majority of the advanced L2 speakers at the time of testing. We maintain that such a distinction is not easily (or not even possibly) subject to inductive learning given the fact that the inductive blocking of the ungrammatical sentences in L2 Spanish would need to stem from exposure to negative evidence, since these are grammatical in the L1 English of the L2 speakers. Moreover, this type of restriction is not taught to L2 learners of Spanish and does not constitute an error that would result in any type of communication breakdown, so it is unlikely that such errors would be corrected, or at least consistently so. Conversely, a feature reconfiguration of embedded T can explain the similar pattern observed in the L2 and native populations, as well as the target performance of the L2 group and the majority of the individuals that comprise it. This feature reconfiguration arguably results from evidence for DP-raising only across a *v*P or AP domain, in combination with the absence of evidence of raising across an embedded defective TP. Returning then to the research question we proposed in Section 3, (Do advanced L1 English/L2 Spanish speakers reject RExp, i.e., do they reconfigure the possible feature specifications of embedded T?), we conclude that they do converge on this feature reconfiguration in the target L2.

If indeed embedded T can be acquired by L1 English speakers on the basis of feature reconfiguration to the target L2 Spanish, this supports FA approaches to Universal Grammar in adult L2 acquisition. In parallel, this paper has shown evidence that L2 learners can overcome a type of Local Representational Deficit (RD), as it was defined e.g., by Hawkins and Hattori (2006). These results show then that Local RD does not constitute a required case of deficit in the context of L2 acquisition,

since Local RD can be overcome by adult L2 learners. Dismissing Local RD approaches is in fact compatible with a precise formal perspective on the nature of feature inventories in the L1 and L2. The L1 and L2 grammars can have different distributions of lexical features across different syntactic domains, so that syntactic domain A in the L2 requires the presence of lexical features that are not found in the same syntactic domain in the L1, although they are present and accessible to the learner in a different syntactic domain B in the L1. As we have shown, this type of representational deficit can indeed be overcome, in that the L2 learner can acquire a distribution of features in the L2 that is distinct from the L1 (i.e., a reconfiguration of features in adult L2 acquisition is possible).

In addition, one could propose that Local RD should involve a learning task concerning the acquisition of properties of CONSTRUCTIONS in the L2 that are not found in the L1 (i.e., *parecer*-clauses in Spanish have different syntactic properties from the constructions with *seem* in English). First, by adopting instead a Minimalist syntax approach to this problem (avoiding appeal to constructions as grammatical primitives), we showed that the learning task in such cases must be specified in terms of lexical features that underlie different constructions, because the formal primitive entities being acquired are not constructions, but lexical features and feature bundles as specified in the form of lexical items and their syntactic distribution. Second, our experimental results showed that differences in the properties of constructions between the L2 and the L1 do not constitute a hurdle in the L2 learning task, therefore constructions are not relevant from the experimental perspective either. This is a welcome result, if the formal primitive entities that are the target of L1/L2 acquisition are not constructions, but rather the formal lexical features whose distribution underlies their structure.¹⁷

Supporting the view that adults have full access to Universal Grammar in no way dismisses or ignores the observation that children and adults still have marked differences in acquisition. However, this conclusion requires searching beyond UG accessibility for independent explanations for the asymmetric patterns of development and convergence in adult L2 acquisition, as has been attempted within various research programs and theoretical models to date within generative SLA (e.g., Duffield & White, 1999; Goad & White, 2006; Goad, White & Steele, 2003; Haznedar & Schwartz, 1997; Lardiere, 2007; Pérez-Leroux & Glass, 1999; Prévost & White, 2000; Schwartz & Sprouse, 1996; Slabakova, 2008; White, 2003).

¹⁷ We thank an anonymous reviewer for raising questions regarding the role we assigned to constructions and to lexical features in our approach.

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