Oblique relative clauses: production, comprehension, and syntactic training in populations with typical and atypical language development

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Introduction. This paper investigates the production, the repetition, and the comprehension of oblique relative clauses in Italian populations with typical and atypical language development (typically developing children, adolescents, and adults; adolescents with developmental dyslexia (DD), bilingual students with Italian L2). Oblique relatives, which are complex constructions derived by syntactic movement and which are typical of the formal and written register, are produced by typically developing children not earlier than 10 years (Guasti & Cardinaletti, 2003). In most cases, they are avoided and frequently substituted by more colloquial alternatives, namely sentences containing resumptive clitic pronouns. Data on the production of these structures by older Italian-speaking individuals are scarce. In addition, no data exist on the comprehension of these constructions.

Beyond their difficulties in reading and writing, individuals with DD may show difficulties with (complex) constructions derived by syntactic movement in oral comprehension and/or production tasks at school age (Arosio et al. 2016), or at the University (Cardinaletti & Volpato 2015). Bilingual individuals may have, as well, difficulties in mastering complex movement-derived structures. Age of onset may influence language acquisition and development (Grosjean 1982; Döpke 1992) and the cut-off point for native-like performance is proposed to be 4 years (e.g., Unsworth et al. 2014). However, it might be less relevant for the acquisition of constructions that are acquired late in (monolingual) typical language development (Tsimpli 2014).

In this study, oblique relatives are investigated in all these populations and compared to other movement-derived constructions taking into account the role of syntactic movement, syntactic complexity, and type of register.

Participants. Production and repetition skills were assessed in 74 typically developing monolingual Italian students (ML), in a group of 8 students with a diagnosis of DD (DD), and in a group of 23 high school bilinguals (Italian /another language). 9 late bilinguals (LB) moved to Italy between the age of 5 and 9 years; 14 simultaneous bilinguals (SB) were born in Italy. For the students of these groups, the age range was from 14 to 20 years. Bilingual participants were assessed to check whether age of onset of exposure to Italian predicts performance in the case of constructions which are acquired very late in (monolingual) typical language development (Grosjean 1982; Unsworth et al. 2014). Comprehension skills were assessed in a group of 9 typically developing children (TDC, age range: 9;2-10;3) and in a group of 28 adults (TDA, age range 21-30).

Materials. Three tasks were used in this study. The production task contains 20 trials eliciting subject, object, and oblique relative clauses (Piccoli 2018, a modification of Mulas, 2000). The sentence repetition task (Del Puppo et al., 2016) includes 33 experimental sentences, both simple (left-dislocation sentences) and complex (long-distance subject and object wh-questions, clefts, oblique – genitive, dative, and locative – relatives), and 16 filler sentences of the same length. The comprehension task includes 48 experimental items (subject and object relative clauses, genitive relatives, dative and locative prepositional relatives).

Results: In the production task, DD's scores on target oblique relative clauses were significantly lower than ML, LB and SB (p=.001). In dative relatives, the DD participants were less accurate than the other groups (p<.001). They produced more sentences typical of sloppy registers and ungrammatical answers instead of dative relative clauses. No difference was found instead between bilinguals and monolinguals. In the repetition task, no significant difference was found between the students with DD, the bilinguals, and the monolinguals when considering left-dislocations and control sentences. In the repetition of wh-questions, the DD group showed more difficulties than the other groups (p<.05). Within each group, clefts and oblique relative clauses were significantly more difficult than the other structures (p<.001). The DD group performed significantly lower than

all the other groups (p<.001). In the comprehension task, adults (TDA) performed almost at ceiling, while for children (TDC), percentages of accuracy were lower. In particular, genitive relatives were less accurate than dative and locative relatives.

Discussion. This study confirms that oblique relatives are acquired late. At high-school age, constructions of the formal register are not fully mastered yet by bilingual students. Monolingual and bilingual students showed similar performance in the use of oblique relative clauses because these structures are also difficult for monolingual Italian participants. This may be due to the frequency at which they are used at school or in formal contexts. Monolinguals and bilinguals are exposed to this language variety to the same extent. Individuals with dyslexia have difficulties in mastering complex structures typical of the formal and written register and derived by syntactic movement. The derivation of oblique relative clauses combines syntactic movement and complex embedding featuring pied-piping. The lower accuracy of the participants with DD might be due to their low experience with the formal register and their difficulties in reading. Persistent difficulties with structures of the formal register lead us to reflect upon the language varieties bilingual and monolingual Italian students deal with at school and to develop protocols of syntactic intervention and teaching strategies helping students to improve their linguistic competence (in Italian).

Three case studies of syntactic intervention on oblique relatives. Two bilingual students and one student with DD were administered a syntactic training focused on relative clauses, the most complex structures. The training, inspired by Levy & Friedmann (2009), lasted less than two months. After syntactic training, their performances significantly improved in both production and repetition. They also improved in the repetition of untrained sentences, namely clefts and *wh*-questions. Generalization effects were found in similar studies on other populations (adults with aphasia: Thompson et al., 2007; adolescent with DLD: Levy & Friedmann 2009; children with cochlear implants: D'Ortenzio 2019) and show that training generalizes from more over less complex structures of the same syntactic type.

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"Come si usa?" The production of clitic *si* in child Italian

Introduction The exact role and interpretation of *se/si* is heavily debated in Romance languages, particularly in Italian (Belletti 1982; Manzini 1986; Cinque 1988; D'Alessandro 2007; Pescarini 2015, a.o.). Italian *si* appears in a variety of contexts, listed with examples in Table 1. Despite extensive theoretical research, (a) there is no consensus as to whether there is a single lexical item *si* or two different ones in the grammar of Italian, and (b) there are no detailed acquisitional studies dedicated to *si* in Italian. Studies on some other Romance languages suggest that there is a developmental path in the acquisition of *si*'s different roles: the reflexive/anticausative functions seem to be acquired first (see Teomiro & Escobar 2013 for Spanish; Barrière et al. 2000 for French). However, the use of impersonal *si* is often not considered in this literature. The current study contributes to the theoretical debate through the lens of acquisition by addressing three questions: (i) given the several different meanings of *si*, is there a difference in their development in child Italian?, (ii) do children assign to *si* the same interpretations we find in the adult language? (iii) can we decide between competing theories of *si*?

Method A corpora analysis in the CHILDES database (MacWhinney 2000) was run through an examination of all productions of *si* followed by a verb (*si+V*) by 16 typically-developing Italian-speaking children aged 1;8 to 3;4. We annotated all *si+V* occurrences (*n* = 283) according to the following criteria: (a) identification of *si*-type constructions (following the annotation in Table 1), (b) appropriate versus inappropriate uses of *si* (grammatical vs ungrammatical constructions in the adult grammar), (c) verb type used (transitive, unaccusative, unergative, alternating). As for the criteria in (a), plural verbal agreement was not available as a distinguishing factor between impersonals and passivizing *si* (Pescarini, 2015), as in most of the utterances the verb appeared in its singular form. We coded these instances as impersonals and we distinguished them from passive *si*, where the passive verbal morphology is expressed. **Results** Our results show that children aged 1;8-3;4 use *si*-type constructions productively and adult-like. Figure 1 reports the rate of production of the four main *si*-type constructions attested in the dataset: impersonal (54%), anticausative (29.3%), true reflexive (6.3%) and inherent reflexive (5.4%). Concerning the other possible functions of *si*, we found only one occurrence of passive *si* and no production of middle *si*. Figure 2 shows the production of *si* constructions over time. Statistical analysis revealed a significant difference in the mean rate of production of impersonal *si* (*p* <.001) w.r.t. the other attested *si* constructions. Among the impersonal *si* constructions (*n* =153), 56% have a generic interpretation (*n* = 86) and 15.6% an existential one (*n* = 24) (the remaining 28% was ambiguous between the two readings). An effect of verb type emerged on impersonal *si*, which was significantly (*p* <.001) more likely to occur with transitive verbs than with all other verb types. In particular, almost the totality of impersonal generics occurred with transitive verbs (93%). In addition, as expected, anticausative *si* occurred exclusively with alternating verbs, inherent reflexive *si* only with unaccusatives and true reflexive *si* only with transitives.

Analysis Three main results emerged from our analysis: (i) four types of *si* constructions (impersonal - generic and existential -, anticausative, true reflexive, inherent reflexive) were attested and produced adult-like by Italian children from very early on; (ii) passive and

middle *si* constructions were not produced; (iii) impersonal *si*, and in particular generic impersonal *si*, was by far the most frequent production in the dataset. Focusing on (iii),we note that in our data, as in Hyams (1986), *si* was realized (almost) exclusively with transitive verbs, even though they can occur with unergatives and unaccusatives in adult language. We propose that impersonal *si* sentences involve a generic closure which allows the external argument to be interpreted as any (group of) human being(s). It is conceivable that impersonalsare preferred by children, as these are structures closest to a passive interpretation, cf. Hyams's (1986) suggestion that in child Italian the complex *si*+V form basically inherits the theta- features of the base verb. This explains the transitivity restriction we identified in our data. Bycontrast, passive structures are more complex: they involve an additional layer of structure above VoiceP (see Bruening 2013, Alexiadou et al. 2015) and hence their production is delayedin children. It is not entirely clear whether our data help deciding between two competing theories of *si*: according to theory 1, there is a single lexical item *si* across different contexts; according to theory 2, impersonal *si* is different (Schäfer 2017 for recent discussion): it is a pronominal element in Spec,VoiceP, saturating the external argument variable, see also Legateet al. (2020). Theory 1 leads one to expect that *si* is acquired at the same age in all contexts (assuming the other lexicalized pieces of such structures are acquired early), while theory 2 does not. While impersonals, reflexives and anticausatives seem in line with the prediction of theory 1, it is not clear why middle and passive *si* are not produced. This could suggest that impersonal *si* is indeed different: it is analyzed by children as an impersonal pronoun in Spec,VoiceP, blocking the production of generic middles. Passive is blocked as the impersonalseems to be the more efficient structure to express a passive interpretation.

Table 1. Italian si: functions and examples

True reflexive
(1) Maria si critica.
    Maria si criticizes
	Inherent reflexive
	(2) Gianni si addormenta.
	    Gianni si falls asleep
		Anti-causative
		(3) Il vaso si è rotto.
		    The vase si is broken

Middle
(4) Quel libro si legge facilmente.
    That book si reads easily
	Passive
	(5) Si sono vendute delle auto.
	    Si were sold some cars
		Impersonal generic
		(6a) In Italia si mangia la pizza.
		    In Italy si eats pizza.
		Impersonal existential
		(6b) Domani si va al mare.
		    Tomorrow si goes to the sea

Figure 1. Proportion of production per *si*-types
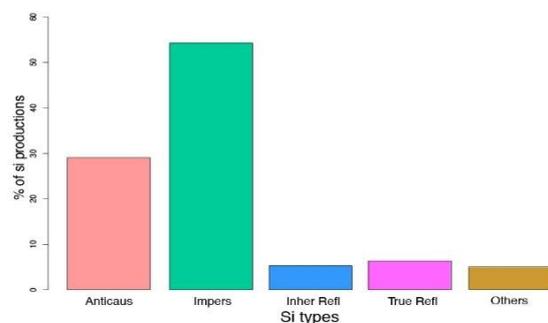
Figure 2. Production of *si*-types over time
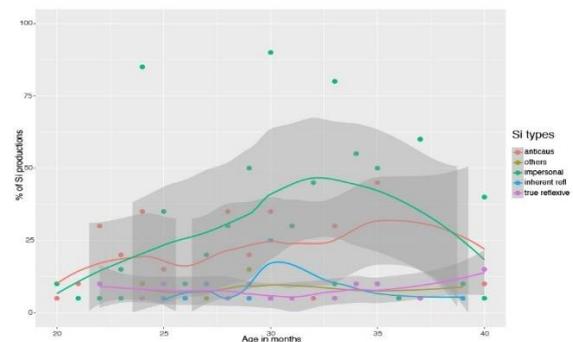
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Word order variation in L1 and L2 Italian speakers: the role of focus and Auxiliary Selection Hierarchy

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This study investigates the Italian word order variation in the relative placement of the subject (S) and the finite predicate (V) in both L1-Italian and L2-Italian-L1-French adult speakers. We test to which extent discourse focus, broad vs. narrow focus, and a decomposed approach to unaccusativity as in Sorace (2000) determine the word order variation in L1 and L2 populations.

In Italian declarative finite clauses, both SV and VS orders are possible. The variation is not unprincipled but is constrained by various discourse and lexical factors, among which focus (Belletti 2001) and unaccusativity (Burzio 1986). In broad focus contexts with unergative verbs the unmarked order is SV, while with unaccusatives the opposite order is found, VS. In narrow focus both verb classes tend to exhibit VS order. This claim found some support in previous experimental studies: L1-Italian speakers produce VS in narrow focus with both unaccusatives and unergatives. Conversely, L2 speakers tend to avoid VS order, transferring the answering strategy of their L1 into Italian, because L2 speakers have an incomplete acquisition of the discourse-pragmatic properties licensing the Italian VS order (Belletti et *al*. 2007; Caloi et *al*. 2018). However, since these studies have focused on narrow focus contexts and have not manipulated both discourse foci in the same design, the effect of discourse focus on the word order variation remains to be investigated. Likewise, we lack experimental information regarding the lexical factor that licenses the Italian VS order, in both L1 and L2 populations. Much research has claimed that unergative/unaccusative predicates are not monolithic classes. Rather they represent two opposite poles of a gradient scale, known as the Auxiliary Selection Hierarchy (ASH): predicates are arranged along the scale depending on telicity and agentivity (Sorace 1993, 2000).

Our study adds to previous research by addressing the role of focus and of the ASH in the variation between S/V orders in native Italian speakers and L2-Italian speakers with French as their L1. We asked: (Q1) Does the two focus types, broad vs. narrow, lead to different word orders?; (Q2) Does the ASH play a role in determining the variation in S/V orders?; (Q3) Do L1 and L2 speaker differ in the word order patterns? A multiple-choice preference task was administered to 40 native Italian speakers and to 40 L2 speakers of Italian with L1-French, with a B2 proficiency level (CEFR). 32 target stimuli were designed manipulating two variables: (a) discourse focus, broad (N=16 items) vs. narrow (N=16); (b) the semantic classes of the ASH, namely Change of Location and Change of State for unaccusative predicates, and Uncontrolled process and Controlled Process for unergative ones (8 items*each class). Each stimulus consisted of three parts. First, a short story provided the context. The story ended with a question with either broad focus, *cosa è successo?* 'what happened?', or narrow focus, *chi è/ha* $V_{participle}$? 'who is/has $V_{participle}$?'. The question was followed by two answers, pre-recorded with unmarked prosody, minimally differing in their word order, SV vs. VS. Participants had to listen to the story, the question and the SV/VS answers. They were asked to choose the answer they would utter between the SV or VS answer they heard. The stimuli were presented in a randomized order. We calculated how many times participants chose SV or VS order, considering three factors: the discourse focus (broad vs. narrow), the quadripartite semantic division of predicates classes, language (L1 vs. L2) (*Graph 1*). Statistical analyzes (, followed by post-hoc multiple comparisons with Tukey's correction) on participants' choices revealed a significant effect of focus ($p<.001$), semantic classes ($p<.001$), and language ($p<.001$), and two interactions: Focus*semantic classes ($p=.011$) and semantic classes*Language ($p<.001$). The VS order was chosen significantly more frequently in narrow focus than in broad focus, more with Change of Location predicates than with other sematic classes,

and more in the L1 than in the L2 group. In **both L1 and L2 speakers**, we found more VS order with all semantic classes in narrow focus than in broad focus (all p's <.006) and more VS order with Change of Location than with the other predicates (all p's <.003). **L1 speakers** chose more VS than L2 speakers with Change of Location, Change of State, and with Uncontrolled Process verbs (all p's <.001). No differences were detected in the amount of VS order with Controlled Process verbs between the two language groups (p=.062). In the L1 Italian group, in narrow focus, the amount of VS was higher with Change of State than with Uncontrolled Process verbs (p<.001), while it did not differ in the comparisons Change of State vs. Change of Location and Uncontrolled vs. Controlled Process verbs (p's >.7). In broad focus, the comparisons between all verb classes differed significantly (all p's <.004), showing that the amount of VS decreased along the scale with controlled process predicates eliciting the lower number of VS orders. **In the L2 group**, in narrow focus, the comparison between Uncontrolled Process and Change of State led to a significant difference (p=.017): more VS responses with Change of State than with uncontrolled process predicates. No differences emerged in the comparisons Change of Location vs. Change of State as well as Uncontrolled vs. Controlled process (p's above .67). In broad focus, the amount of VS was higher with Change of Location than with Change of State (p=.028), while the amount of VS with Change of State did not differ from that of Uncontrolled Process verbs, which in turn did not differ from Controlled Process verbs (p's >.15).

Our study demonstrated that (Q1) discourse focus determines the word order variation, with narrow focus licensing VS order more frequently than broad focus in both L1 and L2 speakers, thereby confirming the theoretical proposal in Belletti (2001). The results showed that (Q2) this variation is also constrained by the lexical semantic properties of the predicate decomposed along the ASH (Sorace 2000): the closer the predicate is to the unaccusativity pole, the higher is the probability to license the VS order in both L1 and L2 speakers. Overall, L2 speakers chose less VS orders than L1 speakers, opting for the SV answer which is available in French (Q3). In sum, our study supports the claim that L2 speakers exhibit an incomplete acquisition of the discourse-pragmatic properties licensing the word order variation (Belletti et al. 2007; Caloi et al. 2018, a.o.) and extends this conclusion to the lexical-semantic properties of the predicate (Sorace 2006, 2011). At the same time, our findings suggest that L2 speakers are nonetheless sensitive to the core properties that license the word order variation: VS was chosen primarily with core unaccusative predicates -Change of Location- and in narrow focus, while SV was the most frequent option in broad focus with unergatives. We conclude that the discourse context that less likely licenses VS order, i.e., broad focus and the less core unaccusative predicates are the vulnerable domains in which L2 speakers are more prone to transfer their L1 answering strategy.
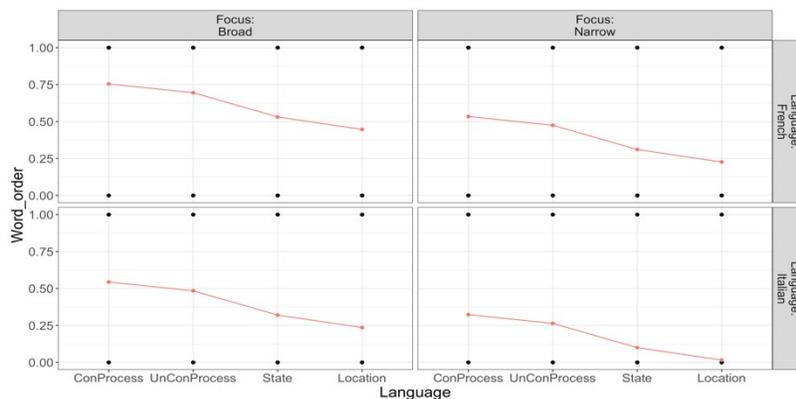
Graph1. Amount of responses SV divided for focus, semantic classes, and language.

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Subject distribution in L2 Spanish of L1 Greek speakers: some implications for the IH

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The phenomena of subject expression and subject position have often been studied in the context of the Interface Hypothesis (IH), which claims that structures involving the syntax/pragmatics interface may be complex to process, so that they are not fully acquirable in a second language (see Sorace & Filiaci 2006; Belletti, Bennati & Sorace 2007; Sorace 2011; 2012). Here we examine the L2 Spanish acquisition by L1 Greek, Spanish and Greek being languages that share the null subject property and allow subject-verb alternations (see Fernández-Soriano 1999; Ordoñez 2007 for Spanish and Spyropoulos & Philippaki-Warburton 2001; Alexiadou & Anagnostopoulou 1998; 2001 for Greek); still the two languages diverge in word order in informational contexts of focused subjects (SV in Greek and VS in Spanish; see Roussou & Tsimpli 2006). The general L1–L2 similarities would be expected to facilitate L2 acquisition, but the IH predicts incomplete command of the interface properties in this case. Rothman's (2009) IH version according to which interface problems may be eventually overcome at higher levels of competence is also taken into consideration.

We designed and administered a multiple-choice task and a word order selection task in Spanish. The tasks were run with 90 participants, 30 intermediate and 30 advanced L1 Greek learners of L2 Spanish and 30 native speakers of Spanish. The conditions examined were: (i) null (#overt) subjects of 3rd person in unambiguous referential shift contexts (with one antecedent) and (ii) overt (#null) subjects of 3rd person in contrastive shift contexts (with two antecedents) in the first task and (iii) postverbal (#preverbal) subjects with unergative/unaccusative verbs in informational focus contexts in the second task. Test items are given in (1), (2) and (3).

(1) ***Juan_i*** quiere publicar un libro y los editores explican que *e_i (#él)* **necesita_i** completar *el* manuscrito.

   Juan_i wants to publish a book and the editors explain that *e_i* (#he) needs to complete the manuscript.

(2) Pese a que ***José_i*** y Marta estudiaron matemáticas, su directora nos dijo que ***él_i (#e)*** hizo su tesis en la facultad de química.

   Although Jose_i and Marta studied mathematics, their supervisor told us that he_i (#e) did his thesis in the faculty of chemistry.

(3) No sabes quién está en la escuela y preguntas: ¿***Quién corre*** en el patio*?* Y tus amigas responden: ***Corren los compañeros de clase*** (#*los compañeros de clase corren*).

   You don't know who is at school and you ask: Who is running in the playground? And your friends reply: Are running the classmates (#the classmates are running).

The results appear in Figures 1 and 2. The statistical analysis of the Mann-Whitney test (with Bonferroni correction) showed that there were significant differences between the intermediate and control groups ($U = 223.000$, $p = .003$) and the advanced and control groups ($U = 234.500$, $p = .003$) in unambiguous referential shift contexts. In the case of contrastive shift contexts, the differences were statistically significant for the intermediate and control groups ($U = 200.500$, $p < .003$), but not for the advanced and control groups. Regarding informational focus contexts, the differences were significant between both the intermediate-control and the advanced-control group comparisons. Both experimental groups of L2 Spanish diverged from native-like patterns in unambiguous referential and informational contexts (with both intransitive verb types), while the advanced group attained target performance in contrastive contexts. The

results were not consistent with the predictions of the IH. Competence level in relation to subject- and context-type and L1 effect played a role in L2 performance, against the IH generalization, but Rothman's (2009) IH version also failed to explain the developmental pattern of L2 acquisition. Our results are far from being an exception, since results that run against the predictions of the IH are common (see Argyri & Sorace 2007 for English-Greek bilinguals; Clements & Domínguez 2017 for L1 English-L2 Spanish; Daskalaki, Chondrogianni, Blom, Argyri & Paradis 2019 for Greek-English bilinguals; Domínguez & Arche 2014 for L1 English-L2 Spanish; Georgopoulos 2017 for L1 Greek-L2 Spanish; Lozano 2009; 2016 for L1 English-L2 Spanish; 2018 for L1 Greek-L2 Spanish; Slabakova, White & Guzzo 2017 for L1 French and L1 Spanish-L2 English). In the second part of our talk we will revise the L2 literature vis-à-vis the IH and show how it fails to meet descriptive adequacy, a conclusion that casts serious doubts on the recent extension of the IH to bilingual populations (Sorace 2016).

Figure 1. Subjects of 3rd person in referential shift contexts.
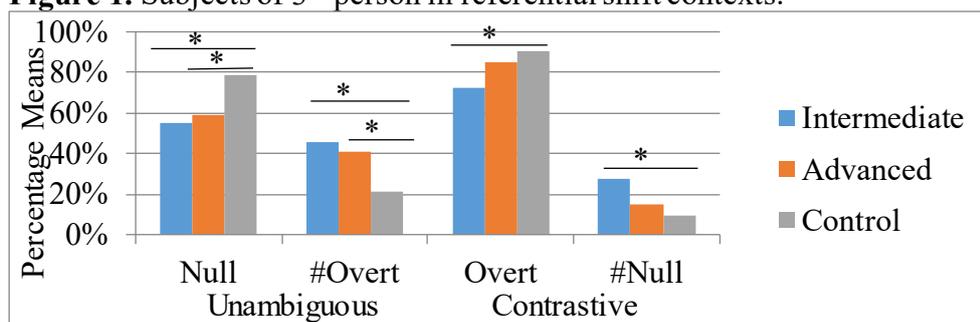
Figure 2. Subjects with intransitive verbs in informational focus contexts.
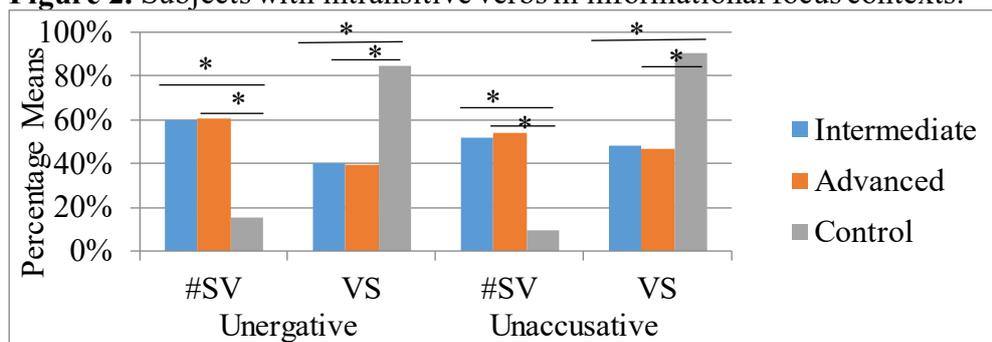
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Person Matters: Relative Clauses in the acquisition of French

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A widely attested finding across languages is that subject relatives (SRs) pose less comprehension difficulties for children than object relatives (ORs) [1-3]. This subject-object asymmetry has been argued to stem from intervention effects present in ORs and determined by the similarity in lexical restriction (LR) between the OR head (i.e. the moved object) and the intervening subject [1]. Difficulties with ORs are reduced, or even eliminated, when the embedded subject is a pronoun, rather than a lexical noun [1,4] and the intervention locality account [1] attributes this facilitation effect to the absence of LR on the intervening subject pronoun. However, a close examination of the experimental materials used in these studies (examples I-II) suggests that the alleviation observed could have arisen for other reasons than the difference in LR between the arguments in the ORs, such as distinctions in number ([3] for Hebrew) or person ([4] for English; [5] for Hebrew). Such mismatches may themselves be the source of facilitation, given that both number and person are attractors for movement in the languages examined, and thus relevant for intervention locality [2,6].

With this in mind, the current study investigated whether intervention effects in French-speaking children can be triggered in the absence of a match in LR between the OR head and the (pronominal) intervener, providing all other relevant features are maintained constant. We compared performance on these ORs (IIIc) to those (i) with a pronominal intervener differing from the fronted LR head on a feature yet unexplored in French, that of person (IIId) and (ii) to SRs and ORs with two matched LR constituents (IIIa-b). 52 participants ages 4;4 to 5;6 (mean age: 4;10) were tested on a character selection task (Fig. 1). If a difference in LR suffices to trigger locality, then all pronominal interveners should give rise to good performance in children. In contrast, if locality operates at a finer-grained featural level than lexical N, children should continue to struggle with ORs containing pronominal subjects which match in grammatical features with the LR fronted object. Selective improvement in comprehension should arise when the pronominal intervener differs in person, providing person is relevant for locality in French, as expected given its relevance for movement [3].

The data (Fig. 2) were fitted with a GLMER with Type of Structure as fixed factor. Results confirm the poor performance often reported for ORs containing a fronted LR object and an intervening LR subject compared to SRs ($p<.001$). Crucially, poor performance was also attested in ORs with an LR head and pronominal interveners, providing these were matched on phi-features (see also [7,8]). In contrast, SRs and ORs with pronominal interveners with a distinct person feature yielded similar performance ($p>.05$). This work confirms that a mismatch in person is a relevant featural distinction in French for the computation of intervention locality, as previously shown for number [6] and as predicted from its status as an attractor for movement [3] and suggests that differences at this fine-grained level suffice to explain children's difficulties with ORs.

Examples

I. Tare li   et   ha-sus   she-mesarkim oto.   (Friedmann et al. 2009)
    show to-me ACC the-horse that-brush-**PL** him
    'Show me the horse that **they** are brushing.'

II. The nurse that **I** am drawing.   (Arnon 2010)
     3rd pers 1st pers

III. a. Montre-moi la souris qui tire la tortue.
         'Show me the mouse that is pulling the turtle.'
      b. Montre-moi la souris que **la tortue** tire.

'Show me the mouse that the turtle is pulling.'
c. Montre-moi la souris qu'**elle** tire.
   'Show me the mouse that she is pulling.'
d. Montre-moi la grand-mère que **je** regarde.
   'Show me the grand-mother that I am watching.'

Figure 1a.
Example of image associated with conditions a-c.
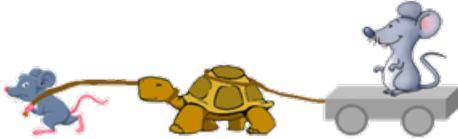
Figure 1b.
Example of image associated with condition d. The pink pony introduced itself at the beginning of the task, explained the task to the children and that she will show them images about herself and her animal friends.

Figure 2. Results
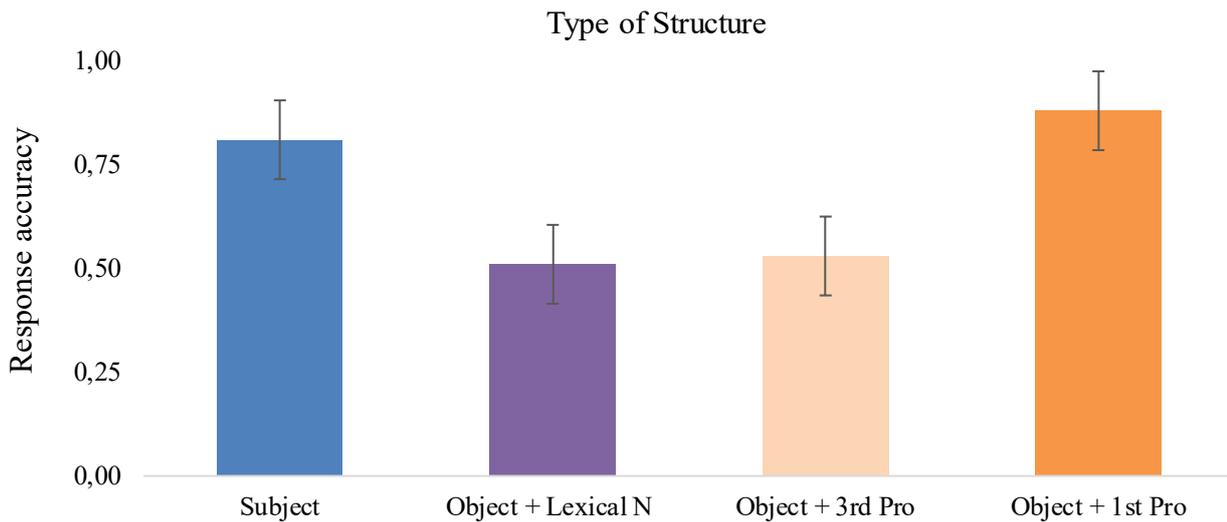
References: [1] Friedmann et al. 2009. *Lingua.* 119: 67-88; [2] Adani et al. 2010. *Lingua.* 120: 2148–2166; [3] Belletti et al. 2012. *Lingua.* 122: 1053-1069; [4] Brandt et al. 2009. *Cognitive Linguistics*. 20: 539–70; [5] Arnon (2010) *Journal of Child Language 37*(1), 27-57 ; [6] Bentea & Durrleman (2017) Proceedings of BUCLD 41, 60-73; [7] Haendler et al. (2015) *Frontiers in Psychology,* 6:860; [8] Haendler & Adani (2018), *Journal of Child Language*, 45: 959-980.

The acquisition of clefts in French: a contribution to the understanding of intervention effects in grammar and language acquisition

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Introduction. The concept of intervention became essential for acquisition research. To explain the difficulties that children show in producing and comprehending object A'-dependencies in questions, relatives and clefts (Friedman, Rizzi & Belletti 2009; Belletti & Contemori 2010, 2012; Belletti & Rizzi 2013; Lobo, Santos & Soares-Jesel 2016, a.o.) several researchers proposed that intervention plays a role and tried to define the factors that are relevant to characterize intervention configurations. Rizzi (2018) proposes that in an intervention configuration …X…Z…Y… there are two types of relations that may arise between the target of the local relation (X) and the intervener (Z): disjunction (the target and the intervener have nothing in common), identity (the target and the intervener are non-distinct) and inclusion (X has some features in common with the intervener but other features distinguish them). Rizzi (2018) argues that children only tolerate disjunction in an intervention configuration, while adults also tolerate inclusion. Moreover, it is a well-known fact that the presence of a lexical restriction in an intervention configuration plays a role in determining intervention locality, throughout language development (Friedman, Rizzi & Belletti 2009; Rizzi 2018). Children have difficulties dealing with configurations in which the target and the intervener are both characterized by a lexical (nominal) restriction (i.e. they both bear the +N feature).

This paper aims to contribute to the discussion of intervention and its role during language development, through the study of clefts in child French. We will specifically focus on the production and comprehension of standard clefts (1) and pseudoclefts (2):

(1)   a. [C'est **la vache** [qui __ lèche la girafe]]
                     |_____|
                It is the cow   who   licks the giraffe
        b. [C'est **la vache** [que **la girafe** lèche __]]
                     |_____|
                It is the cow   that   the giraffe licks

(2)   a.[Celle [qui __ lèche **la girafe**]] [c'est la vache]
               The one who licks the giraffe it is the cow

        b. [Celle [que **la girafe** lèche __]] [c'est la vache]
               The one that the giraffe licks   it is the cow

Intervention effects, and then subject object asymmetries in production / comprehension of clefts by children, are expected in standard clefts (1). In the object cleft (1b), the subject of the embedded clause is marked +N since it is a definite description with a lexical (nominal) restriction. The clefted constituent is also a lexically restricted DP object and crosses the subject.

In contrast, object pseudoclefts (2b) do not entail a typical intervention configuration since French pseudoclefts may be analysed as identificational constructions presenting a demonstrative pronoun (which is not lexically restricted) modified by a relative clause

(Roubaud 2000). No intervention effects are then expected in the production / comprehension of pseudoclefts by children.

Previous works on the acquisition of clefts. Several studies described subject / object asymmetries in the acquisition of clefts in different languages. In general, children perform significantly better on subject clefts than in object clefts. Results are available for English (Lempert & Kinsbourne 1980, children from 2;05 to 6;03; Dick et al. 2004, children aged 5 to 17), for French (Hupet & Tilmant 1989, children from 4 to 10 years), for European Portuguese (Lobo, Santos & Soares-Jesel 2016, 2019, children from 1;2 to 6;9). Investigation on pseudoclefts is scarce. Lobo *et al*. 2019 tested the comprehension of pseudoclefts and found no subject / object asymmetry, arguing that they do not entail an intervention configuration (the moved wh-element does not have a lexical (nominal) restriction) and reenforcing a featural intervention account.

Method. In order to investigate clefts in French child language, we carried out a production test and a comprehension test. The production task offered an appropriate discourse context for structures conveying contrast and included 4 different conditions (targeting subjects, direct objects, indirect objects and adjuncts; 34 items). To assess children's comprehension of clefts, we designed a truth value judgement task which required the child to determine whether a puppet was correctly describing a picture and which included 4 conditions (object standard clefts / subject standard clefts / object pseudoclefts / subject pseudoclefts). 63 children (from 3;3 to 6;2) were tested for production and 34 children (from 4;2 to 6;2) were tested for comprehension.

Results. The results of the production task reveal that: (i) children do not produce pseudoclefts, (ii) children mainly produce standard clefts in the subject condition, (iii) the production of standard clefts increases with age, (iv) clefts are infrequent in the other conditions, (v) in the object condition and in the other conditions, children mainly produce fragments and simple sentences. The results of the truth value judgement task show that: (i) pseudoclefts do not pose difficulties in comprehension, (ii) children perform better in subject clefts and there is no difference in the comprehension of subject standard clefts *versus* subject pseudoclefts, (iii) as far as object clefts are concerned, there is a difference between standard clefts and pseudoclefts – children perform better in pseudoclefts, (iv) in standard clefts, there is a difference between types of clefted constituents – the performance in subject clefts is better, (v) the same is true for pseudoclefts – the performance is better in subject pseudoclefts.

As far as pseudoclefts are concerned, our results do not confirm previous results on the acquisition of clefts, since subjet / object asymmetries also arise in the comprehension of these structures in child French.

Discussion. We argue that intervention configurations may arise in the absence of a lexical (nominal) restriction, although the effects are stronger when there is a lexical restriction. The gender feature on the demonstrative pronoun *celui / celle* that introduces the pseudocleft may be sufficient to give rise to an intervention effect. Costa, Grillo & Lobo (2012) also found intervention effects in the absence of a lexical restriction. Thus, our study gives further support to the featural intervention account (Rizzi 2018). In addition, our study supports different syntactic underlying structures for standard clefts and pseudoclefts. As far as production is concerned, we argue that children resort to other syntactically less complex focus strategies available in the language, such as prosodic focus.

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