The Acquisition of Differential Object Marking

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Differential Object Marking (DOM) - the overt morphological marking of some direct objects - is a widespread phenomenon in many languages of the world.

The objects that must be distinguished from subjects on semantic and pragmatic prominence scales are the ones that typically receive overt marking (Aissen 2003, Laca 2006).

The general parameters that define DOM crosslinguistically are animacy and specificity (or definiteness) and referentiality of the object, the lexical semantics of the verb, and topicality (Torrego 1998, Von Heusinger 2005; 2008), among others, but the relative relevance of these parameters for DOM differ from language to language.

The scant research on the acquisition of DOM by young children indicates that DOM is acquired and mastered by age 3;00 at least when it comes to the morphological expression of core cases. However, DOM is particularly vulnerable to morphological variability, language transfer and interference, and to incomplete acquisition and fossilization in some cases of bilingualism and multilingualism.

In this talk, I will present research on several languages (Spanish, Hindi, Farsi, Turkish) showing the challenges that DOM presents to bilingual and multilingual learners, and I will consider the suitability of current theoretical approaches to morphological variability in bilingualism, such as the Interface Hypothesis (Sorace 2011), the Feature Reassembly Hypothesis (Lardiere 2009) and Emergentism (O’Grady et al. 2011), to account for the findings.
Variability in the input: Acquisition of Differential Object Marking in Estonian

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Unlike Differential Object Marking (DOM) in languages which contrast unmarked with marked objects, Estonian exhibits, unusually, alternation between two overtly case-marked objects. The well-known DOM pattern of, e.g. Spanish, where object marking is conditioned by animacy (Aissen 1993), also contrasts with Estonian, where several factors interact in the choice of object case. Hence, this is a fruitful domain for investigating how variation in the input affects children’s production.

Although object case alternation signals boundedness in Estonian, it is not a one-to-one mapping: object case-marking is subtly conditioned by an interaction of variables (Ogren 2015, Tamm 2004, inter alia). Transitive verbs are grouped into “Partitive verbs”, which only take PARTITIVE objects, or “Alternating verbs”, which select object case depending on several syntactic and semantic factors: polarity and aspect of the clause, and number, quantity and affectedness of the object referent, with PARTITIVE / GENITIVE used for singular objects, PARTITIVE / NOMINATIVE for plural objects. PARTITIVE is associated with imperfective events, indefinite quantity or partially affected objects.

In this study, we ask how children learn the variation inherent in this system. Does the child mirror the relative frequencies of case choice in her caregivers’ speech; and is the child sensitive to the same factors which affect adults’ object case-marking? We discuss results of (1) a corpus study of dense data from one mother-child dyad, and (2) two experiments investigating knowledge of object case alternation in 3 to 5-year-olds.

The data in the corpus study consist of 2136 utterances with transitive verbs and overt objects, from four datasets: two speakers, a mother and child, at two ages, 2 years (2;0.01 – 2;1.12, MLU in words 2-2.9), and 3 years (3;0.01 – 3;1.13, MLUw 2.6-5.5). The results show differences in the child’s usage of PARTITIVE vs non-PARTITIVE objects at each age, as well as a significant difference between the child’s and caregiver’s usage (CDS) at age 3. A linear regression analysis of the factors influencing object case revealed that the lexical bias of verbs in CDS to occur with PARTITIVE objects has a more significant effect on the child’s use at age 3 than age 2 ($\beta= 1.62$, SE = 0.64, $p=0.011$), showing development toward adult-like usage. We found no effect of tense, but the presence of perfective markers ($\beta= -2.79$, SE = 0.4, $p<0.001$), sentence type ($\beta= -1.32$, SE = 0.32, $p<0.011$), and animacy ($\beta= -1.75$, SE = 0.63, $p=0.005$) all affected the child’s object case-marking, showing child sensitivity to a range of relevant factors.

We also carried out a production study (1) and a comprehension study (2), in order to test whether children were more influenced by the lexical bias of particular verbs in the language or semantic aspect (cf Argus 2008, who reported great differences in production and comprehension of Estonian object case). We showed children aged 3 (N1 = 29, N2 = 20) and 5 (N1 = 36, N2 = 21), and an adult control group, videos of completed and incomplete actions. In Study 1, we asked participants to complete sentences by supplying a missing object; in Study 2, they were asked to select one of two videos to match a spoken sentence. The results (Fig. 1-2) show clear developmental effects between 3 and 5-year-olds. Three-year-olds (in Study 1) and adult participants (both studies) gave more categorical responses.
based on the lexical bias of verbs, whereas 5-year-olds in both studies responded to both the lexical bias of Alternating verbs ($\beta_1 = 5.55$, SE$_1 = 1.36$, $p_1<0.001$; $\beta_2 = 2.73$, SE$_2 = 0.78$, $p_2<0.001$) and the aspectual condition of the stimuli ($\beta_1 = 0.61$, SE$_1 = 0.23$, $p_1=0.008$; $\beta_2 = 0.65$, SE$_2 = 0.28$, $p_2=0.02$).

Taken together, these studies provide evidence that Estonian-speaking children are sensitive to the multiple factors affecting DOM in the target language at a young age, but teasing them apart is a gradual process. Though even 2-year-olds have knowledge of object case alternation, the interaction of factors means that this integral part of the grammar is slow to develop. 5-year-olds show understanding of the interacting variables, whereas adults have categorical judgements of verbs with clear biases (both low and high), and are sensitive to the conditions of alternation only with true alternating verbs. The implications of these results for a Usage-Based approach to acquisition will be critically discussed.

![Figure 1](image1.png)

**Figure 1.** Results of production study, by age group (3- and 5-year-olds and adults) and lexical bias of verb to occur with partitive object (Alternating bias [Alt] = within 1 SD below and above mean, Low bias < M-1SD, High bias >= M+1SD).

![Figure 2](image2.png)

**Figure 2.** Results of comprehension study, by age group (3- and 5-year-olds and adults) and lexical bias of verb to occur with partitive object.
References:

The Acquisition of Differential Object Marking by Child Korean Heritage Learners

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Korean employs both differential object marking (DOM) and differential subject marking (DSM), in which nouns are permitted to appear without case markers in certain contexts. Some of the factors that can play a role in the permissiveness of bare subjects and objects include OV adjacency, weight, animacy, definiteness, and—of particular interest for the present study—register (Kwon & Zribi-Hertz, 2008). There is little known about the first language acquisition of this optionality in Korean, and even less known for second language learners. Second language acquisition studies of Korean have shown that learners frequently omit case markers in general (Song, O’Grady, Cho, & Lee, 1997), adding to the difficulty of acquiring DOM and DSM in Korean. Furthermore, bare nouns in Korean are more common in informal registers; due to the fact that heritage speakers are more likely to use and hear informal registers of the heritage language (Valdés, 2014), these learners are then exposed to limited uses of overt case markers in the input. Given these issues—the frequent omission of case markers and the limited exposure to DOM and DSM in informal registers—it is predicted that young heritage speakers of Korean living in the U.S. will not have control over DOM or DSM. Three children ages 3;7 through 7;11 are observed longitudinally over the course of two years. The data consists of monthly recordings of naturalistic play interactions with a parent in the child’s home. Findings reveal that all three of the children use nouns with and without case marking for both subjects and objects from as early as 3;9, as in (1), which is consistent with findings from studies of DOM in first language acquisition of Korean (e.g., Chung, 1994; Chung, 2013; Kim, 1997).

(1) etten namca-nun canggab-ul acu coha-ha-munday (Sarah 7;11)
    some man-TOP glove-ACC very like-do-MOD
    ‘some man really likes the glove’

The results also show that subjects appear with case markers 57.6% of the time where applicable, while objects appear with case markers 19.5% of time, and that over the course of two years all three of the children show increases in the rate of overt case marker usage. Despite the fact that the children predominantly hear Korean spoken in informal registers and the data were collected during informal, low register contexts (e.g., home with parent), the children exhibit native-like rates of DOM and DSM. The role of input in DOM and DSM development, as well as broader connections to heritage language learning, will be discussed.

Selected references:


Differential Object Marking (DOM), a typologically common phenomenon, has enjoyed abundant scholarly interest insomuch as theoretical explanations of its key parameters (Aissen 2003; Malchukov and Swart 2008), language-specific constraints (Leonetti 2004; Seifart 2012; Sinnemaki 2014) and synchronic and diachronic accounts in various languages (Morimoto and Swart 2004; von Heusenger and Kaiser, 2005). However, less attention has been paid to the role that language contact plays in the emergence of DOM or the processes that lead to its variable use in contact settings. Although Basque and Basque-Spanish leísmo have been characterized to share syntactic features such as structural encoding of morphological dative as well as clitic-doubling, (Odria, 2014; Fernández and Rezac, 2016), understanding the processes behind such Basque DOM remains a challenge. In order to fill this gap, this study argues for a contact-induced account of Basque DOM by presenting a quantifiable account on the patterns of language use among different Basque-Spanish bilinguals.

Drawing from methodologies used in SLA and sociolinguistics, I collected data from 84 different Basque-Spanish bilinguals participated in a) an elicited production task (EPT) containing 30 target verbs and b) oral interviews in Basque and Spanish. Speakers were stratified according to BILINGUAL TYPE (42= Basque-Spanish simultaneous bilinguals, 15 = Spanish-Basque early sequential bilinguals and 27 = Basque L2 Spanish L1 speakers (15=advanced and 12=intermediate). Following a direct-object approach on case-marking (Comrie, 2011) and ambiguity thesis (Aissen, 2003), 120 hours of spontaneous speech in Basque and Spanish were transcribed and coded for ANIMACY, SPECIFICITY, PERSON, NUMBER, OBJECT TYPE (null vs. overt) and VERB SEMANTICS (behavioral, physical, perceptual, psychological, and motion). For the Basque data, the factor of VERB TYPE (etymologically Basque or borrowed from Latin or Spanish) was added in order to test possible contact effects. Multiple mixed-effects models (with random-effects) were performed in R in order to locate statistical significances and interactions between factors for each bilingual group.

Results show that different bilingual groups differ not only quantitatively (natives=36,1%; ESB= 15,5 %; L2-advanced=(18,1 %); L2-intermediate=32%) but also qualitatively in their use Basque DOM: whereas all groups follow universal tendencies in the sense that animacy and specificity are significant, native speakers produce significantly more DOM when they borrow verbs from Spanish and the object is null. Furthermore, all groups produce Basque DOM with first and second person objects, but only L2-intermediate speakers extend DOm to 3rd person objects. Results from leísmo show that Basque-Spanish simultaneous bilinguals show nearly categorical uses of leísmo in terms of animacy. Furthermore, all groups showed similar patterns with respect to verb semantics in both languages. In terms of VERB SEMANTICS, both languages show a similar pattern of dative-marking. Based on these results, it is argued that the emergence of Basque DOM in L2 speech is the result of direct transfer or polysemy copying, while its use in native speech is a much older phenomenon of replica gramaticalization (Heine & Kuteva, 2010) from Spanish. Finally, it is argued that these two processes, although different, both lead to convergence between Basque DOM and Spanish leísmo, which provides further evidence that grammaticalization and contact are not mutually exclusive.
References:


Online-sensitivity to DOM Violations by Spanish Heritage Speakers

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This study examines the online processing of differential object marking (DOM) by heritage speakers (HSs) of Spanish living in the U.S. In Spanish, objects that are [+specific] and [+animate] are marked with the preposition ‘a’ (Rodriguez-Mondoñedo, 2008). Previous research has found that HSs omit the obligatory ‘a’ with animate direct objects (e.g. Montrul & Bowles, 2009) from their speech production. This study aims to identify and describe performance issues that appear during online-processing to help explain why HSs struggle with DOM from a psycholinguistic perspective.

According to Ullman’s Declarative and Procedural (DP) model (Ullman, 2001), an individual’s lexical knowledge (declarative memory) as well as their grammatical knowledge (procedural memory) are susceptible to change if exposed to a dominant language (DL) early in life. Necessary syntactic structures in the heritage language (HL) may not be completely developed (i.e. incomplete acquisition) and/or what was already acquired might be altered/forgotten (i.e. language attrition) due to the DL. Therefore, the DP model predicts that HSs will exhibit grammatical processing difficulties in the HL. More precisely, HSs will show English-like grammatical processing strategies when processing the HL. In the case of DOM, HSs might use rigid word order for agent identification instead of using case markers as Spanish-native speakers do (Kilborn, 1989).

Twenty native speakers and 20 HSs of Spanish participated in an eye-tracking reading experiment. Sentences varied between canonical (SVO) and non-canonical (VSO) word order. The processing of DOM is not required for SVO sentences because participants can rely on word order to understand the sentences. However, the processing of DOM is required for VSO sentences to know who is doing what. SVO and VSO sentences appeared in grammatical and ungrammatical conditions by omitting the obligatory ‘a’ as in (1) and (2).

Reading time data showed that HSs were not sensitive to DOM violations with SVO sentences, but they were sensitive to DOM violations with VSO sentences. This suggests that early exposure to English only partially affects HSs’ processing and acquisition of DOM: it affected the way HSs processed SVO sentences, but not VSO sentences. For SVO sentences, HSs used English-like strategies by (1) relying on word order and (2) ignoring case markers. However, for the VSO sentences, where word order alone is not sufficient to interpret the sentence, HS used Spanish-like strategies by (1) relying on case markers. This study suggests that HSs struggle with DOM because they first rely on their DL’s processing strategies and only resort to their HSs when their DL’s strategies are not available.

(1) SVO sentences (Grammatical and Ungrammatical)
   a. Juan llamó al doctor desde su oficina
   b. *Juan llamó el doctor desde su oficina
(2) VSO sentences (Grammatical and Ungrammatical)
   a. Llamó Juan al doctor desde su oficina
   b. *Llamó Juan el doctor desde su oficina
References:


Modeling the Development of Differential Object Marking

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This paper uses a relatively new way of studying language evolution to explore the diachronic development of differential object marking, viz. through computational modeling (Lestrade 2015, to appear). It will be argued that differential object marking forms the evolutionary basis of “normal” object marking.

The main assumptions are that (1) language started out as a "protolanguage", a language without grammar, consisting of a lexicon of object and actions terms only (Bickerton 1981, Jackendoff 2002, Arbib 2015), and (2) speakers make sure they are understood by elaborating their utterances whenever deemed necessary (Blutner 2007; de Swart 2007; Zeevat 2007; Lestrade 2010, 2013); for example, they may use role markers if the contribution of event participants does not follow automatically.

Initially, in the absence of grammatical conventions, these elaborations consist of very specific, lexical ad-hoc markers. As relative frequency plays a role in word activation, items that have previously been used for role disambiguation are more likely to be considered again. And as there often are only two roles to be kept apart, a previously used role marker is often found good enough. As a result, its frequency of usage increases further, as well as the variation of its usage contexts.

In the course of many generations, popular solutions may grammaticalize (Heine and Kuteva 2007). Two important mechanisms in this process are "erosion" (frequent forms being pronounced sloppily and eventually becoming represented accordingly; Nettle 1999) and "desemanticization" (frequent meanings becoming more general as a function of the different contexts in which they are used; Bybee 2010). If a meaning becomes more general, it can be used in even more contexts, and if a form becomes too short to stand on its own, it is suffixed to its host (Bybee, 1985). Thus, words may end up as a case marker eventually.

Using a computer simulation, it will be shown how case markers may thus develop. From this modeling perspective, the problem in fact is not the learning of a (motivated) DOM system, which follows straightforwardly from the desire for communicative success and the grammaticalization of role markers. Instead, the problem is to generalize beyond a differential use, to the use of case marking for all objects. Interestingly, however, differential case marking seems prevalent from a synchronic perspective too: Iggesen (2013) only finds 79 non-differential case-marking languages in his sample of 180 (261 in total, of which 81 don't use case marking). Maybe we should reconsider what normal case-marking is.

References:


Bybee, J.L. (1985), Morphology. a study of the relation between meaning and form.


Lestrade, S. (to appear), "The emergence of differential case marking".


Selective vulnerability: Differential Object Marking in 2L1 Romanian

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University of Bucharest

Introduction. Previous research has shown vulnerability in 2L1 to be restricted to structures at the interfaces between syntax and pragmatics. Syntactic properties that do not involve such interfaces are not subject to delayed acquisition (The Interface Hypothesis, Sorace and Filiaci 2006, Sorace 2011). Romanian has an overt differential object marker (DOM), pe, whose use is constrained by animacy and specificity (Farkas and von Heusinger 2003). At discourse level, pe signals prominence and topicality (Avram & Coene 2009, Chiriacescu & Heusinger 2010). At first sight, the DOM system seems to have all the ingredients of delayed acquisition in a bilingual context. But in Romanian DOM interferes with clitic doubling (CD) in an intricate manner: with definite pronouns and, according to most speakers, proper names as well, CD is obligatory. In CD contexts, pe is a case marker (Dobrovie Sorin 1993), required by syntax. Romanian DOM therefore offers the perfect ground to test the Interface Hypothesis. The use of pe with proper names and definite pronouns is obligatory not (merely) because they are [+definite] and discourse topics, but because of a syntactic requirement. The Interface Hypothesis predicts, in this case, early acquisition. The use of pe with definite and indefinite descriptive DPs is discourse-built and can be optional (in the absence of a clitic). The Interface Hypothesis predicts delayed acquisition in this case.

Aim. In this study we focus on the acquisition of DOM in Romanian by simultaneous Romanian-Hungarian bilinguals with a view to testing the predictions of the Interface Hypothesis.

Method and participants. We investigate pe-marking in two longitudinal corpora of spontaneous speech and in 18 narratives (Mercer Mayer’s Frog, where are you?). We compare the use of DOM in 2L1 to L1 Romanian (see Tables 1 and 2).

Results and discussion. The data coming from the longitudinal corpora show that age of emergence is very early with both monolingual and simultaneous bilingual children, the error rate is low with both groups, the error pattern is identical (very few omissions and overextensions). Adult-like use of DOM is attained by age 3;0 by both groups. In all the corpora investigated, DOM applies earlier and more robustly to proper names and pronouns, i.e. DPs with which marking is constrained by syntax. With definite descriptive DPs, whose marking requires integration and updating of contextual information, the rate of marked objects is lower with the bilinguals (20% vs. 4%). We argue that the longitudinal data provide evidence in favour of the Interface Hypothesis. In narratives, however, older bilinguals mark definite descriptive DPs at a higher rate. We suggest that this result can be accounted for in terms of cross-linguistic interference. The Hungarian verb features two conjugations: a definite conjugation, triggered by a +definite feature on the direct object (É.Kiss 2004, Coppock and Wechsler 2010), and an indefinite conjugation, required in the presence of an indefinite direct object. The acquisition of the two conjugations is early and flawless both in L1 and 2L1 Hungarian. It is therefore possible that this early awareness of the definiteness feature of the direct object in Hungarian gradually contributed to the increase in DOM use with definite descriptive DPs.
Table 1. Longitudinal corpora

<table>
<thead>
<tr>
<th>Setting</th>
<th>Child</th>
<th>Age</th>
<th>MLU</th>
<th>Hours</th>
<th>No. of (Romanian) utterances</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>T.</td>
<td>1;11-2;11</td>
<td>1.94 - 4.51</td>
<td>31</td>
<td>6,587</td>
</tr>
<tr>
<td></td>
<td>P.</td>
<td>2;0-2;8</td>
<td>1.47 - 3.79</td>
<td>18</td>
<td>6,645</td>
</tr>
<tr>
<td>L1</td>
<td>I.</td>
<td>1;10-3;1</td>
<td>1.11-3.63</td>
<td>16</td>
<td>8,006</td>
</tr>
<tr>
<td></td>
<td>A.</td>
<td>1;9-3;1</td>
<td>1.51-3.17</td>
<td>17</td>
<td>8,047</td>
</tr>
</tbody>
</table>

Table 2. Frog stories corpus

<table>
<thead>
<tr>
<th>Setting</th>
<th>No. of participant s</th>
<th>Age range</th>
<th>Total number pe-marked DPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>18</td>
<td>3;3-5;10</td>
<td>70</td>
</tr>
<tr>
<td>L1 (the corpus in Buja 2008)</td>
<td>18</td>
<td>3;2-5;10</td>
<td>33</td>
</tr>
</tbody>
</table>

Table 3. Longitudinal data. Results

<table>
<thead>
<tr>
<th>Setting</th>
<th>Child</th>
<th>1st DOM contexts</th>
<th>DOM used</th>
<th>Omissions</th>
<th>Overextensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>T.</td>
<td>237</td>
<td>91% (n=216)</td>
<td>9% (n=22)</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>P.</td>
<td>136</td>
<td>91% (n=124)</td>
<td>9% (n=12)</td>
<td>1</td>
</tr>
<tr>
<td>L1</td>
<td>A.</td>
<td>121</td>
<td>76.4%(n=110)</td>
<td>7.6%(n=11)</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>I.</td>
<td>197</td>
<td>97.5%(n=192)</td>
<td>2.5%(n=5)</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 4. Longitudinal data. Pe-marking per DP type

<table>
<thead>
<tr>
<th>Setting</th>
<th>Child</th>
<th>Proper names and pronouns</th>
<th>Definite DPs</th>
<th>Indefinite DPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>T.</td>
<td>96%</td>
<td>4%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>P.</td>
<td>97%</td>
<td>3%</td>
<td>0</td>
</tr>
<tr>
<td>L1</td>
<td>A.</td>
<td>85.1%</td>
<td>14.9%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>I.</td>
<td>76.6%</td>
<td>21.3%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

Table 5. DOM in narratives. Overall results

<table>
<thead>
<tr>
<th>Setting</th>
<th>DOM contexts</th>
<th>DOM used</th>
<th>Omissions</th>
<th>Overextensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>70</td>
<td>70</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>L1</td>
<td>33</td>
<td>33</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 6. DOM in narratives. Pe-marking per DP type

<table>
<thead>
<tr>
<th>Setting</th>
<th>Proper names and pronouns</th>
<th>Def DP</th>
<th>Indef DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>2L1</td>
<td>81%</td>
<td>19%</td>
<td>0%</td>
</tr>
<tr>
<td>L1</td>
<td>91%</td>
<td>9%</td>
<td>0%</td>
</tr>
</tbody>
</table>
References:


In our paper we will present the findings of a cross-sectional study on the acquisition of the objective case marker with foreign language (FL) learners of Hindi. In Hindi, the objective marking of the direct object (ko-marking) is conditioned by the factors animacy and specificity (Kachru, 2006). Animate direct objects are always marked with the objective case marker ko, whereas specific direct objects are only optionally marked with ko. Inanimate and non-specific direct objects are never marked with ko and take the unmarked nominative form (see Table 1). This phenomenon is known as differential object marking (DOM).

<table>
<thead>
<tr>
<th></th>
<th>Specific</th>
<th>Non-specific</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animate</td>
<td>-ko</td>
<td>-ko</td>
</tr>
<tr>
<td>Inanimate</td>
<td>-ko or Ø</td>
<td>Ø</td>
</tr>
</tbody>
</table>

The following example sentences illustrate the pattern of DOM. The DO in (1) is marked with the objective marker. It is animate, and can be interpreted as specific or non-specific. The next two examples (Mohanan, 1994) contain an inanimate DO, which is likely to be interpreted as specific in (2) because of the objective marking, while in (3), the absence of objective marking calls for a non-specific interpretation.

(1) \textit{mai\text{\textasciinewline}ṃ \textit{larkī}=ko \textit{dekh-tā h-ūṃ}}
\begin{itemize}
\item I.nom girl=obj see-prs.m.1sg
\item ‘I see the girl/a girl.’
\end{itemize}

(2) \textit{Ilā=ne hār=ko \textit{uthā-yā}}
\begin{itemize}
\item Ilā=erg=necklace=obj lift-pst.m.sg
\item ‘Ilā lifted the necklace.’
\end{itemize}

(3) \textit{Ilā=ne hār \textit{uthā-yā}}
\begin{itemize}
\item Ilā=erg=necklace+nom lift-pst.m.sg
\item ‘Ilā lifted a necklace.’
\end{itemize}

FL Learners cannot rely on one-to-one mapping (i.e., all direct objects receive ko-marking) but have to discern under which conditions ko will be used. Previous work on Hindi case acquisition (Montrul et al., 2012) has revealed language attrition among heritage speakers of Hindi: ko as a marker of the direct object showed a 85% accuracy rate (vs. 97% for native speakers). The case loss is explained by a lack of exposure to native language use, which makes that heritage learners are less sensitive to the complex form-function mappings.

The aim of the present paper is to examine the use and non-use of ko among foreign language learners, who have in all probability a different amount of exposure to Hindi than the heritage speakers in Montrul et al. (2012). We conducted a cross-sectional study with 30 FL learners.

\footnote{The abbreviations used in the glosses are the following: aux: auxiliary; erg: ergative; f: feminine; m: masculine; nom: nominative; obj: objective; obl: oblique; prs: present; pst: past; rel: relative pronoun; sg: singular}
of Hindi: 15 of them had daily exposure to Hindi as they lived in India, they have different L1 backgrounds; the other 15 FL learners studied Hindi outside of India (in Belgium) and all have Dutch as their L1. All learners were administered the same oral production task. The task elicited 1383 DOM contexts.

The results show that the FL learners \((n = 30)\) have a preference for the nominative case. The objective case is only used correctly in 30% of the DOM contexts, which is far below the 85% accuracy rate found among heritage speakers (Montrul et al., 2012). Remarkably, the pattern of accuracy rates is highly similar between the two groups \((n = 15\) in India vs. \(n = 15\) in Belgium). No statistical differences (Mann-Whitney U-test) could be detected. The highest accuracy rates were found in contexts where the DO was animate and specific. In the contexts with animate/non-specific DOs and inanimate/specific DOs the accuracy rate was rather low. These findings show that difficulties arise when the factors animacy and specificity interact (in an asymmetric way).

Nevertheless, despite the low accuracy scores in general, the high accuracy rate of NOM in inanimate/non-specific contexts and the high accuracy rate of objective case in animate/specific contexts actually indicate that the phenomenon DOM in itself is not problematic. Indeed, individual analyses show that the majority of the learners is able to construct an opposition between the use of \(ko\) and the non-use of \(ko\), even though this opposition has only emerged to a limited extent. In our paper, we will discuss this development from emergence to mastery.

References:
Bilingual Sensitivity to Conceptual Structures: Evidence from Turkish DOM

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Processing structures relevant to syntax-semantics and pragmatics-syntax interface are shown to be more demanding than narrow syntax in various bilingual groups: early L2 acquirers, attriters, near-native speakers, heritage bilinguals. Recent research suggested bilinguals to have more difficulties in syntax-pragmatics interface than syntax-semantics interface (Tsimpili & Sorace 2006; Sorace & Serratrice 2009). However most studies investigated the former interface type and only a few studied the latter, and there is controversial evidence that show bilingual difficulties at syntax-semantics interface (Hopp 2010; Yuan 2010).

Here, I study optional ACC case marking in Turkish on monolinguals and Turkish-German bilinguals. ACC marking of the indefinite direct object (provided by means of using the numeral one, ‘bir’ in Turkish, preceding the direct object NP) has been suggested to characterize as Differential Object Marking (DOM) (Aissen 2003; von Heusinger & Kornfilt 2005; Leonetti 2004). ACC marking, through the suffix -(y)I on the object NPs, yields gradience in Turkish: obligatory marking, obligatory unmarking and optional marking (von Heusinger & Kornfilt 2005). Overt occurrence of DOM is known to correlate with definiteness hierarchy as well as animacy hierarchy in languages like Spanish. However, the animacy constraint on DOM has thus far been considered to have minor (Erguvanlı & Zimmer 1994) or no effects in Turkish (Bossong, G. 1985). As for the examples to the animacy effects in Turkish grammar (Bamyaci et al. 2014; Özsoy 2009), I suspect Turkish DOM to be sensitive to animacy effects too. Due to its gradient nature, as well as its truly semantics-morphosyntax interface character, I predict DOM to be liable to show differential levels of acceptability in bilingual and monolingual groups: it requires the integration of semantic information (perceived animacy of nouns) in a morpho-syntactic operation (ACC marking). As such, non-convergence may be observed in Turkish-German bilinguals, especially given that, unlike Turkish, German obligatory marks the accusative on indefinite direct objects.

Using a 10 point scale, I measured the acceptability of isolated short sentences. I kept the animacy of the subjects constant by using proper names, used verbs creating transparent context in past tense in order to avoid influences of lexical semantics of the verb. Indefinite direct objects denoted entities belonging to three animacy categories with a further distinction for two sub-animacy categories for each, Human (Kinship and Profession terms), Animal (Wild and Domestic animals), Inanimate (Concrete and Abstract entities). (See the below table for examples to each condition.) Each condition consisted of 12 items. Direct object is used once with and once without overt DOM, the two versions of the direct object is presented in different item lists. 24 fillers including grammatical and ungrammatical sentences were added to the stimuli in order to check the reliability of participant responses as well for distraction. Thus, each participant saw a total of 96 items, in two different lists, each list randomized in two different orders.
I tested two groups of speakers. These were 18 monolingually grown up Turkish speakers (ages 20-36, M= 25) living in Turkey, speaking the standard variety, they were never exposed to an L2 before the age of 12, they were university students/graduates; and 32 L1 speakers of Turkish with dominant German L2 (ages 18-34, M= 22.7) they were born and living in Germany, they have not been exposed to any language other than Turkish and German, they attended German kindergartens around age of 3, they were university students/graduates. Based on their scores at the Turkish Tömer Standardized Language Proficiency Test, the bilingual group is further split into two proficiency levels, with 17 high intermediate speakers and 15 low intermediate speakers.

Z-transformed values based on 10-point scale data are entered to lme on R for statistical analysis. The high intermediate L1 Turkish speakers did not differ from monolingually grown up Turkish speakers whereas the low intermediate L1 Turkish speakers significantly differed from the monolinguals. In the monolingual group I found a significant animacy affect where the occurrence of DOM has the highest likelihood for Human objects, average likelihood for Animals and the least for the Inanimates. I did not observe distinction of any further main or sub-animacy levels. The monolingual speakers did not differentiate the sub-animacy categories. Bilinguals on the other hand, made a two-way distinction of the main animacy categories whereby Human objects had higher likelihood to take overt DOM when compared to Non-Human objects (Animal & Inanimate). Bilingual speakers further differentiated the sub-animacy categories of Wild Animals vs. Domestic Animals and Concrete Entities vs. Abstract Entities.

These results confirm the results of recent research on the interaction of animacy and optional-verb-number-marking which showed heritage speakers to provide finer distinctions of semantic constraints on morpho-syntax, arguing them to lack automatic processing strategies and thus provide non-economical processing patterns due to the lack of processing experience (Bamyaci 2016) in light of a recent processing-based linguistic framework (Sharwood Smith & Truscott 2014).
References:


