

SPECIFICITY AND ANIMACY IN THE ACQUISITION OF DIFFERENTIAL OBJECT MARKING IN PERSIAN AS L2

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Abstract. The present paper presents findings on the learning of the differential object marker *rā* in Persian as L2 by speakers of L1 Romanian. In both Persian and Romanian differential object marking is constrained by specificity, but it is only in Romanian that the animacy feature plays an important role as well. The results of a grammaticality judgment task with a group of adult L2 learners show that there is no L1 transfer of the animacy constraint and that the L2 learning process is guided by the underlying semantic feature of the specificity scale: referential stability. More generally, our results provide evidence in favour of direct access to universal semantic features in L2 learning.

Keywords: Differential object marking, animacy, referential stability, Persian, Romanian, L2 learning.

1. INTRODUCTION

In a significant number of languages, there is a correspondence between case marking and semantic features; for example, direct objects which are animate, definite or specific are ‘differentially marked’ (Bossong 1985, 1991, 1998, Aissen 2003). Recent work on the L2 learning of differential object marking (DOM) has focused on the preposition *a* in L2 Spanish, usually in learning contexts in which L1 lacks a differential object marker (e.g. L1 English – Guijarro-Fuentes, Marinis 2007, Montrul, Bowles 2009). The general picture which emerges is that DOM in L2 Spanish is a vulnerable domain.

No studies³, however, have investigated DOM in an L2 learning context in which both L1 and L2 differentially mark direct objects but under different semantic conditions. The present study attempts precisely at filling in this gap. It presents findings on the learning in a formal context of the differential object marker *rā* in L2 Persian by adult speakers of L1 Romanian, with focus on the semantic dimension of DOM.

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³ To the best of our knowledge, there is no such study available. Guijarro-Fuentes and Marinis (2009) investigate the acquisition of the Spanish *a* in a Catalan-Spanish context (where both languages have differential object markers) but their participants are not adult L2 learners. They are sequential bilinguals (they had acquired Spanish in a naturalistic environment, in Barcelona, since childhood).

Both Persian and Romanian are DOM languages. The Persian *rā* is primarily a marker of specificity (Karimi 1990, 1996, Ghomeshi 1997, Cagri 2007), with animacy becoming relevant in a small number of contexts. The Romanian *pe* is constrained by specificity and animacy (Farkas 1978, Tasmowski de Ryck 1987, Cornilescu 2000, Farkas, von Heusinger 2003, Mardale 2008a, 2008b, Tigău 2011). Therefore, the semantic parameter which distinguishes DOM in the two languages is one related to the role of animacy. Interestingly, in Persian, where the system is generally indifferent to animacy, when the direct object is low on the specificity scale and marking is no longer obligatory, if the direct object is animate, marked direct objects are preferred (Lazard 1992). Such data suggest that in Persian, strength of specificity interferes with animacy and that the system is not totally insensitive to this semantic feature. The parallelism and the differences between these two systems allow us to investigate the availability of L1 transfer of semantic features, to what extent L2 learners might have (direct) access to the semantic features which underlie the DOM system of the target language, and also how specificity harmonizes with animacy in the L2 learning process. These are the issues which we address in the present study.

We show that the patterns of use of DOM in L2 Persian reflect direct access to universal semantic features from a very early stage, with no transfer from L1. Though the rate of correct answers of the beginner and the intermediate groups is lower than the one of the native controls, the response pattern of the advanced learners is similar to that of native speakers. The responses of all the groups, irrespective of their proficiency level, observe the semantic constraints on the DOM system of the target language, suggesting that DOM is not a vulnerable domain in the L2 learning of Persian by speakers of L1 Romanian. More generally, our study sheds light on L2 learners' access to universal semantic features (as argued, for example, in Ionin *et al.* 2008).

The remainder of the paper is organized as follows. Section 2 includes a short presentation of the main semantic properties of the DOM systems of Persian and Romanian and discusses the predictions for the acquisition of the Persian differential marker *rā* in an L1 Romanian – L2 Persian learning context. The study itself, based on the results of a grammaticality judgment task, is presented in Section 3. The implications of the results are discussed in Section 4. Section 5 summarizes the main findings.

2. DOM IN PERSIAN AND ROMANIAN: PREDICTIONS FOR L2 LEARNING

2.1. On the semantic features which guide DOM

According to Aissen (2003) direct objects which are high in prominence are 'differentially marked'. The set of features which are directly relevant for prominence assessment includes at least animacy and definiteness/specificity (Aissen 2003). The empirical generalization is that an object which is higher on the animacy or on the definiteness/specificity scales (1) is more likely to be overtly case marked (Aissen 2003):

- (1) a. *animacy scale*
human > animate > inanimate
- b. *definiteness/specificity scale*
personal pronoun > proper noun > definite DP > indefinite specific DP > non-specific indefinite DP

Farkas and von Heusinger (2003) propose that the semantic dimension which underlies the specificity scale is *referential stability*, i.e. prominence on the scale is measured in terms of relative referential stability. At the core of this approach lies the intuition that the value which is assigned to the variable introduced by a DP across verifying assignment functions may be more or less ‘fixed’. The bonus of identifying referential stability as the underlying feature of the specificity scale is that it can account for what various types of specificity (epistemic, partitive, scopal)⁴ have in common and it can also explain why partitives behave more like definite DPs than like narrow scope indefinites. On this view, Aissen’s definiteness scale is replaced by the referential stability scale in (2), i.e. the more dynamically stable a direct object is the stronger DOM trigger it will be (Farkas, von Heusinger 2003):

- (2) *dynamic stability scale*
proper nouns, definite pronouns > definite DPs > partitives > indefinite DPs

According to Farkas and von Heusinger (2003), proper names and definite pronouns are *unconditionally* stable, i.e. their value remains unchanged throughout the discourse in virtue of their inherent properties, they are ‘no choice’ DPs. Definite DPs are *conditionally* stable, i.e. the variable which they introduce is required to be stable, but their referential stability depends on some property of the context. Indefinites and partitives, on the other hand, are non-stable, i.e. the value assigned to the variable which they introduce can vary across updates since they are not required to have determined reference. However, it is obvious that partitives differ from (specific) indefinites in one important respect: the value which is assigned to the variable which they introduce is restricted to a subset of the value of a discourse referent, i.e. their non-stability is contextually restricted. Non-stability, then, can be restricted and non-restricted. In our analysis we will adopt the view that the underlying feature of the specificity scale is *referential stability*.

2.2. DOM in Persian

In this section we provide a description of the semantic properties of the Persian DOM system, with focus on the contexts of use relevant to the present study. The Persian morpheme *rā* (*ro/o* in the spoken language) has been traditionally described as a marker of definite direct objects (Lambton 1984, Khanlari 1973, Mahootian 1997). According to these authors, DOM is obligatory in Persian with [+definite] direct objects. Proper names, personal and demonstrative pronouns and definite common nouns require *rā* in direct object position, regardless of animacy:

- (3) Man to/Ali/Tehran/ barādar-e to/ān ketāb *(rā) didam.
I you/Ali/Tehran/brother-EZ⁵ you/that book *(RĀ) saw_{1st sg}
‘I saw you/Ali/Tehran/your brother/that book.’

This analysis, however, cannot account for those cases where *rā* is used with indefinites. Lazard (1992), for example, identifies two classes of specific indefinites which

⁴ See Farkas (2002) for an analysis of several types of specificity.

⁵ The *Ezāfe* (EZ) particle links the head noun to its modifiers.

are obligatorily marked: partitives and those having the meaning of ‘a certain’. The use of *rā* with partitives, with animate and with inanimate objects, is illustrated in (4)⁶:

- (4) a. Yeki az dānešgūiyān *(rā) didam.
 one-INDEF of students RĀ saw_{1st sg}
 ‘I saw one of the students.’
 b. Do tā az ketābhā-ye tārikh *(rā) xāndam.
 two classifier of books-EZ history RĀ read_{1st sg}
 ‘I read two of the history books.’

The co-occurrence of *rā* with the indefinite marker *-i* further supports the claim that the underlying feature of the DOM system in Persian is not definiteness but specificity (see Windfuhr 1979, Karimi 1990, 1996, among others). The use of *rā* with indefinite direct objects is optional; its presence or absence correlates with two different interpretations of the DP with respect to specificity. Both (5a) and (5b) below are acceptable in Persian, but without *rā* the object DP in (5a) is interpreted as non-specific, while in (5b), the use of *rā* forces a specific reading, implying that the referent of the DP is known to the speaker:

- (5) a. Ali ketābi āvard. b. Ali ketābi *(rā) āvard.
 Ali book brought Ali book *(RĀ) brought
 ‘Ali brought a book.’ ‘Ali brought a book.’ (a certain book)

Windfuhr (1979) focuses on the role of referentiality, noting that the occurrence of *rā* with indefinites in situations like the one in (6) indicates its function as referential:

- (6) kasi rā didam
 person-INDEF RĀ saw_{1st sg}
 ‘I saw someone.’

In terms of Farkas and von Heusinger’s (2003) referential stability scale, Persian does not distinguish between conditional and unconditional stability, since both proper names and definite pronouns, on the one hand, and definite common nouns on the other, are obligatorily differentially marked. In this respect, partitives pattern like referentially stable DPs, since they also require obligatory marking. As a rule, the [+/-animate] feature is irrelevant to the DOM system in Persian. This can be seen in (1) and (2) above, and it can account for those cases where *rā* applies to an adverb in intransitive constructions (Karimi 1990:143):

- (7) hafte-ye āyanda-ro esterāhat mi-kon-am.
 week-EZ coming- RĀ relax Pres-do-I
 ‘As for next week, I will relax.’

⁶ One has to mention that traditional prescriptive grammars of Persian ban the use of *rā* with indefinites. Najafī (1992), for example, states that the use of *rā* after indefinite nouns that appear with the indefinite marker *-i* is incorrect (p. 204). But he adds that the norm is, nevertheless, often disregarded both in the spoken and in the written language.

However, it seems that this feature does play a role when low specificity is involved. The data suggest that there is a tendency to use *rā* with indefinite objects if they are [+animate]. Following Lazard (1992), Ghomeshi (1997:140) provides the following examples (8a-b below, including glosses, are hers) in support of this claim; according to her, ‘*b* sounds much better’:

- (8) a. ?hame-ye mo'Allem-â ye shâgerd-i mo' arefi kard-and
 all+EZ teacher + pl one student +indef introduce did+3pl
 ‘Every teacher introduced a student.’
 b. hame-ye mo'Allem-â ye shâgerd-i-**ro** mo' arefi kard-and
 all+EZ teacher + pl one student +indef+râ introduce did+3pl
 ‘Every teacher introduced a student.’

In discussing the clitic doubling of *rā*-marked direct objects, Ganjavi (2007) points out that animacy also plays a role in the felicitous use of the clitic doubling constructions in Persian⁷. She shows that proper nouns, pronouns and definite DPs, i.e. referentially stable DPs, can all be doubled (9a), but doubling is not possible when the direct object is [-animate] (9b).

- (9) a. Unhâ un mard-a- rā didaneš
 they that man-DEF-RĀ saw-3pl-3sg
 ‘They saw-him that man.’
 b. * borj-e ifel-o didameš.
 Tower-EZ Eiffel-RĀ saw-1sg-3sg
 ‘I saw-it the Eiffel Tower’ (from Ganjavi 2007: 188)

Summing up, in Persian the prominence of direct objects is assessed on the specificity/referential stability scale. Direct objects which are referentially stable (proper names, personal pronouns, definite pronouns, definite common nouns) as well as restricted non-stable direct objects (partitives) require the use of *rā*. The partition on the referential stability scale, building on the strength of the trigger, i.e. on whether it forces the use of *rā* or only allows it, is the one in (10):

- (10) Persian: DOM triggers (obligatory vs. optional marking)
 (conditionally and unconditionally) stable DP, restricted non-stable DP > non-restricted non-stable DP

The system, however, is not fully indifferent to animacy. With indefinites, with which the use of *rā* is optional, there is a bias towards the differentially marking of those objects which are [+animate]. Animacy also becomes relevant in clitic doubling constructions.

⁷ We adopt the analysis put forth in Ganjavi (2007); however, it should be noted that there has been some disagreement in the literature concerning the acceptability of clitic doubling constructions in Persian (see, for example, Ghomeshi 1997:157).

The Persian data show that indeed the underlying semantic feature of the DOM system is referential stability; but even within such a system, generally indifferent to animacy, there are contexts where this feature becomes relevant as well.

2.3. DOM in Romanian

In this section, the most important semantic properties of DOM in Romanian will be presented with focus on the similarities and differences between this system and the Persian one. In Romanian, *two* semantic features are relevant to the DOM system⁸: referential stability and animacy. DOM is obligatory when the direct object is unconditionally referentially stable and animate; if it is inanimate, DOM is illicit:

- (11) Vasilica a vizitat *(pe) Vasile/ (*pe) Londra.
 Vasilica has visited *(PE) Vasile / (*PE) London
 ‘Vasilica has visited Vasile/ London.’

With conditionally referentially stable objects, the use of *pe* is optional when the object is [+animate] (see 12a) and illicit if it is [-animate] (see 12b):

- (12) a. Am cunoscut (pe) vecinul de la patru.
 have met (PE) neighbour.the from four
 ‘I have met the neighbour who lives on the 4th floor.’
 b. Am văzut (*PE) un scaun nou.
 have seen (PE) a chair new
 ‘I have seen a new chair.’

Specific indefinite direct objects and partitives are optionally marked if they are [+animate] (13a, 14a) but marking is banned if they are [-animate] (13b, 14b):

- (13) a. (O) caut pe o doctoriță.
 (clitic_{Acc 3rd sg}) look_{1st sg} PE a doctor_{fem}
 ‘I am looking for a woman doctor.’
 b. (*O) caut (*pe) o carte bună.
 (clitic_{Acc 3rd sg}) look_{1st sg} (PE) a book good
 ‘I am looking for a good book.’
 (14) a. Cunosc (pe) câteva din aceste studente.
 know_{1sg} PE some of these students
 ‘I know some of these students.’

⁸ Other features discussed in the literature include topicality and mood (see Farkas, von Heusinger 2003 and references therein). In this presentation we will only focus on the most important properties of the DOM system. Moreover, we adopt the view that DOM in Romanian is constrained only by animacy and referential stability. Topicality, mood, etc. are side effects of the properties of other structures in which *pe* does not behave like a differential object marker (see Ciovârname, Avram 2012).

- b. Știu (*pe) câteva din aceste cărți.
 know_{1sg} PE some of these books
 ‘I know some of these books.’

In Romanian the preposition *pe* also appears in clitic doubling constructions:

- (15) Vasilica l- a ajutat pe el când a avut nevoie.
 Vasilica clitic_{Acc 3rd masc sg} has helped PE him when has had need
 ‘Vasilica helped him when he needed help.’

There is, however, an asymmetry between the preposition *pe* and the clitic: the presence of the former with the direct object does not require the use of the clitic (see 16a below) whereas the use of the clitic requires the presence of *pe* (16b), i.e. the direct object can be marked by *pe* without being doubled by a clitic, but when the sentence contains both an Accusative clitic and an overt direct object, the use of *pe* is obligatory:

- (16) a. (L-) a pictat **pe** vecinul de la patru.
 clitic_{Acc 3rd masc sg} has painted PE neighbour.the from four
 b. L- a pictat ***(pe)** vecinul de la patru.
 clitic_{Acc 3rd masc sg} has painted (PE) neighbour.the from four
 ‘(S)he has painted the neighbour who lives on the 4th floor.’

Interestingly, the presence of the clitic weakens the animacy constraint: in this case *pe* can mark both [+animate] (as in 16) and [-animate] direct objects (as in 17):

- (17) Le -am citit pe câteva din aceste cărți.
 clitic_{Acc 3rd fem pl} have read PE some of these books
 ‘I have read some of these books.’

Animacy is also weak with definite pronouns (other than personal pronouns), which require an obligatory clitic. In (18) below, *acela* ‘that one’ may be [+/-animate]. In both cases, the use of *pe* is obligatory:

- (18) L- am desenat *(pe) acela de acolo. [+/-animate]
 clitic_{Acc 3rd masc sg} have drawn PE that one of there
 ‘I have drawn the one over there.’

The fact that in clitic doubling constructions *pe* is indifferent to animacy is also transparent in direct object relatives and in clitic left dislocation structures:

- (19) a. Cartea pe care am citit -o.
 book.the PE which have read clitic_{Acc 3rd fem sg}
 ‘The book which I have read.’
 b. Pe câteva le- am citit și eu.
 PE some clitic_{Acc 3rd fem pl} have read and me
 ‘Some of them, I also read myself.’

In the colloquial language there are cases where direct objects which are [+definite] [-animate] can be differentially marked, with an upgrading effect (Cornilescu 2000):

- (20) a. Uitați cum o facem pe măămăliguță. (from Mardale 2008a)
 look how clitic_{3rd sg fem} make_{1st pl} PE polenta_{dim}
 ‘Look how we are making this little polenta.’
- b. Tu crezi topurile dacă vrei să le crezi pe topuri.
 you believe tops.the if want_{2nd sg} subj clitic_{3rd fem pl} believe_{2nd sg} PE tops.the
 ‘You can trust tops if you want to trust them.’

Summing up, the DOM system in Romanian assesses the prominence of direct objects on both the animacy and the referential stability scale: generally, DPs which are higher on both scales are stronger DOM triggers. The partition on the referential stability scale relative to whether the use of *pe* is obligatory or optional is the one in (21):

- (21) Romanian: DOM triggers (obligatory vs. optional marking)
 unconditionally stable DP > conditionally stable DP, (restricted and non-restricted)
 non-stable DP

However, the strength of animacy is not equal across the identified contexts: the role of animacy weakens when the DP is very high on the stability scale as well as in clitic doubling constructions.

2.4. Drawing the threads together

The data in 2.2 and in 2.3 show that referential stability is the underlying feature of both DOM systems. With respect to obligatoriness of marking, Persian cuts the domain into referentially stable and referentially non-stable direct objects, placing partitives with the former. Romanian is sensitive to type of stability, cutting the domain into unconditionally referentially stable, with an obligatory *pe*, on the one hand, and conditionally referentially stable and referentially non-stable direct objects, with which *pe* is optional, on the other hand. Importantly, the relative strength of DOM triggers on the referential stability scale remains constant across syntactic contexts.

The comparison between the two systems with respect to referential stability within the DOM system is summarized in Table 1 below:

Table 1

Referential stability in the DOM systems of Persian and Romanian

Language	Referentially stable direct objects		Referentially non-stable direct objects	
	unconditionally stable	conditionally stable	restricted	non-restricted
Persian	obligatory	obligatory	obligatory	optional
Romanian	obligatory	optional	optional	optional

The data in Table 1 show that Romanian imposes more restrictive conditions on the direct object, which has to be very high on the referential stability scale in order for object marking to be obligatory. On the referential stability scale, the two systems are in a subset-superset relationship, with the Persian one being the superset.

Persian and Romanian differ with respect to the role of the animacy feature, which is predominant only in Romanian. The relevance of animacy to the use of *rā* and *pe*, respectively, changes according to specificity strength in both languages. In Persian, where the animacy feature is generally inactive in differential marking, it becomes active when the direct object is low on the specificity scale. In Romanian, where it is generally active, it weakens when the direct object is very high on the specificity scale.

The two languages also have in common a change in the role of animacy in clitic doubling constructions, where the semantic features associated with the differential object marker are different from the ones in structures without a clitic: in Romanian, the presence of *pe* is associated with [+referential stability] [+/-animacy], with a preference for [+animate] objects; in Persian, the presence of *rā* is associated with [+referential stability] [+/-animacy], with a preference for [+animate] objects. And in both languages the structures which involve clitic doubling are also associated with topicality. We assume that in structures which involve clitic doubling, *pe* and *rā* are no longer differential object markers (see Ciovrnache, Avram 2012). Therefore, in our investigation of the L2 learning of DOM in Persian, we only investigate the acquisition of *rā* in structures which do not involve clitic doubling or topicalization (i.e. *rā*-marked adverbs in intransitive constructions are also excluded).

With the DOM systems restricted in the way mentioned above, the relationship between the two languages relative to the role of animacy is, just like in the case of referential stability, a subset-superset one, with the Persian system being the superset: both animate and inanimate direct objects can be marked, whereas Romanian marks only animate objects. The picture, however, also includes contexts where the strength of the animacy feature changes.

The comparison between the two systems with respect to animacy is summarized in Table 2:

Table 2

Animacy in the DOM systems of Persian and Romanian

Language	[+animate] direct objects				[-animate] direct objects			
	Stable		Non-stable		Stable		Non-stable	
	UCS	CS	R	NR	UCS	CS	R	NR
Persian	obligatory	obligatory	obligatory	optional (preferred)	obligatory	obligatory	obligatory	optional
Romanian	obligatory	optional	no	no	with definite pronouns	no	no	no

CS: conditionally stable; UCS: unconditionally stable; R: restricted; NR: non-restricted

The data examined in 2.2, 2.3 and the comparative analysis of the DOM systems of Persian and Romanian show that (i) the two systems differ with respect to the role of the animacy feature; (ii) referentiality interferes with animacy in both systems; (iii) Persian is the superset both relative to referential stability and with respect to animacy.

2.5. Predictions for the L2 learning of *rā*

To the best of our knowledge, there is no other study that has investigated the learning of *rā* in L2 Persian in an L1 Romanian context. The vast majority of research on DOM in adult L2 learning has focused on the preposition *a* in Spanish. Guijarro-Fuentes and Marinis (2007) investigated the learning of DOM in L2 Spanish by English adults on the basis of an acceptability judgment task. Their results show that L2 learners of all proficiency levels perform at chance. Studies of adult Spanish heritage speakers raised in the US show that they have unstable knowledge of DOM; they omit the DOM marker (Montrul 2004) and accept sentences with unmarked animate and specific objects (Montrul, Bowles 2009). As can be seen, the available studies of DOM in adult L2 Spanish reveal the vulnerability of the system, which is unstable even with advanced L2 learners or adult heritage speakers (but see Killam 2011 for a different point of view).

The participants in these previous studies had an L1 which lacks differential object marking. The only exception is that of the paper by Guijarro-Fuentes and Marinis (2009), who investigated the L2 learning of the Spanish differential marker *a* by a group of English-Spanish bilinguals and by a group of Catalan-Spanish sequential bilinguals. Though the authors do not explicitly compare the two groups with respect to the availability of a DOM system in the learners' L1, the two contexts which they examine differ in this respect. Catalan, unlike English, has a differential object marker (Aissen 2003 and references therein). The error pattern of the two groups is different, with the English learners making more errors of omission and the Catalan-Spanish bilinguals making more errors of commission. The latter are also reported to have performed 'slightly better' overall. Though the authors suggest that the pattern showed by the two groups does not seem to be determined by their L1, they notice, however, that in the case of the English-Spanish bilinguals, the L1 'exerts some kind of influence' (p. 90). The differences between the English-Spanish and the Catalan-Spanish groups in the study by Guijarro-Fuentes and Marinis (2009) seem to suggest that it is not implausible to assume that the properties of L1 might determine the L2 learning route of DOM⁹, with some possible positive effects when the L1 also has a differential object marker.

In the present study, the context which we are investigating includes two DOM languages: Persian and Romanian. Learning the use of *rā* involves identifying the semantic properties which require that a direct object be differentially marked. Previous studies that investigated semantic constraints in L2 learning argued that learners have direct access to universal semantic features (see, for example, Ionin *et al.* 2008). If their hypothesis is on the right track, the L2 learner of Persian should be guided, from the very beginning, by the semantic underlying features of the semantic scales which assess prominence in DOM systems. On the basis of the input, they will select one of these features as relevant: referential stability. This predicts that from the beginning of the learning process the system will be constrained by referential stability, e.g. objects more prominent on this semantic scale will be marked in preference to the ones which are less prominent. Of course, since

⁹ Since the Catalan participants were sequential bilinguals who had acquired the language naturalistically whereas the English ones had learned it in a classroom context, it is difficult to account for the observed differences exclusively in terms of cross-linguistic differences, since other variables can be associated with the observed different response patterns.

referential stability also guides differential marking in L1, it seems difficult to decide whether the role of referential stability mirrors indeed access to semantic universal features or L1 transfer.

One way of testing the availability of transfer is to see to what extent the animacy constraint in the DOM system of L1 transfers to the L2 system. The relationship between the two languages with respect to animacy, as already mentioned, is a subset-superset one, with Persian, which differentially marks both animate and inanimate objects, being the superset. This allows us to make some predictions with respect to the learning route. For L2 learning, there is evidence that when the L2 target structure is a superset of the L1, learners are able to acquire it, provided they get sufficient positive evidence (Sorace 1993, White *et al.* 1999); but when the target structure in L2 is a subset of the L1, this will result in L1 transfer, which will persist even at advanced stages (see the discussion and the references in Inagaki 2006). If the Subset Principle applies to semantic features as well, the prediction is that Romanian learners of L2 Persian will converge on the target system.

The predictions made in this section lead to the same conclusion: DOM in L2 Persian should not be problematic for native speakers of Romanian:

(i) the Subset Principle predicts that the animacy constraint of the DOM system of L1 will not be transferred to L2;

(ii) the hypothesis of direct access to universal semantic features in L2 learning predicts that L2 learners of Persian will preferentially mark those direct objects which are higher on the referentiality scale from the beginning of the learning process.

3. THE STUDY

3.1. Aim

The main questions addressed in this study are: (i) since learning DOM in Persian as L2 by speakers of Romanian as L1 may involve (re)learning the role of the animacy feature within the L2 DOM system, is there L1 transfer of the animacy constraint at any stage in the learning process?; (ii) do L2 learners of Persian have direct access to universal features? In particular, do they have full access to the prominence scales that underlie DOM choice cross-linguistically (Aissen 2003, Farkas, von Heusinger 2003)? We answer these questions on the basis of the results of a grammaticality judgment task.

3.2. Experiment

3.2.1. Participants

29 Romanian learners of L2 Persian and a group of 6 native speakers of Persian took part in this study. The Romanian participants were all undergraduate students of Persian at the department of Persian at Bucharest University or graduates of the same department. The native controls were all native speakers from Iran. Age of onset was approximately the same for all the L2 learners (19-25 years) and the length of exposure ranged between 9 months and 9 years. The beginners were all 1st year students, i.e. they had been studying Persian in a formal (classroom) context for 9 months when the test was administered. The intermediate learners were all 3rd year students, i.e. 30 months of formal learning of the

language at the time of testing. The advanced group had an exposure length of 5 to 9 years; some of them worked or had worked in a Persian-speaking environment and they had all spent some time in Iran. Since there is no standardized Persian proficiency test, participants were classified on the basis of three criteria: (i) length of exposure to Persian; (ii) this first classification was corrected for the beginner and the intermediate groups on the basis of the participants' results in all the proficiency language exams they had taken in the department before testing time. The average grade for allowing the participant to remain in the intermediate group was 7 on a scale from 1 to 10, with 10 being the highest grade; (iii) the classification was also corrected on the basis of the results of a language proficiency test which focused on the morpho-syntactic competence (knowledge of grammatical structures, simple and compound verbs, tense and mood, use of prepositions, auxiliaries, subordinate clauses). The minimum score to allow the participant to remain in the advanced group was 85 out of a total score of 100. For the participant to remain in the intermediate group, the minimum score had to be 50. Table 3 summarizes the participants' data:

Table 3

Participants in the study

Participants	Nr	Age range
Beginners	10	19-25 years
Intermediate	14	20-38 years
Advanced	5	24-34 years
Controls	6	24-45 years
TOTAL	35	

The vocabulary used in the test sentences and in the distractors were known to all the participants. However, some of the words which might have been insufficiently known by the group of beginners were listed together with their Romanian equivalent at the end of the test. The use of *rā* had never been explicitly taught before the test.

3.2.2. Materials and procedure

In order to test the L2 learners' knowledge of the semantic conditions under which *rā* marks direct objects in Persian we used a grammaticality judgement task. It included a total of 32 test sentences, 16 with an animate object and 16 with an inanimate object, ranging over 4 conditions with 4 test sentences per condition, and 32 distractors. The details are summarized in Table 4:

Table 4

DOM in L2 Persian: Acceptability Judgement Task

	[-animate] direct object	Nr of sentences	[+animate] direct object	Nr of sentences
C1	unconditionally stable DP (proper name, definite pronoun)	4	unconditionally stable DP (proper name, definite pronoun)	4
C2	conditionally stable DP (definite common noun)	4	conditionally stable DP (definite common noun)	4
C3	non-stable DP (partitive)	4	non-stable DP (partitive)	4

Table 4 (continued)

C4	non-stable DP (specific indefinite)	4	non-stable DP (specific indefinite)	4
	TOTAL	16	TOTAL	16
32 distractors (16 grammatical and 16 ungrammatical).				

The first three conditions targeted obligatory contexts of use; the fourth condition targeted a context in which the use of *rā* is optional, but the preference is to mark the object when it is animate (samples of test sentences for each condition are given in Appendix 1 at the end of the paper). Therefore, for the first three conditions, all the sentences with marked objects, irrespective of animacy, were well-formed and hence should have been accepted. For condition 4, both marked and non-marked direct objects were acceptable, but the marked ones should have been preferred when they were animate.

Though the available literature does not explicitly indicate an interference between DOM and aspectual value of the predicate in any of the languages involved in the study¹⁰, in order to avoid possible side effects of a property that might not have been sufficiently investigated¹¹, the test sentences were balanced for lexical aspect. For each testing condition the number of telic/atelic predicates was kept constant.

The participants were asked to rate the sentences as acceptable or unacceptable. For the sentences which they rated as unacceptable they were also required to provide the corrected version. The response was analysed as correct only if a sentence evaluated as unacceptable was also corrected target-like (i.e. if the source of the identified error was DOM-related). The beginners and the intermediate group solved the task in class, in the presence of one of the researchers. It was untimed. The advanced learners and the native speakers solved the task at home.

3.2.3. Results

With respect to animacy, there was no difference between the acceptance rate of *rā* with [-animate] ($M=10.00$, $SD=3.359$) and with [+animate] direct objects ($M=10.24$, $SD=3.450$), with a strong correlation between the two ($r=0.81$, $p=0.01$). The correlation was strong within each group, beginners included ($r=0.82$, $p=0.01$). The findings are summarized in Figure 1. The correlation between the acceptance rate of *rā* with [-animate] and with [+animate] direct objects was significant within each condition (C1: $r=0.55$, $p=0.01$; C2: $r=0.60$, $p=0.01$; C3: $r=0.70$, $p=0.01$; C3: $r=0.71$, $p=0.01$; C4: $r=0.55$, $p=0.01$) and with each L2 learner group, beginners included ($r=0.82$, $p=0.01$). The descriptive statistics for each group is given in Appendix 2.

¹⁰ See, however, Ganjavi (2007) for some interesting observations on the interference between telicity and *rā*-marked and non-*rā*-marked objects.

¹¹ Given the fact that in Romanian DOM involves animacy, it would not be surprising to find out that telicity might play a part, on a par with what has been suggested for Spanish, for example (see Torrego 1998). We thank Pedro Guijarro-Fuentes for pointing this out to us.

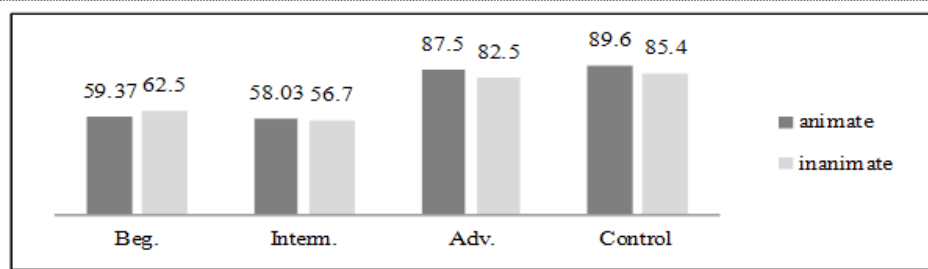


Fig. 1. Results: DOM and animacy in L2 Persian.

With respect to referential stability, $r\bar{a}$ was more often accepted with referentially stable direct objects across conditions ($M=11.83$, $SD=3.252$) than with the referentially non-stable ones ($M=8.41$, $SD=4.196$), irrespective of animacy, by all the participants. The beginners' acceptance rate of $r\bar{a}$ with referentially stable objects ($M=11$, $SD=2.055$) was higher than with referentially non-stable ones ($M=8.6$, $SD=3.204$) ($t(10)=2.256$, $p=0.05$, (2-tailed)) (see also Appendix 2). The difference between responses to conditions 1 and 2 did not reach significance. With the intermediate group as well the overall rate of acceptance was significantly higher for the test sentences with a stable DP ($M=11.28$, $SD=3.930$) than for those with a non-stable one ($M=7$, $SD=3.762$) ($t(14)=4.229$, $p=0.0009$ (2-tailed)), there was no difference between responses to sentences with conditionally stable vs. unconditionally stable DPs but, unlike in the case of the group of beginners, the difference between the acceptance rate of $r\bar{a}$ with partitives ($M=4.5$, $SD=2.175$) and with indefinites ($M=2.57$, $SD=2.138$) reaches significance ($t(14)=3.333$, $p=0.005$ (2-tailed)). With the advanced group, the response rate was similar to the one of the native controls. The overall results per group are summarized in Figure 2.

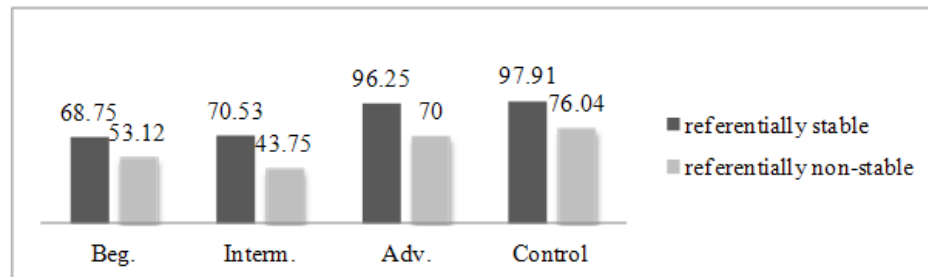


Fig. 2. Results: DOM and referential stability in L2 Persian.

For condition 4, there were no significant differences between the participants' responses to sentences with a [+animate] and with a [-animate] direct object; but there was a difference between the intermediate group and all the other participants: the former accepted a lower number of $r\bar{a}$ -marked objects with indefinites than any of the other groups (28.3% for animates and 31.6% for inanimates).

The rate of correct responses overall is lower with the beginner and the intermediate participants, but the advanced group responded similarly to the group of native controls. The advanced learners, however, gave a lower rate of correct responses in condition 3 with animate DPs (80% vs. the 95.8% of the controls) but the difference is lower in the case of inanimate DPs (85% vs. 91.7%).

4. DISCUSSION

Building on the hypothesis that L2 learners have direct access to universal semantic features (Ionin *et al.* 2008), in conjunction with the Subset Principle, we predicted that the animacy feature which constrains the DOM system in Romanian should not be transferred to L2 Persian. This prediction was borne out by the data. The responses of the participants, irrespective of their proficiency level, did not reveal any animacy constraint at work in the interlanguage, i.e. they did not accept [+animate] *rā*-marked direct objects in preference to [-animate] ones, irrespective of the referential properties of the DP. It is true that the participants in the beginner group had been studying Persian for 9 months at testing time. This is why it might not be possible to firmly state that there is no L1 transfer at all from the very beginning of the learning process. However, a look at the responses to the test sentences in Condition 4, which targeted the use of *rā* with indefinites, could offer further evidence that there might be no L1 transfer of semantic features. The correlation between the acceptance rate of *rā* with [-animate] and with [+animate] direct objects was strong for this condition with each group, beginners included. The participants did not preferentially accept *rā* with [+animate] objects even when the context favours animacy in the target language. The results with respect to animacy are reinforced by the ones relative to referential stability. The participants in our study, irrespective of proficiency level, did not treat conditionally and unconditionally stable direct objects differently, which indicates lack of transfer on the referential stability scale as well. We believe that our findings provide evidence that L1 transfer of semantic features is absent in the L1-L2 learning context under investigation. This is probably favoured by the subset-superset relationship between the two systems.

The second prediction which we made was that L2 learners of Persian should be sensitive to referential stability and differentially mark direct objects in accordance with the dynamic stability scale, i.e. they should preferentially mark referentially stable direct objects. We built this prediction on the assumption that the features underlying semantic scales are part of a universal inventory. If L2 learners have access to universal semantic features, as argued in Ionin *et al.* (2008), for example, learners should preferentially mark DPs following the referential stability scale (Farkas, von Heusinger 2003) at any stage. This prediction was also borne out by the data. Our findings provide evidence that referential stability, indeed, guides the L2 learning of DOM in Persian. All the participants, irrespective of proficiency level, showed an obvious preference for marked referentially stable direct objects, which suggests that their acquisition process is guided by referential stability. As already mentioned above, beginners partitioned DOM triggers in referentially stable and referentially non-stable, with no concern for unconditional vs. conditional stability, in accordance with the system of the target language, in which marking is obligatory with all referentially stable objects, irrespective of stability type. Within the class

of non-stable objects, beginners did not treat partitives as stronger DOM triggers than either indefinites or definites. In this respect, their system reflected a vacillation between treating partitives as definite or as indefinite DPs. With intermediate learners one notices a change: they treated partitives as stronger DOM triggers than specific indefinite objects, in accordance with the properties of the target language.

The order of acquisition suggests that L2 learners have access to the underlying semantic feature of the stability scale (Farkas, von Heusinger 2003), with (unconditionally and conditionally) stable DPs being preferentially marked from the early stages of the learning process. Restricted non-stable DPs, as expected, lag behind, but the learning pattern follows the direction of the scale.

If it is true that L2 learning involves access to universal semantic features, our findings could shed some light on the nature of semantic scales. In particular, they could contribute to what Kiparsky (2008) calls 'a principled separation between true universals, which constrain both synchronic grammars and language change, and typological generalizations, which are simply the results of typical paths of change.' Our data from DOM in L2 Persian indicate that referential stability does indeed constrain language learning, which follows the referential stability scale. But the comparison of Persian and Romanian reveals that the relative strength of triggers on the scale is language specific. What is universal is the underlying feature and the direction on the scale: from unconditionally stable DPs to non-restricted non-stable DPs.

Access to universal semantic features does not exclude gradual learning. The different rate of correct responses with the beginner, the intermediate and the advanced L2 learners indicates that DOM marking is gradually learned. A developmental difference is observed with specific indefinites as well. The intermediate group offered the lowest percentage of accurate responses to the sentences in Condition 4, giving the route a U-curve flavour. This result, however, should be understood in the more general context: *rā* is obligatory in all the other tested contexts but optional with indefinites. Another important fact is that more conservative speakers of Persian do not use *rā* with indefinites. Therefore, frequency in the input might have also played a part.

The comparison of the responses of the advanced group with those of the native controls shows that DOM can be acquired in L2 (at least in a learning context like the one under investigation, where both L1 and L2 are DOM-languages and where the L2 system is the superset in relation to the L1 system). However, this conclusion is weakened by the low number of participants in the advanced group.

Our results offer a picture which is different from the one reported in the literature for the Spanish *a*. This difference may be due to the fact that we investigated the acquisition of DOM in a context where both languages differentially mark objects and where the relationship between the two systems is one which favours the learning process: the L2 system is the superset.

5. CONCLUSIONS

The present study addressed the issue of the L2 learning of DOM in Persian in an L1 Romanian context, with focus on the semantic features of animacy and specificity. We distinguished between the use of *rā* as a differential object marker and the use of *rā* in

structures which involve topicality. Our study investigated only the L2 learning of the former. Given the difference between the semantic scales which assess prominence of objects in the two DOM systems (the animacy and the referential stability scales in Romanian vs. the referential stability scale in Persian) we first investigated the availability of transfer of semantic features. Our findings provide evidence that the animacy constraint which guides DOM in Romanian does not transfer to L2 Persian. Nor is there any transfer of the strength of DOM triggers on the referential stability scale.

The second issue of interest was the availability of direct access to the universal semantic features which underlie DOM systems. The observed DOM learning route indicates that referential stability (as defined in Farkas, von Heusinger 2003) is central to DOM systems: the learning process is guided by referential stability at every stage and extension of differential marking follows the direction of the scale: from unconditionally stable DPs to specific indefinites.

The third issue was the interference between animacy and specificity. The analysis of the two systems revealed that referentiality is crucial and that it interferes with animacy even when assessment of the prominence of direct objects generally ignores the animacy scale. The identified interference pattern is the one of two competing features. If animacy plays a strong part in the system, it weakens when referential stability is very high (the case of Romanian DOM with definite pronouns). If animacy is almost irrelevant to the system, it begins to play a part when referential stability is very low (the case of Persian DOM with indefinites). In the learning process, however, we found no statistically significant evidence of this animacy - referentiality interference, though the response pattern of the advanced group and of the native controls seems to indicate a slight preference for [+animate] direct objects in the case of specific indefinites. Definitely, further research is needed in order to get closer to the nature of the relationship between the two semantic features not only in the learning process but also in DOM systems in general.

APPENDIX 1. GRAMMATICALITY JUDGEMENT TASK: SAMPLE TEST SENTENCES

Condition 1 (proper names, definite pronouns)

- (i) proper name [-animate] [+rā] (grammatical)

Do sāl dar Irān zendegi kardam, vali mota'sefāne Esfahān rā faqat yek bār didam.
two year in Iran life did_{-1sg} but unfortunately Esfahan RĀ only once saw_{-1sg}.
'I lived in Iran for two years, but unfortunately I visited Isfahan only once.'

- (ii) personal pronoun [+animate] [-rā] (ungrammatical)

Ānd bār šomā sedā kardam, ammā ġavāb nadādid.
few times you call did_{-1sg} but answer NEG-give_{-2pl}.
'I called you a few times, but you didn't answer.'

Condition 2 (definite common nouns)

- (i) [+definite], [-animate] (+rā) (grammatical)

Nāme-ye u *(rā) diruz daryāft kardam.
letter-EZ he RĀ yesterday receive did_{-1sg}
'I received his letter yesterday.'

- (ii) [+definite], [+animate] (+**rā**) (grammatical)
 Man barādar-e bozorg-e Ali *(rā) mišenāsam.
 I brother-EZ big-EZ Ali RĀ know-_{1sg}
 ‘I know Ali’s older brother.’
- (iii) [+definite] [-animate] (-**rā**) (ungrammatical)
 Ali in ’akshā-ye qašang čand ruz-e piš be man nešān dād.
 Ali this pictures-EZ beautiful few day-EZ ago to me show gave-_{3sg}
 ‘Ali showed me these beautiful pictures a few days ago.’
- (iv) [+definite] [+animate] (- **rā**) (ungrammatical)
 Maryam gorbeaš xēili dust dārad.
 Maryam cat-her very much love have-_{3sg}
 ‘Maryam loves her cat very much.’

Condition 3 (partitives)

- (i) [+partitive] [+animate] (+**rā**) (grammatical)
 Čand tâ az dānešjuyân-ye irāni *(rā) dar dānešgāh didam.
 some classifier of students--EZ Iranian RĀ in university saw-_{1sg}
 ‘I saw some of the Iranian students at the university.’
- (ii) [+partitive] [-animate] (+**rā**) (grammatical)
 Čand tâ az medādhā-ye qermez *(rā) gom kardam.
 some classifier of pencils-EZ red RĀ lost did-_{1sg}
 ‘I lost some of the red pencils.’
- (iii) [+partitive] [+animate] (- **rā**) (ungrammatical)
 Man do tâ az ostādān-e šomā mišenāsam.
 I two classifier of teachers-EZ you know-_{1sg}
 ‘I know two of your teachers.’
- (iv) [+partitive] [-animate] (- **rā**) (ungrammatical)
 Barāye emtehān do tâ az ketābha-ye dastur-e zabān xāndam.
 for exam two classifier of books-EZ grammar-EZ language read-_{1sg}
 ‘For the exam, I read two of the grammar books.’

Condition 4 (specific indefinites)

- (i) [-definite] [+specific][+animate] (with *rā*)
 Dar kelās-e mā dānešguyi rā mišenāsam ke dar emtehān taqallob kard.
 in class-EZ our student-INDEF RĀ know-_{1sg} who in exam cheat did-_{3sg}
 ‘I know a student in our class who cheated in the exam.’
- (ii) [-definite] [+specific][-animate] (with *rā*)
 Hafte-ye gozašte āpartemāni rā xaridam. Ān dar markaz-e šahr ast.
 week-EZ last apartment-INDEF RĀ bought-_{1sg}. It in centre-EZ city is.
 ‘I bought an apartment last week. It is in the centre of the city.’
- (iii) [-definite] [+specific][+animate] (without *rā*)
 Man doktori mišenāsam ke ruzhā-ye yekšambe kār mikonad.
 I doctor-INDEF know-_{1sg} that days-EZ Sunday work do-_{3sg}
 ‘I know a doctor who works on Sundays.’
- (iv) [-definite] [+specific][-animate] (without *rā*)
 Madresei mišenāsam ke kelāshā-ye farānsavi dārad.
 school-INDEF know-_{1sg} that classes-EZ French have-_{3sg}.
 ‘I know a school that has French classes.’

APPENDIX 2. RESULTS: DOM AND ANIMACY IN L2 PERSIAN PER CONDITION

Group		C1		C2		C3		C4	
		+an	-an	+an	-an	+an	-an	+an	-an
Beginner N=10	Mean	2.7	2.6	2.8	2.9	2.5	2.2	2	1.8
	SD	.823	.699	.789	.994	1.08	.789	.919	1.317
	Range	2-4	2-4	2-4	2-4	1-4	1-4	1-3	0-4
Intermediate N=15	Mean	2.86	2.86	2.86	2.64	2.21	2.36	1.14	1.36
	SD	1.027	1.292	1.027	1.151	1.122	1.216	1.099	1.277
	Range	1-4	0-4	0-4	0-4	0-4	0-4	0-3	0-4
Advanced N=5	Mean	4.0	4.0	3.8	3.4	3.2	3.4	2.8	2.4
	SD	.000	.000	.447	.548	1.789	1.342	1.643	1.673
	Range	4	4	4	3-4	0-4	1-4	0-4	0-4
Native controls N= 6	Mean	4.0	3.8	4.0	3.8	3.8	3.6	2.5	2.1
	SD	.000	.408	.000	.408	.408	.516	.547	.408
	Range	4	3-4	4	3-4	3-4	3-4	2-3	2-3

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