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THE ACQUISITION OF SUBJECT-VERB AGREEMENT IN ARABIC AS A SECOND LANGUAGE

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ABSTRACT

The acquisition of complex grammatical structures of a non-cognate language has been reported to be a daunting task for adult learners (Samimy and Tabuse, 1992; Bailey, 1983; Kleimann, 1977). In the case of Arabic morphology, this task is reported to be difficult not only for foreign learners (Bakalla, 1980; Neel, 1980) but also for native speakers (Omar, 1973). The current paper sets out to investigate the nature and the processes involved in the learning of Arabic subject-verb agreement structures by Australian advanced learners. The investigation employs explanations from second language acquisition (SLA) theories as well as from linguistic theories. It is hypothesised that (1) the amount and direction of information encoding (Person, Number and Gender) motivated by certain semantic categories and word order, as well as (2) the availability of discourse cues would influence the learners' performance in subject-verb agreement tasks. The results reported in this paper indicate that these two factors are significantly important in predicting and accounting for the learners' final linguistic achievement in this grammatical structure.

INTRODUCTION

The main concern of this study is to find out how Australian students learn subject-verb agreement morphology in Arabic written discourse. The study investigates the effect of (1) word order (syntactic information structure), (2) the categories of 'humanness-animacy' and 'collectivity' (semantic information structure) as well as (3) discourse cues (discourse information structure). The discourse-based approach taken in this study (following Barlow 1992) not only helps to account for the seemingly conflicting agreement patterns but also represents an additional source of informative cues regarding the cross-referencing of the subject onto the verb. The discourse information structure, as employed in this paper, consists of the following discourse cues: (a) the 'naturalness' of the

ARAL 18,2 (1995) 65-84

subject's property to be marked on the verb, (b) discourse coherence, namely surface realisation of the subject and its persistence in the discourse as well as (c) lexical specificity of the subject in the discourse (cf. Tyler and Bro 1986:75).

Grammatical agreement in Arabic has always been of some interest to general linguistics and debates on grammar theories, yet, little has been done in applied linguistics to investigate its implications on the learning of Arabic as a foreign language. People involved in teaching, planning and designing Arabic courses (cf. Bakalla, 1980; Neel, 1980) have always noticed that even advanced learners of Arabic commit far more errors in subject-verb agreement than in any other aspect of Arabic grammar (probably with the exception of the Broken Plural). If the availability of discourse cues in written discourse is found to have a significant effect on the learners' performance in subject-verb agreement tasks, then this research would probably present a step forward towards a better understanding of the teaching/learning of Arabic subject-verb agreement.

Besides this purely applied goal, this study aims at contributing to the existing research literature on the role of discourse structures and discourse cues in the learning of second/foreign languages. More specifically, it will be of some significance in relation to the learning of Modern Standard Arabic, an area of language acquisition theory where, in comparison to European languages, research is still lacking. It is hoped that this study may help to fill one of the many gaps that exist in the field of the acquisition of Arabic as a second/foreign language.

Discourse Features of Arabic Subject-Verb Agreement

The main features of Arabic agreement which can be related to and governed by discourse structure are: (1) semantic categories (humanness-animacy and collectivity)¹, (2) syntactic variation (SVO-type versus VSO-type), and (3) pragmatic resulting from the availability of certain discourse cues which function as a source of grammatical information predicted to influence the learners' performance in Arabic subject-verb agreement tasks.

1. Semantic categories

The idea that nouns that are higher on the 'humanness-animacy' scale are more likely to display full grammatical agreement with verbs than those which are low on this scale is discussed in Givon (1984:365), in

Hopper and Thompson (1980: 252) and in Barlow (1992: 205) from a discourse perspective. It is argued, Barlow in particular, that grammatical agreement involving nouns that are [-human] or [+collective] can best be explained in terms of the discourse referent in its discourse context rather than in terms of the lexical item *per se* used in subject position. Some illustrative examples are given below as the full discussion of this approach is beyond the scope of this paper. The semantic categories that are used as independent variables in the current study are 'humanness-animacy' and 'collectivity'.

a. Humanness-animacy

Overt marking of humanness in nominal and agreement morphology is quiet common across many languages. Less common, however, is the overt marking of animacy. In Arabic, like many other languages, non-human nouns are not cross-referenced on verbs in number (c.f. Merlan, 1982:86). Verbs with plural subjects that exhibit the properties [-human] are not marked as plural but rather take the verbal base form [+SG] and a default gender specification [+F] regardless of the natural gender of the subject (in the case of animals). Consider examples (1) and (2):

(1) *al-kilaab-u* *harab-at*
the-dog.M.PL-Nom escaped-F.SG
'the dogs escaped'

(2) *al-manaazil-u²* *taHattam-at*
the-house.M.PL-Nom collapsed-F.SG
'the houses collapsed'

The subject in (1) has the properties [-human; +M.PL] and in (2) [-animate; +M.PL] while the verb in both examples exhibits the features [+F.SG] with no morphological marking of the subject's plurality. The rule seems to be that whenever the subject shows the features [-human; +PL] it is mapped onto the verb as [+F.SG] (see Mansouri, 1995 for a more detailed discussion).

b. Collectivity:

Because it is rare to find collective markers in Arabic agreement morphology, in fact in many languages of the world, the category

[+collective; +human]³ maps onto verbs either as [-PL] or as [+PL] although its morphological structure does not encode plurality. The variation in cross-referencing certain collectives in MSA as either [+PL] or [-PL] is discourse-governed as evidenced in the following examples⁴:

(3.a) *as-salaf-u alladh-ii lahu ru'yat-an*
 the-ancestor-Nom who-M.SG has view-Acc
waqi@iyyat-an qabil-a l-ikhtilaafa
 realistic-Acc accepted-3M.SG the-difference
bayna al-muslim-iina
 among the-muslim-M.PL-Gen
 'The ancestor who had a realistic view tolerated difference among muslims'.

(3.b) *as-sulTat-u @inda s-salafi lladh-iina yamlik-uuna*
 the-power-Nom with the-ancestor who-M.PL possess-3M.PL
ra'y-an fii tawDiifi d-diini
 opinion-Acc in use the-religion
 'Power is with the ancestors who possess a view of the function of religion'.

Note that unlike English the word *salaf* is a collective noun which does not take plural morphemes. The above examples illustrate the fact that the subject being [+collective] is mapped onto the verb as [+SG] in (3.a) and as [+MP] in (3.b). Agreement is influenced not by the lexical item *per se* (ancestor) but rather by its discourse interpretation namely, the undifferentiated entity that represents the ancestor in (3.a) as opposed to the individuals who belong to the group of ancestors in (3.b). The difficulty facing foreign learners of MSA is not only to identify the collective noun in the clause but also to work out its reference in the discourse and then interpret its cross-referencing accordingly.

2. Word order⁵

Arabic is a language that tolerates a high level of word order combinations to the extent that many linguists have argued for different canonical word order combinations for Arabic. Bakir (1980) and Fassi Fehri (1982), for instance, take VSO as the canonical word order, Edmond (1980) and

Mohammad (1990) argue for SVO, while Anshen and Schreiber (1967) suggest that the underlying word order in Arabic is VOS. The puzzle for learners of MSA is the apparent influence word order has on subject-verb agreement. In fact, in SVO-type sentences where the source (subject) precedes the target (verb) agreement is fully marked (Person, Number and Gender), in VSO-type sentences it is partially marked (Gender only) and in VOS-type sentences there is no agreement marking at all (only the base form of the verb which inherently indicates masculine singular). The discourse-based approach to agreement (Barlow:1992) does offer a satisfactory account for this aspect of Arabic grammar. Barlow suggests an ordering of discourse referents (S (ource) and T (arget)) rather than the traditional morphosyntactic notions of 'verb' and 'subject'. From this discourse perspective, it seems reasonable that when [S] precedes [T] agreement marking is cognitively easy because the information to be marked on the verb is presented before the verb itself appears, whereas when [S] follows [T] it is less easy as we are left to predict the possible information about the subject that need to be mapped onto the already existent verb. Consider the following example:

(4) *al-banaat-u akal-na l-xubz-a*
 the-girl.F.PL-Nom ate-F.PL the-bread-Acc
 'the girls ate the bread'

Example (4) presents a SVO-type sentence with full mapping of the source (subject) on the target (verb): source = [F.PL] and target = [F.PL]. In other words, this is an example where the grammatical choices and the natural attributes are equal, i.e., Source=Target:

(5) *akal-at il-bannat-u al-xubz-a*
 ate-F.SG the-girl.F.PL-Nom the-bread-Acc
 'the girls ate the bread'

Example (5) presents a VSO-type sentence with partial marking (gender): source = [F.PL] while target = [F.SG]. In this example the grammatical choices and the natural attributes are not equal. There is a mismatch in favour of the source (S>T).

- (6) *akal-a⁶ l-xubz-a l-banaat-u*
 ate-M.SG the-bread-Acc the-girl.F.PL-Nom
 lit: 'ate the bread the girls'
 'As for bread, the girls ate it'.

This is a VOS-type sentence with no agreement mapping: Source = [F.P] with the Target = [M.SG] which is the base form of Arabic verbs and does not represent an instance of subject-verb agreement.⁷

Eventhough word order is mainly related to the clause-level grammar of Arabic, it is the particular context in the discourse serving as a discourse cue which plays a major role in motivating the use of one word order rather than the other. In example (4) the speech producer is placing focus on *al-banaat* as opposed to other participants in the discourse. In example (5) s/he is producing the utterance as part of a larger narration. No topicalisation is required as relations between participants has already been established in previous thread of discourse. In example (6) the speech producer is deliberately putting emphasis on the patient *al-xubz* rather than the agent *al-banaat*. This usually occurs as an answer to a question about *al-xubz*. The three word order combinations are, therefore, sensitive to and motivated by discourse cues as well as the discourse context in which they occur.

3. Discourse cues

Three main discourse cues are used as variables in this study to test hypothesis (2). The discourse cues consist of (a) the 'naturalness' (in terms of gender) of the property to be marked on the verb, (b) discourse coherence and (c) lexical cues (specificity) available to assist the learners in identifying the discourse reference (discourse information) of the subject.

a. Naturalness

The concept of 'naturalness', as used in this paper, is restricted to the 'natural gender' (Barlow 1992:308) of the subject. It is predicted that if this natural attribute of the subject is equal to its grammatical marking on the verb then agreement marking should be easier. In other words, when gender marking is semantically motivated agreement is easy, on the other hand when it is grammatically motivated agreement is less easy. Consider the following examples:

- (7.a) *al-bint-u akal-at l-xubz-a*
 the-girl-Nom ate-3F.SG the-bread-Acc
 'The girl ate the bread'.
 (7.b) *al-azhaar-u tafattaH-at mundhu yawmayni*
 the-flowers-Nom blossomed-3F.SG since day.DL-Gen
 'The flowers blossomed two days ago'.

In (7.a) the agreement marker [-at] is semantically motivated as it reflects the natural attribute (gender and number) of *al-bintu*. In this case the learner would find it easy to map [-at] onto the verb. In (7.b) the same agreement marker [-at] is purely a grammatical choice as a result of the subject being [+PL; -Hum] and, therefore, is obligatorily mapped onto the verb as feminine singular. In this case the learner is expected to find it less easy to mark grammatical (non natural) gender.

b. Discourse coherence

This variable is discussed in Barlow (1992:156) and also in Givon (1990:896), though from a slightly different perspective, who talks about 'referential coherence in multi-popositional discourse'. The operational definition of discourse coherence as adopted in this study is that it refers to surface realisation of the subject and its persistence in discourse. Surface realisation implies explicit expression of the subject in the discourse as opposed to being understood or omitted for any pragmatic reasons. 'Persistence' of subject implies that the same referent is present over a span of several propositions in the written discourse. Consider the following example:

- (8) *al-walad-u akal-a l-faTuur-a thumma*
 the-boy-Nom ate- 3M.SG the-breakfast-Acc then
dhahab-a ila l-madrasat-i
 went-3.M.SG to the-school-Gen
 'The boy ate breakfast. Then he went to school'.

The agreement marker [-a] in this example is a reference to the subject *al-walad* and is extended over two propositions to indicate that *al-walad* is the topic of the second comment eventhough it is not overtly realised.

c. Lexical specificity

Tyler and Bro (1986:75) argue that 'specificity' of the discourse referent (subject) is very important for learning of any grammatical structures. They define lexical specificity as a category under which are included "the use of articles, pronominalisation, and what we will call lexical choice... The overarching notion is that the referent in discourse should be sufficiently identified to avoid undue ambiguity or confusion for the learners". The lexical cues that are of relevance to the current study are modifiers, relative pronouns and numerals. It is believed that these cues would have an impact on the learners' performance in tasks where there is an ambiguous and/or insufficient amount of information concerning the discourse referent (subject) to the extent that it affects the agreement relation (see examples 11.a and 11.b below).

METHOD

Second Language Acquisition (SLA) is a multi-dimensional phenomenon in which it is difficult to separate the four interactive factors (learner characteristics; nature of target language; instruction/teaching and context) that influence the learning outcome (Long 1983; Stern 1988). This interactive aspect of SLA research is reflected in this study in which it is hypothesized that the learners' performance in agreement-related tasks will be influenced by the nature of Arabic (influence of word order and semantic categories such as 'collectivity', 'humanness' and 'animacy' on agreement marking) as well as by instruction, that is if the learners are given discourse cues this would have an effect on their performance. In the following section the hypotheses are formulated then a discourse-based discussion (following Barlow 1992) of the 'independent variables' used to test the main hypotheses is presented.

Hypotheses

The major hypotheses of this study are:

Hypothesis (1): directionality (Source<Target; Source>Target or Source=Target)⁸ of grammatical encoding would have an effect on the learning of subject-verb agreement.

This means that the variation of the morphosyntactic features of the Source and their agreement marking on the Target would influence

the learners' performance in agreement tasks. Not-surprisingly, when Source's features are equal their morphological mapping on the Target (Source = Target), agreement marking is anticipated to be easier. When the Source exhibits features that are not mapped on the Target (Source > Target), then agreement marking is less easy. Finally, when the Target shows features that are not morphologically derived from the Source (Source < Target) then agreement marking is least easy.

This hypothesis tested the semantic categories of [humanness-animacy] and [collectivity]. Word order (SVO vs VSO) was also used to test the difference between certain levels of hypothesis (1). These levels (Source=Target as opposed to Source>Target) are discussed below.

Hypothesis (2): the availability of discourse cues in written discourse would have an effect on the learners' performance in subject-verb agreement.

Hypothesis (2) tests three discourse cues: naturalness, lexical specificity and discourse coherence.

The aim of this study is to confirm the above hypotheses (1 and 2) and determine the exact significance of their effect on the learners' performance in agreement tasks. Thus proving that the direction and amount of encoding are essential in predicting the learners' performance in subject-verb agreement in MSA and that the availability of discourse cues in written discourse do have an effect on the learners' marking of subject-verb agreement.

The learners

The 5 learners chosen for this study were advanced students enrolled at third year in an Australian university, with 6 months in-country experience in an Arabic-speaking country. They were selected from a group of 20 students on the basis of their proficiency (advanced students), their ethno-linguistic background (English-speaking background), their age (all between 23 and 28) and their motivation for learning Arabic (academic purposes).

Data collection

The nature of this study requires data from written rather than spoken tasks. Two main data-eliciting procedures were employed: grammatical tasks and cloze tests. In both tasks students were asked to fill in the gaps

with the appropriate forms (in terms of the marking of Person, Number and Gender) of the missing verbs. This study is set to test 5 independent variables so the data are collected in a way that each set of data tests one and only one independent variable, thus maintaining the independence of samples. The data-eliciting tasks were designed in such a way that when one variable (eg, 'naturalness') is being tested the learners are not, at the same time, under the effect of another variable (eg, 'lexical specificity'). Hypothesis (1) is tested by means of data collected from grammatical tasks, while hypothesis (2) is tested with data collected from cloze tests.

RESULTS

a. Hypothesis (1) testing the effect of 'directionality of encoding'

The first major hypothesis (1) tested the prediction that the amount and direction of grammatical encoding would have an effect on the learners' performance in agreement tasks. To put differently, it is anticipated that the three levels of amount and direction of encoding, i.e. Source>Target, Source<Target and Source=Target, would have different impacts on the students' performance. The testing of this hypothesis consists in tallying the students' correct as well as incorrect performances in grammatical tasks. Grammatical tasks that included sources which had the properties [-human] and/or [-animate] tested S>T, sources that were [+collective] tested the S<T level and finally sources that exhibited the property [+human] was set to test the S=T level. The results of this test are shown in Table 1.

amount and direction of encoding	correct	incorrect	observations per row
S>T ie [-human]	48 (42.4)	12 (17.6)	60
S<T ie [+collective]	21 (36.74)	31 (15.26)	52
S=T ie [+human]	49 (38.86)	6 (16.14)	55
total per column	118	49	167

$\chi^2 = 34.526$; $df = 2$; $p = 0.0001$

Table 1: Effect of directionality of encoding on learning of agreement⁹

Table 1 shows that there is a significant difference ($\chi^2 = 34.526$; $p = .0001$) between the students' performance in the three levels of directionality encoding, which implies that hypothesis (1) has been statistically supported.

Consider the following illustrative examples produced by a learner and involving a human participant for [S=T], a non human participant for [S>T] and a collective participant for [S<T] respectively:

- 9 (a) *arrijaal-u ya@mal-uuna bikulli jidd-in*
the-man.3M.PL-Nom work-3M.PL with hard-Gen
'The men are working very hard'.
- (b) **al-usuud-u ya@iish-uuna fi l-ghaabat-i*
the-lion.3M.PL-Nom live-3.M.PL in the-forest-Gen.
'Lions live in the wild'.
- (c) **al-qawm-u rafa@-a min sha'ni*
the-people-Nom raised-3M.SG from status
ad-dustuur-i
the-constitution-Gen
'The people raised the status of the constitution'.

The learner was able to grammatically carry out subject-verb agreement in (9.a) with [S=T] in terms of feature specification, whereas in both (9.b) reflecting [S>T]-level and in (9.c) reflecting [S<T]-level where there is a feature mismatch, the learner produced ungrammatical agreement tokens.

However, it is important to verify whether the students' performance in every single level is significantly different from their performance in every other single level or not. Interestingly, χ^2 did not show a significant difference ($\chi^2 = 1.796$; $p = .1802$) between (S=T) on one hand and (S>T) on the other hand. This implies that the learners' performance in both levels was not significantly affected. However, both (S=T) and (S>T) were significantly different from (S<T) with ($\chi^2 = 28.03$; $p = .0001$) and ($\chi^2 = 18.483$; $p = .0001$) respectively. These analyses illustrate the fact that the learners perform significantly better in (S=T)-type agreement relations.

The syntax-motivated data provided another source of information for checking the above finding concerning the non significant difference

in the learners' performance in (S=T) and (S>T) tasks. Results of this analysis are displayed in Table 2

Word order	correct	incorrect	observations per row
SVO for (S=T)	48 (47.14)	9 (7.86)	57
VSO for (S>T)	42 (42.86)	8 (7.14)	50
Total per Column	90	17	107

$\chi^2 = .229$ (non significant); df= 1; p= .6322

Table 2: Testing the effect of word order

The above statistics confirm the early findings that the difference between the learners' performance in (S=T)-type of agreement structure as opposed to (S>T)-type is not significant in both semantically-motivated data and syntactically-motivated one. Unfortunately, it is not possible to test (S<T) from a syntactic perspective because word order does not provide such agreement pattern.

b. Hypothesis (2) testing the effect of discourse cues

The second hypothesis (2) dealing with the effect of discourse cues on the students' performance in subject-verb agreement tasks was investigated primarily by means of cloze tests. As this hypothesis is testing the effect of discourse cues the students were tested in both discourse cues-rich tasks as well as discourse cues-poor data. In both instances correct and incorrect answers were tallied to check if the difference was significant. The results involving each of the three discourse cues used -surface realisation and persistence of the subject, lexical specificity and naturalness- are shown in Tables 3, 4 and 5 respectively.

The chi-square test used to test the statistical significance of the discourse cues in the second hypothesis revealed that all three cues do have a significant influence (p<.05) on the learners' performance. In fact, the result for discourse coherence is clearly significant (p=.0001).

coherence	correct	incorrect	observations per row
+coherence	46 (36.37)	7 (16.63)	53
-coherence	24 (33.63)	25 (15.37)	49
total per column	70	32	102

$\chi^2 = 15.198$; df= 1; p = 0.0001

Table 3: Effect discourse coherence on learning of agreement

specificity	correct	incorrect	observations per row
+specificity	48 (35.47)	8 (13.53)	56
-specificity	56 (61.53)	29 (23.47)	85
total per column	104	37	141

$\chi^2 = 4.072$; df= 1; p = .0436

Table 4: Testing the effect of 'lexical specificity'

naturalness	correct	incorrect	observations per row
+naturalness	57 (48.97)	8 (16.03)	65
-naturalness	56 (64.03)	29 (20.97)	85
Total per columns	113	37	150

$\chi^2 = 8.292$; df= 1; p = .004

Table 5: Testing the effect of 'naturalness'

This means that students would perform significantly better in a context where the subject is persistent and explicitly expressed than in a context where there are different referents assigned the role of subjects and where these subjects are not explicitly realised in the discourse. Consider the following examples:

10. *kaana naser wa aSHAabihi yuqaawim-uuna*
was Naser and companions fight-3.M.PL
l-@aduww-a wa jaahad-a kathiiran
the-enemy-Acc and resisted-3.M.SG much
'Naser and his companions fought the enemy. They resisted a lot'.

The marking in the first sentence of this example is consistent with the features of the subject (subject= plural; verb=3M.PL) whereas in the second sentence the learner switched back to the base form of the verb (3M.SG) as a result of not having an explicitly available source.

Lexical specificity was also significant ($p=.0436$), but clearly less significant than the other two cues. The availability of lexical modifiers has a positive effect on learners' performing of agreement tasks as evidenced in the following examples:

- 11.(a) **al-usuud-u ya@iish-uuna fi l-ghaabat-i*
the-lion.3M.PL-Nom live-3.M.PL in the-forest-Gen.
'Lions live in the wild'.
- 11.(b) *al-usuud-u all-atii ta@iish-u fi l-ghaabat-i*
the-lion.3M.PL-Nom which.3F.SG live-3F.SG in the-forest-Gen
akthara xuTuurat min usuud-i l-Hadiiqat-i.
more danger from lion-3M.PL-Gen the-zoo-Gen
'Lions who live in the wild are more dangerous than those who live in the zoo'.

Unlike (11.a) where there is no lexical modifiers indicative of the features of the subject, the availability of the relative pronoun *allatii* in (11.b) which indicates the features [F.SG] served as a cue in the learner's identification process of what ought to be cross-referenced onto the verb.

The third discourse cue tested under hypothesis (2) was 'naturalness' which was significantly ($p=.004$) effective in assisting

learners in subject-verb agreement marking, whereas the lack of it hindered the learners' performance. Consider the following examples:

- 12.(a) *al-banaat-u daras-na fi l-jaami@at-i*
the-girls-Nom studied.3F.PL in the-university-Gen
'The girls studied at university'.
- 12.(b) **al-manaazil-u taHaTTam-uuna min shiddati ar-riiH-i*
the-houses-Nom collapsed-3M.PL from strength the-wind-Gen
'The houses collapsed because of strong wind'.

The plural marking is grammatical in (12.a) but not in (12.b) as a result of 'naturalness' of features being present in the former but missing in the latter.

The overall results of this test reveal a significant difference between the learners' performance in cloze tests rich in discourse cues and where natural attributes of the subject equal the grammatical marking on the verb on one hand, and their performance in cloze tests poor in discourse cues and where there is a mismatch between encoded attributes and grammatical marking on the other hand.

DISCUSSION AND CONCLUSION

The statistical findings of this study indicate that advanced learners of MSA perform significantly better in agreement tasks when discourse cues are available in the passage than when they are not. The importance of discourse cues for these learners derives from the fact that all discourse cues represent an additional source of information regarding the identity and the attributes of the subject. The other source of information is the semantic knowledge of the world that speakers of all languages share about things around them. It is, in particular, in complex agreement patterns that advanced learners have successfully used discourse cues in order for them to cross-reference the appropriate attributes of the 'subject' in question onto the verb (cf., Fakhri, 1984; Bates & MacWhinney, 1981). Some of these complex agreement relations include clauses where the 'subject' is either 'non-human' or 'collective', in both cases their morphological marking was not equal to their natural semantic attributes. Needless to say, in less complex agreement relations (with human

participants) advanced learners did not have difficulties carrying out subject-verb agreement marking. Discourse cues, however, did have an overall positive effect on the learners' marking of such subject-verb agreement relations.

There is a strong indication that learners of Arabic who have reached a relatively high proficiency level use information not only from the already available semantic structure but also from the discourse structure. Information extracted from the general discourse context consists of what is recoverable from explicit cues as well as from the learners' own perceptual and cognitive interpretation of different discourse referents in a particular context (cf., Bates and MacWhinney, 1981). Learners tend to employ such strategies when confronted with complex structures in the target language, namely when there is no one-to-one correspondence between forms and their functions in the discourse (Cooreman and Kilborn, 1991). Discourse information together with the learner's own perception of the source's identity play a crucial role in allowing grammatical rules to be an efficient processing device (Givon, 1983) in subject-verb agreement.

The overall results point out to a significant difference between the learners' performance in discourse-controlled tests and their performance in discourse-uncontrolled tests. If the learner has all the information needed to be encoded on the Target then agreement marking is easier. If such information is not available then agreement marking is harder. The findings of this study are in line with Givon's claim (1990:949) that the order of acquisition of any grammatical structure, in our case subject-verb agreement, reflects the order of cognitive complexity of such structures. This result is of particular relevance to those interested in written discourse since it is argued that the creation of written texts, in second language learning, is cognitively and linguistically more demanding than reading comprehension and in certain languages like Arabic more complex than speaking (cf, Wells, 1981:254). Thus the importance of discourse coherence and discourse cues in enhancing cognitive processing of difficult grammatical structures is manifested.

This investigation began with the observation that subject-verb agreement in Modern Standard Arabic presents a major problem for both teachers and learners. This observation was confirmed even for advanced learners. In providing possible explanations for this problem, a discourse-

based approach was employed. The clear benefit of using discourse to account for the learners' problems with agreement is that (i) it offers explanations for the cognitive difficulties associated with various factors affecting agreement such as word order and semantic categories and (ii) it presents additional information structure which can be utilised by learners when identifying the Source and the Target of a given agreement relation.

In sum, the findings of this study have proved that discourse information is crucial in explaining and enhancing the learning of subject-verb agreement in Arabic. The effect of semantic information on the acquisition of agreement is significant but proved to be controllable by discourse information. The learners' performance in subject-verb agreement tasks that are influenced by syntactic information (SVO vs VSO) was not significantly different. This might be the result of their relatively advanced proficiency in Arabic, in which case the question of whether the performance of beginners and intermediate learners would show a significant difference under various word order combinations remains to be answered. This is an evidence that Arabic subject-verb agreement is a persistent problem even for advanced students. It remains to be determined whether discourse cues and perception do assist learners with lower proficiency levels in dealing with agreement relations in general, and complex agreement patterns in particular. This is an area that should be studied in future research investigating the acquisition of Arabic as a second language.

NOTES

1. Collectivity is more classificatory rather than semantic category. However, in this paper it is treated as a semantic notion for pure methodological convenience.
2. Duplicated consonants [cc] indicate gemination, duplicated vowels [vv] indicate vowel length and capital consonants [C] indicate emphatic sounds.
3. Not all collectives in Arabic undergo this agreement pattern ([+collective] ———> [+PL]), rather only certain human collectives that do not refer to a particular group of individuals e.g 'the bedouin', 'the arabs' etc... do map onto verbs as [+PL].

This is in contrast to Abboud et al (1975) and Barlow (1992) who fail to identify this type of collectives. Barlow (1992:258) cites non-countable generic/collectives for non-human nouns and human collectives which refer to groups of people. Both types map onto verbs as feminine singular. There is no discussion of collectives that map onto verbs as masculine plural.

4. Examples 3.a and 3.b are extracted from Omran and Al-jazaar (1995).
5. Word order is used to provide a different source of data (syntax-motivated data) in addition to the already available semantics-motivated data, in order to test hypothesis (1) in the two levels (S>T typified in VSO-type sentences) and (S=T typified in SVO-type sentences).
6. The mapping of the features [masculine singular] in (6) does not represent agreement marking in these two sentences but rather it represents the base form of the verb. In Arabic there is no infinitive with all verbs having a base form inherently exhibiting the features [masculine singular].
7. Because it was difficult to collect data on a large enough scale (at least 25 observations) VOS-type level was disregarded.
8. Following Barlow (1992) Source refers to 'subject' of agreement and Target refers to the 'verb'.
9. In all tables reporting statistical analyses, the italic figures presented between parentheses refer to the expected values (EV) of that particular cell. The observed value (OV) is presented on the left hand side of the parentheses in the same cell.

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ARGUMENTATION AS AN INTERACTIONAL PROCESS IN CONVERSATION

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ABSTRACT

Argument is a structured phenomenon, the structuring of which is evident in conversational activity. This study begins with speech act analyses of argumentation and examines the way in which idealized models of argumentation relate to the linguistic behaviour of participants in argument as talk. While a speech act understanding of arguments reveals some of the basic principles of the ways in which arguments are constructed as talk, sequencing patterns of arguments are interactionally accomplished. Speakers produce turns which are related to their purpose in talking and which include speech act complexes appropriate for the perlocutionary act of convincing. This limits the range of choices for a speaker in the sequence of interaction. Turns which do not count as appropriate for the task of arguing are accountable.

INTRODUCTION

Argumentation has received a great deal of attention in a number of disciplines, particularly philosophy and rhetoric, and more recently has come to be studied as a part of linguistics and discourse studies. A substantial body of knowledge has been established, based largely on idealized or intuitive data. Studies of argumentation using idealized data have treated argument both as a monologic process in which the individual's attempts to produce convincing strategies are studied as an interior process and as a dialogic process, in which argumentation is seen as developing in interaction between participants in talk. Significant insights into argumentation as talk have been achieved through the application of speech act theory which has established ideal models of the argumentation process (see in particular van Eemeren and Grootendorst 1984, 1992; van Eemeren, Grootendorst, Jackson and Jacobs 1993; van Eemeren and Kruijer 1987; Jacobs 1989; Grootendorst 1990).

ARAL 18,2 (1995) 85-104