

Agreement Asymmetries and Word Order in Iraqi Arabic

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Abstract: Agreement asymmetries in the varieties of Arabic have been a topic of continuing attraction. One particularly interesting area where this agreement asymmetry occurs is the case of conjoined subjects. Here Iraqi Arabic, and reportedly other spoken Arabic dialects, differentiate between preverbal and post-verbal subjects. In VS orders the agreement is sometimes with the first conjunct DP while in SV order there is full agreement with the whole conjoined DP. A number of proposals have been suggested to offer a formal account for this asymmetry in Standard Arabic and modern spoken dialects. However, these formal accounts with their single mechanisms fail to deal with the evident variability in the agreement pattern that is exhibited in sentences with VS order. The paper attempts to account for this variability via the investigation of the performance-related processing factors lying behind it. To this effect, a sentence production experiment is conducted that manipulates subject-verb and subject-predicative adjective order. The informants view objects on a poster, name the objects and produce sentences of varying word order that contain two agreement targets. The difference in this order appears to produce a significant difference in the agreement pattern of the agreement target. Post-subject verbs exhibit agreement with the whole conjoined DP, and pre-subject verbs exhibit variability in their agreement pattern, while adjectives do not show this asymmetry since they always occur after the subject. This shows that linear order plays a substantial role in determining agreement in the resolution of the target number.

Keywords: agreement asymmetry, Iraqi Arabic, linear order, proximity, word order

1. Introduction

Asymmetry in subject-verb agreement has been a topic of continuing interest in syntactic research. The phenomenon is attested in many languages of differing typology.¹ In Arabic, the standard variety exhibits an asymmetrical agreement pattern between the verb and subject depending on the position of the verb in relation to the subject. There is full agreement (in number, gender, and person) when the subject precedes the verb, and a partial agreement (in gender and person) when the opposite order obtains. In contrast to this, spoken dialects show full agreement of the verb with the subject, regardless of their order in relation to one another. Nevertheless, these dialects do exhibit agreement asymmetry in cases of conjoined subjects. Preverbal conjoined subjects elicit full verbal agreement, while post-verbal subjects variably elicit either full agreement with the conjoined subject, sometimes showing plural number, or partial agreement with only the first conjunct showing singular number in others. Various proposals have been put forward to account formally for this agreement asymmetry. However, there appears to be another dimension to this phenomenon that is worthy of investigation; namely, the performance-related factors that lie behind the

variability exhibited in the agreement pattern in those cases where the verb precedes the subject, and which formal accounts seem to fail to account for.

The paper attempts to investigate this agreement asymmetry in Iraqi Arabic, (one of the spoken varieties of Arabic), and to provide concrete evidence of the variability in agreement that this variety shows via a performance task that is hoped to reveal the nature and limits of this variability. After a brief overview and a review of both formal syntactic and processing accounts of this phenomenon, the paper argues for a performance related explanation for the apparent variability in the agreement pattern between the verb and the subject. The paper is divided as follows: section 2 is a descriptive statement of the nature of subject-verb agreement; section 3 deals with the noticeable agreement asymmetry in cases of conjoined subjects and reviews related proposals; section 4 describes the performance experiment that is carried out to find out where variability takes place; and, section 5 discusses the results of the experiment and suggests an account for this variability.

2. Subject-verb agreement in Iraqi Arabic

Like other spoken Arabic dialects, Iraqi Arabic is said to exhibit full agreement between the subject and verb. All the Φ -features (number, gender and person) of the subject are valued/checked (or copied) onto the verb regardless of their position in relation to each other, as can be seen in sentences like:

- 1.a l-jaha:l na:maw²
 def-children slept.3PL.M
 b. na:maw l-jaha:l
 slept.3PL.M def- children
 ‘The children slept.’
- 2.a hse:n na:m
 Hussein slept.3SG.M
 b. na:m hse:n
 slept.3SG.M Hussein
 ‘Hussein slept.’

In this, spoken dialects appear to differ from Standard Arabic, which displays a systematic agreement asymmetry in these contexts.³

3. Agreement asymmetry in sentences with conjoined subjects

A special type of agreement asymmetry however, has been found to exist in some spoken Arabic dialects (Lebanese and Moroccan Arabic) in cases of conjoined subjects as was discussed in Aoun et al (1994). While the verb exhibits full agreement (marked by plural number inflection) with such a subject when this occurs preverbally, the reverse VS order results in a different agreement pattern. Here, the verb may sometimes exhibit plural agreement in an analogous pattern to that of the verb with a preceding subject, while in others, it seems to agree with the first of the two conjoined DP's, the so called ‘first conjunct agreement’

(FCA). In such cases, conjoined subjects do not appear to behave like the plural entities they are. It is this type of agreement asymmetry that is the focus of our investigation.

Like Moroccan Arabic and Lebanese Arabic, Iraqi Arabic, which exhibits full agreement of the verb with the subject across the board, regardless of their order in relation to each other, shows the same agreement asymmetry found in those dialects in clauses with conjoined subjects. This is what we see in sentences (3.a-d). While verbs show full agreement with their preverbal subjects, as in (3.a), and the impermissibility of partial agreement as in (3.b), full agreement on the verb is optional when it precedes the subject, as in (3.c) and (3.d).

- 3.a. l-rajja:l w l-mara tghaddaw
 def-man and def-woman had lunch.3PL.M
- b. * l-rajja:l w l-mara tghadda
 def-man and def-woman had lunch.3SG.M
- c. tghadda l-rajja:l w il-mara
 had lunch.3SG.M def-man and def-woman
- d. tghaddaw l-rajja:l w il-mara
 had lunch.3PL.M def-man and def-woman
 ‘The man and the woman had lunch.’

In such structures, we can observe some variability in the agreement pattern between the verb and its post-verbal subject (VS order): full and partial, while no such variability occurs in cases where the subject occurs preverbally (SV order). It appears that in VS order sentences, the agreement is sometimes with the whole conjoined DP, i.e. full, plural agreement, while it is only with the first conjunct in others. To account for this phenomenon, various suggestions have been made. These are of two general types: formal syntactic proposals and performance-related processing proposals. The following subsection reviews some of these, plus an evaluation of the solutions they offer to the present question.

3.1. Formal analyses

A number of proposals have been put forward to account formally for this asymmetry in Standard Arabic, modern spoken dialects and other languages, where it has been found that such asymmetries occur. Aoun, et al (1994) were the first to notice it and to propose that these conjoined DP's may be the result of clausal coordination with a subsequent deletion of the verb of the second clause under identity – i.e. gapping, which leaves one instance of the verb to carry its original agreement morphology with the first subject, as represented in (4).

4. [[_{TP} tğadda l-rajjaal] w [_{TP} ~~tğadda~~ il-mara]]
 had lunch.3SG.M def-man and had lunch.3SG.F def-woman

To them, the agreement in VS order is with the first conjunct DP and the conjoined subject DP does not form a constituent, i.e. a phrasal constituent with plural number. Only when the conjoined subject precedes the verb does it form a unit that has a plural number and therefore the verb shows full, plural inflection.

Another proposal hypothesizes that in sentences with postverbal subjects, the agreement with the first conjunct is due to a particular type of government

holding between a head – the verb, and the specifier of its complement - the first conjunct DP in the ConjP (Munn 1999). The agreement with the first conjunct is presumed to be due to the structural asymmetry of the two conjunct DP's in the ConjP, as in:

5. [TP raah [_{ConjP} [DP I-ʔab][_{Conj'} [_{Conj} w][_{DP} ʔwlaad]]] [_{PP} lil-siinama]]
 went.3SG.M def-father and def-boys to def-cinema

The first conjunct is the specifier of the verb complement and is the locus of the features with which the verb agrees. In sentences with preverbal subjects, the whole subject (ConjP), is in the TP specifier position in which the verb is the head. The agreement here is the conventional spec-head agreement holding between the subject ConjP, as a whole, and the head verb, hence the full plural agreement pattern.

A third proposal suggests that the agreement with the first conjunct (partial agreement) in VS orders is the result of a late adjunction of the second conjoined DP into the ConjP represented in (5) above. That is, the agreement process doesn't 'see' the second conjunct since it is not available when it takes place. Sentences with preverbal subjects will exhibit full, plural agreement, because the higher-positioned conjoined subject will be taken as one 'plural' unit in the agreement with the verb (Soltan 2006).

The proposals differ in the syntactic agreement processes and operations they posit to account for this attested asymmetry in the pattern of subject-verb agreement. However, they all fall short of dealing adequately with the facts of asymmetry. Within the first proposal, the fact that there is no optionality of agreement pattern in SV order, like that which is devised for the VS order, is not explained. Besides resorting to different mechanisms to establish agreement, the second and third analyses cannot explain that full agreement is also an option in VS orders (see Larson 2013 for assessment).

Regardless of their degree of success in accounting for the differing agreement patterns however, these formal accounts seem to neglect an important element in the apparent variability of the agreement pattern in VS orders. This is the influence of performance in shaping the actual production and comprehension of linguistic expression.

3.2. Performance-related explanations

The various issues of subject verb agreement have attracted the psycholinguistic researcher's interest for a long time. Investigation has not been limited to the representation of the phrase structure of these expressions and how it is built during the processing of an expression, but it has also involved the processes that look into the dependencies between lexical items; steps in the actual performance of an expression. Among these dependencies are subject verb agreement and the various factors that account for its shaping. One of the pioneering works in the performance-related investigation of how subject-verb agreement is processed is that of Bock and Miller (1991), who clarified that although subject verb

agreement appears to be a very straightforward process, it nevertheless is a source of many performance errors. The authors investigated structures where the head noun of the subject DP, also known as the ‘agreement controller’, is separated from the verb, the ‘agreement target’ by another noun that does not match the first in number, to see whether this intervention may result in errors in agreement. To achieve this, they carried out a sentence completion task which revealed that intervention clearly does result in errors in agreement. This, they attributed to the factor of proximity of the candidate controller to the agreement target: the noun closer to the verb may constitute the one with which the verb agrees with. Their study also showed that it was only where a singular subject contains a plural distractor, e.g. ‘*the key to the cabinets*’, that agreement attraction errors occurred. In the opposite case, i.e. where a plural subject contains a singular noun, like ‘*the keys to the cabinet*’, such errors didn’t occur.

To account for this asymmetry, a suggestion was made in the form of feature percolation by Nicol et al (1997). According to them, attraction errors result from the movement of a wrong feature to mark the subject DP, at the stage when it is being computed. In those structures with a plural distracter that mismatches the controller noun, like ‘*the key to the cabinets*’ the plural feature ‘percolates’ up to the DP and mark it as plural. At the following stage that marks the integration of the verb in the representation, the verb will be checked against a plural DP. This account explains the difference between plural and singular attraction errors by proposing that only the plural number is specified on the noun via a specific feature, while singular nouns are not. Thus a distractor noun that is singular in number does not have any such feature, and therefore no feature will percolate (Eberhard 1997).

Related to this are studies that investigated the role of linear proximity compared to structural relations and their role in agreement attraction which found that it is the latter that produces more errors, e.g. Vigliocco and Nicol (1998) and Franck et al (2002). This provided evidence to the percolation account above in that the features of the distractor have to be integrated in the subject DP.

Amongst the factors whose effects were investigated in performance related studies was the morphological structure of agreement controllers/distractors. A comprehension study by Tucker et al (2015) investigated the role of the plural type of distractor noun in the frequency of agreement errors in Modern Standard Arabic. It presented subjects with sentences in which the verb was preceded by two nouns, one of which was the head of the subject DP and the other which was a mismatching local noun that may work as a possible distractor. They found that the distractor nouns that formed their plural by suffixation (sound masculine and feminine plurals), e.g. *mu^callimuun*, ‘teachers’(m), *mu^callimaat* ‘teachers’(f), induced higher rates of agreement attraction errors on the verbs, than those distractors which formed their plurals via internal change (broken plurals), e.g. *‘ummaal*, *mudaraa?*.

Lorimor and Benmamoun (2007) investigated the influence of the factors of linear order between the agreement controller and the agreement target, and the conceptual number of the controller on the computation of the agreement between

the subject and the verb in Lebanese Arabic. To this effect, a sentence production experiment was run to validate this suggestion. The sentences contained two agreement targets, a verb and an adjective, and an agreement controller, the subject, consisting of conjoined DP's. While the position of the adjective in relation to the subject remained constant, the verb's position varied. It was found that the position of the verb in relation to the subject had a definite effect on the agreement pattern that was produced, while conceptual number didn't.

The above studies show that what underlies the variation in the resolution of the agreement between the verb and subject, which may be in the form of errors, is the result of factors that affect the actual implementation of this dependency relation during the processing of an utterance- in its comprehension or production. These may range from the interruption of an intervening noun that may assume the role of the controller, to the proximity of a candidate controller, memory gaps during processing, order between the controller and target, syntactic and semantic configurations and features that may add to indeterminacy in computing agreement, etc.

We will proceed to investigate the nature of the above mentioned asymmetry as it is manifested in Iraqi Arabic. We will also attempt to offer a satisfactory account for it in view of the proposals that have been offered in the literature, as is detailed in the following section.

4. Methodology and procedure

The noticed variability in subject verb agreement was checked via a sentence production experiment. The experiment involved a picture description and manipulated factors that are thought to affect this variation between single and plural agreement: word order (the position of the subject and the verb in relation to each other) and noun number (singular vs. plural first conjuncts and mass conjuncts) and the interaction between them. The factor of word order was also checked in the position of the adjective in relation to the subject.

The subjects (12 native speakers of IA, of varying age and gender) viewed (each on his/her own) 18 sketches showing persons, animals and objects painted with different colours. Each sketch showed two entities, e.g. *ктаاب* 'book', *دافااتير* 'notebooks', *؟اؤلاء* 'boys', representing the 'conjoined subjects'. These consisted of single or multiple members of such entities. In the sketches, the entities were painted in a specific colour. The subjects were given clear instructions that they were to produce statements about the colour that these objects had in the past, and yes/no questions about their colours in the past. They were also given examples of the task they were to carry out. This task necessitated the use of the perfective copular verb *كان/كانت* 'was', and the colour adjective, e.g. *؟ازراغ/زوروج* 'blue', with the appropriate number and gender markings and with variation in the number and gender markings on the two agreement targets.

Each sketch that the subjects were shown was expected to generate a pair of sentences with conjoined subjects that differ in their number, gender and animacy. Thirteen of these pairs had a singular first conjunct DP, and singular or plural

second conjunct DP. Five of the pairs had plural first conjunct DP's with either singular or plural second conjunct DP's. In five of them, the first conjunct DP's were feminine (singular or plural), and masculine (singular or plural) in the other thirteen. Seven of these sketches represented inanimate first conjuncts: one mass and six countable, and eleven represents animate ones: seven human nouns, and four non-human ones.

For each sketch, the subjects were asked to produce two sentences: a declarative sentence and interrogative sentence. Typically, the two sentence types that the subjects were asked to produce, differ in the subject–verb order: the first is SV, and the second is VS. Since it is possible to use the two word orders in any of the two sentence types, the subjects were asked and shown with examples how to produce sentences of the targeted orders. Sentences (6) and (7) are examples of the produced sentences.

6. l-qalam w l-maṣṭara ča:n /ča:naw zurug
 def-pencil and def-ruler were.3pl.m blue(p)
 'The pencil and the ruler were green.'

7. čaan /ča:naw l-qalam w l-maṣṭara zurug
 was/ were 3sg.m/pl def-pencil and def-ruler blue(p)
 'Were the pencil and the ruler green?'

Since Iraqi Arabic shows agreement in gender and number on both verbs and adjectives, each of the sentences produced contained two agreement targets: the perfective copular verb *ka:n/ča:n* 'was' and the colour adjective. The two elicited sentences exhibit a change in the position of only one of the agreement targets – the verb, in relation to the agreement controller – the subject. The position of the second agreement target, the adjective, remains constant in relation to the agreement controller. Being predicative, the adjective in IA always comes to the right of the subject, regardless of the change in the subject –verb order. In the VS order, the verb, which comes to the right of the subject, intervenes between the subject and the adjective. The responses were recorded and statistically computed in terms of ratios of variation in agreement patterns.

5. Results and discussion

The results of the experiment show that the difference in word order between the declarative and the interrogative sentences produced a significant difference in the agreement pattern of the first target, the verb. The subjects were obviously sensitive to this positional difference as exemplified by table (1).

Table 1. Agreement patterns in declarative and interrogative sentences

Sentence type	Order	Plural no. marking	Singular no. marking
Decl. sentences	SV	98.5%	1.5%
Inter. Sentences	VS	46.5%	54%

Preverbal subjects elicited plural verb agreement, i.e. agreement with the whole conjoined DP. 98.5% of the declarative SV sentences, like sentence (3), were

produced with verbs carrying plural number markings: *ka:naw/ĉa:naw*. The number of verbs with singular agreement marking, i.e. *ka:n/ĉa:n*, in these declarative sentences was a negligible 1.5%: only two instances out of 156. It is interesting that these were in two sentences: the first with mass noun conjuncts [*l-^ĉasi:r w il-ma:y*] 'the juice and the water', and the second with singular human masculine conjuncts [*l-^lab w il-walad*] 'the father and the boy'.

On the other hand, post-verbal subjects do not seem to have a similar effect on the verbs that precede them. Rather than agreeing with the whole conjoined DP, as apparent in the declarative sentences produced, verbs in the interrogative sentences, such as sentence (4) above, exhibited a variation in their number marking. The results show that in 54 % of the produced interrogative sentences, the pre-subject verb carried singular number agreement and in 46% of them, plural number marking. We may note here that the first conjunct DP's in these sentences were both of plural and singular number. In those interrogative VS sentences where the first conjunct DP is singular, i.e. with a subject of the form [DP_{sing} and DP_{sing/pl}], e.g. [*lĉalib w lbazzu:na*] 'the dog and the cat' and [*lmu^ĉallim w ltulla:b*] 'the teacher and the students', the percentage of the singular agreement pattern increases as illustrated in table (2).

Table 2. VS Agreement pattern according to first conjunct

Sentence type	Plural no. marking	Singular no. marking
[DP _{sing} conj DP _{sing/pl}]	56 (36%)	100 (64%)
[DP _{pl} conj DP _{sing/pl}]	44 (73%)	16 (27%)

In the production of these sentences, the pre-subject verb carried a singular number marking in 100 out of the 156 such sentences produced by the subjects-forming 64% of the cases. Only 56 (36%) of the verbs showed plural marking, compared to the 1.5 % of singular verbs in declarative SV sentences. On the other hand, the agreement pattern shows indicative variation in sentences with plural first conjuncts. In the 60 interrogative sentences that have plural first conjuncts, e.g. [*l-tulla:b w il-mu^ĉallim*] 'the students and the teacher', the majority of the verbs carried plural agreement marking. These were 44, forming (73%) of the total number of tokens.

It is worth noting here that the singular feminine form of the verb – i.e. *ka:nat/ĉa:nat*, is the form that many speakers of Iraq Arabic use with plural non-human and even plural human feminine nouns instead of the plural *ka:naw/ĉa:naw/ĉa:nan*. If we add the eight instances where this form is used, the number of the verb forms which show agreement with the first conjunct in interrogative VS sentences rises to 52 (86.5%). This strongly suggests that the agreement of the verb is with the first conjunct rather than the whole conjoined DP, a finding that lends support to the hypothesis that the linear order of the constituents does play a role in the process of agreement. Agreement targets occurring before the agreement controllers tend to exhibit agreement with the number of the first control candidate. The subject-verb agreement in sentences

with singular feminine first conjuncts exhibit a similar pattern, as can be seen in table (3).

Table 3. Subject-verb agreement: singular feminine first conjuncts

Sentence type	Order	Plural marking	Singular marking	
			fem.	masc.
Decl. sentences	SV	36 (100%)	--	----
Inter. Sentences	VS	17 (47%)	14 (39%)	5 (14%)

Declarative sentences with subjects of the form [DP_{s,f} – and – DP_{s/p}], like *lmu^calma w ltulla:b* ‘the teacher(f) and the students’ show 100% agreement with the conjoined DP- i.e. the verbs show plural marking in all thirty six sentences with singular first conjuncts that were produced by the subjects. In their interrogative counterparts the picture is different. The interrogative sentences that showed agreement with the conjoined DP – i.e. plural marking were only 17 out of 36, forming 47%. On the other hand, sentences with verbs showing agreement with the number of the first conjunct counted 19, forming 53% of the total sentences produced. Of these there were 14 (39%) sentences in which the verbs exhibited singular feminine marking, i.e. they did not only agree with the first conjunct in number, but also agreed with it with the other phi-feature of gender. In these cases, then, the singular feminine first conjunct elicits gender agreement with the verb that precedes it. The remaining five sentences (14%) showed verbs of the singular masculine form. Although the agreement in gender accounts for only 39% of the cases, it may be taken as a second piece of evidence of the tendency of pre-subject verbs to agree with the first conjunct in more than one of its phi-features.

Let’s turn now to the second agreement target in the produced expressions, i.e. the adjective. This target retains its clause-final position in both sentence types. If our hypothesis about the effect of linear order is correct, then we should not expect the form of the adjective to exhibit any asymmetrical variation in the sentences produced. This seems to be the case, as shown in table (4).

Table 4. Adjective agreement patterns

Sentence type	Order	Plural marking	Singular marking
Decl. Sentences	SV	213 (98.5%)	3 (1.5%)
Inter. Sentences	VS	212 (98%)	4 (2 %)

Out of a total of 216 declarative sentences, there was only one instance of a sentence with a singular masculine adjective and two instances of a sentence with a singular feminine adjective. The first was a sentence in which the conjuncts were masculine mass nouns, and the other two sentences had plural inanimate first conjuncts. However, with the knowledge that in Iraqi Arabic, non-human feminine plural subjects elicit singular feminine agreement marking on verbs and

adjectives, we can say that the agreement of the adjective in these two sentences is with the whole conjoined DP and not with the first conjunct.

In the corresponding interrogative sentences with a VS order, there were only four instances of singular masculine adjectives. These were sentences with non-human singular masculine first conjuncts. There were also two instances of interrogative sentences showing singular feminine adjectives. These were sentences with inanimate plural first conjuncts. Again, we may note here that plural non-human subjects elicit singular feminine agreement markings in the idiolects of several of the informants. So, these, too, are instances where agreement is with the whole conjoined DP. All in all, the number of sentences where the adjective exhibits singular agreement marking, i.e. agreement with the first conjunct, is negligible. They are only four, making approximately 2% of the total number of produced sentences.

If we leave aside the trivial exceptions above, it becomes clear that the hypothesis about linear order is borne out. The second agreement target in these sentences, whose position in relation to the agreement controller doesn't change with the change in the order of the verb and subject, shows no variation in its agreement marking. It carries the plural agreement marking throughout. The agreement here is with the whole conjoined DP, and not with its first conjunct. Incidentally, the plural marking that we find on the adjectives in all the sentences produced, testifies to the plurality of the conjoined subject DP, and may probably be used as evidence against the suggestion that such subjects are the result of clausal conjunction reduction, as is proposed in one of the formal accounts above. However, this is an issue that is beyond the scope of this study.

6. Conclusion

The experiment results provide answers to two questions. The first concerns the asymmetry that is found in agreement patterns in declarative and interrogative sentences, and how to account for it. The formal syntactic literature provides a number of proposals based on different mechanisms to achieve this asymmetry: Agree, spec-head, government, conjunction reduction, etc. The second concerns the variability that we find in the agreement patterns of sentences with the VS order. As we have seen, there appears to be a significant tendency for the verb to agree with the first conjunct of the post-verbal subject. However, this is not a choice that all respondents share, or is adhered to systematically by the same person. The formal syntactic proposals accounted for the different agreement patterns via positing differing structures in which each takes place or by using different syntactic processes for the realization of each pattern. However, variability of agreement in the same construction – VS sentences, does not seem to be susceptible to such accounts.

We may thus need to entertain the possibility that it is the result of the working of factors involved in the processing of these expressions- i.e. in their production and comprehension. A number of these factors have been identified as playing a role in influencing the implementation of the agreement of the verb with

the subject. One such factor seems to be the order of the agreement target and the agreement controller in relation to each other. In the processing of SV sentences, the computation of the subject DP precedes the introduction of the verb into the phrase marker, and thus has its number feature set up as a plural number. This will make the agreement features (especially those of number and gender) of the controller (subject) more prominent and active, and the agreement of the verb will be with an already identified plural subject.

On the other hand, in the processing of VS sentences, where the agreement controller (the subject) is introduced into the phrase marker later than the target (the verb), it seems that agreement is implemented between the verb and the first conjunct DP, once this is 'merged' into the phrase marker, and before the second conjunct DP is introduced, i.e. before the subject DP establishes its full number specification. In this case, the subject does not seem to exert the same degree of control on that target.

In other words, the precedence of an agreement controller places tighter control on the subsequent agreement targets. Agreement targets that precede the controller will vary as far as their number is concerned because of the tendency to agree with the nearest element, i.e. DP, that can stand as an agreement controller. If the latter is singular then the tendency of the preceding target to exhibit singular number marking, but plural number marking if this element is plural. This explains the difference in the agreement pattern between first singular conjuncts and first plural conjuncts. The difference in the gender of the first conjunct produced similar results as can be seen above, when the verb precedes the subject. Word order changes between the subject and the verb produced such a difference, while no difference is noticeable in the agreement pattern of the adjectives whose order in relation to the subjects do not differ.

Endnotes

1. For a detailed discussion of the issues involved in agreement and the relevant literature see (Corbett, 2006).
2. In the transliteration of the Iraqi Arabic words, the following symbols are used: /ʔ/ for the glottal stop; /^h/ for the voiced pharyngeal fricative; /h/ for the voiceless pharyngeal fricative; /q/ for the voiced uvular stop; /gh/ for the voiced velar fricative; /č/ for the voiceless palatal affricate; /s/ for the voiceless alveolar emphatic fricative; and, /t/ for the voiced dental emphatic stop. Vowel length is indicated by /:/ and consonant gemination by character doubling.
3. The agreement pattern that Standard Arabic exhibits is sensitive to the linear order of the words. While a SV order triggers full agreement (in number, gender, and person), we only find partial agreement (only in person and gender) in sentences with a VS order. This is exemplified in the following examples.
 - i. al-ʔwla:du na:mu:
def-boys slept.3PL.M
 - ii. na:ma al-ʔawla:du
slept.3SG.M def- boys
'The boys slept.'

The issue of this asymmetrical agreement has been the focus of all treatments of Arabic syntax since antiquity, and no traditional grammatical treaty misses discussing it. Because this agreement asymmetry was linked to the difference in word order, the issue was part of the more general question of the clausal structure of Arabic. The traditional treatments uniformly assigned two syntactic structures to sentences exhibiting the two orders: a simple sentence and a complex one, each responsible for one of the orders. In modern times, various proposals have been made to account for this difference based on varying descriptive models and by using a variety of devices and processes. Some have taken the difference between full and partial agreement to be the result of retaining or deleting the number markings on the verb depending on its position in relation to the subject (Bakir 1979). Others consider full agreement to be a result of pronominal incorporation, and partial agreement as an instance of an agreement process between the post verbal subject and the verb (Fassi-Fehri 1993), or taking the verb morphology to be the realization of a structural spec/head relation between an expletive *pro* and the verb (Mohammed 2000). Another proposal treats the asymmetry as a morphological phenomenon, where the verb loses its number feature because it makes a prosodic unit with the following subject in VS order. In such a unit the number feature on the verb becomes redundant (Benmamoun, 2000). More recently, the phenomenon is accounted for via the relation Agree taking place at different positions in the clause structure (Soltan 2006). (For an overview see Aoun et.al. 2010).

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