The Structure of Agreement Failure in Lebanese Arabic

Peter Hallman
UCLA

1. The phenomenon

This paper treats the structure of example (1b), and shows that a cluster of properties that belong to this construction are consequences of the particular syntactic structure of (1b).

(1) a. *bees wleed l-m9allme
kissed children the-teacher

b. bees wleed ktiir l-m9allme
kissed children a lot the-teacher
'Children kissed the teacher a lot.'

(2) a. bees-o wleed l-m9allme
kissed-3p children the-teacher
'Children kissed the teacher.'

b. *bees-o wleed ktiir l-m9allme
kissed-3p children a lot the-teacher

(1b) exemplifies a construction in Lebanese Arabic in which a transitive verb fails to agree with the subject in the context of the adverbs *ktiir* or *'aliil*, meaning *a lot* and *a little* respectively. Agreement is obligatory in the absence of either of these adverbs, as the contrast between (1a) and (2a) shows, and the occurrence of the adverb in the word order that the non-agreeing construction displays makes agreement impossible, as the contrast (1b)-(2b) shows. So the adverbs *ktiir* and *'aliil* block subject-verb agreement, which is otherwise obligatory.

The non-agreeing construction in (1b) displays a number of other properties that differentiate it from 'normal' agreeing contexts. First, a non-

* Thanks to Lina Choueiri for the very generous amount of time and patience she contributed to discussions of these data.

 WCCFL 19 Proceedings, ed. Billerey and Lillehaugen, pp. 178-190. Somerville, MA: Cascadilla Press

agreeing subject cannot be quantified at all, either weakly, as in (3a and b), or strongly, as in (3c).

(3) a. *bees 9addit wleed ktiir l-m9allme
kissed several children a lot the-teacher

b. *bees tleet wleed ktiir l-m9allme
kissed three children a lot the-teacher

c. *bees l-wleed ktiir l-m9allme
kissed the-children a lot the-teacher

Also, Arabic normally displays alternative SVO word order in addition to VSO, but unquantified nouns cannot be preverbal, so non-agreeing subjects cannot be preverbal, since they cannot be quantified, as (4) demonstrates.

(4) *wleed bees-(o) ktiir l-m9allme
children kissed-(3p) a lot the-teacher

Three additional properties of the non-agreeing construction are demonstrated in (5) through (7). Non-agreeing subjects cannot bind an anaphor, as shown in (5a), though agreeing subjects can, as in (5b).

(5) a. *bees wleed$_i$ ktiir m9allimt-un$_i$
kissed children$_i$ a lot teacher-their$_i$

b. bees-o wleed$_i$ m9allimt-un$_i$
kissed-3p children$_i$ teacher-their$_i$
'Children kissed their teacher.'

Second, a prepositional phrase may intervene between the verb and a postverbal subject when the verb agrees with the subject, as in (6a), but not when it doesn't, as in (6b).

(6) a. bees-o fi l-Saff wleed l-m9allme
kissed-3p in the-classroom children the-teacher
'Children kissed the teacher in the classroom.'

b. *bees fi l-Saff wleed ktiir l-m9allme
kissed in the-classroom children a lot the-teacher

Third, there is no pragmatic topic in non-agreeing constructions. The question 'who kissed the teacher' in (7a) requires the answer to be about

kissers of teachers. This 'aboutness' property of the subject cannot hold in non-agreeing contexts, so a non-agreeing sentence is not acceptable as an answer to the question in (7a). The non-agreeing sentence is okay in (7b), as an answer to a question about what happened, which does not require an answer that says something about a subject.

(7) a. miin bees l-m9allme?
who kissed the-teacher
'Who kissed the teacher?'

infelicitous: bees wleed ktiir l-m9allme
kissed children a lot the-teacher
'Children kissed the teacher a lot.'

okay: bees-o wleed l-m9allme
kissed-3p children the-teacher
'Children kissed the teacher.'

b. shu saar bi l-Saff l-yuum?
what happened in the-class the-today
'What happened in class today?'

okay: bees wleed ktiir l-m9allme
kissed children a lot the-teacher
'Children kissed the teacher a lot.'

also okay: bees-o wleed l-m9allme
kissed-3p children the-teacher
'Children kissed the teacher.'

Lastly, there are no special restrictions on the interpretation of the object in non-agreeing contexts. For the object, every quantifier licit in agreeing contexts is licit in non-agreeing contexts, and the object can bind an anaphor equally well in agreeing and non agreeing contexts, as shown in (8).

(8) a. bees wleed ktiir m9allme/l-m9allme/kill m9allme
kissed children a lot teacher/the-teacher/every teacher
'Children kissed a teacher/the teacher/every teacher a lot.'

b. bees wleed ktiir m9allmeet$_i$ 9a xadd-un$_i$
kissed children a lot teachers on cheek-their
'Children kissed teachers on their cheek a lot.'

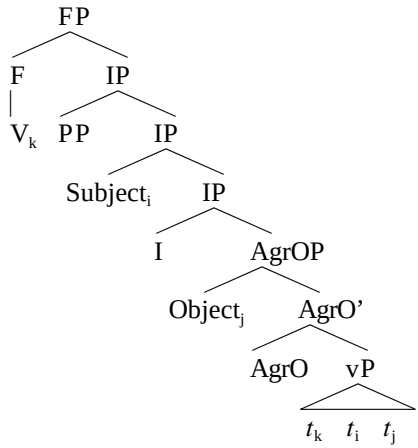
So a number of properties cluster together obligatorily in the presence of *ktiir* and *'aliil*. In summary:

(9) (i) The verb fails to agree
(ii) The verb is inseparable from the subject
(iii) The subject is unquantified
(iv) The subject cannot bind an anaphor
(v) The sentence is topicless
(vi) The object is unrestricted

1.1 Normative Arabic phrase structure

I adopt the results of Aoun, Benmamoun and Sportiche (1994) as an *a priori* analysis of the syntax of the normative agreeing construction. They show that agreement in Lebanese Arabic is triggered by subject movement to [spec,IP]. The verb moves to a higher functional projection, here labeled FP, yielding VSO word order. We only need add to this that the possibility of a prepositional phrase separating the verb and subject as in (6a) indicates a PP may adjoin to IP, as illustrated in (10).

(10)



2. The clustering of *ktiir*/*'aliil* and the properties in (9)

I will treat the question of why the properties in (9) cluster together in the presence of the adverbs *ktiir* and *'aliil* as a question of what effect *ktiir* and *'aliil* have on their syntactic environment that has the properties in (9) as an outcome. The remainder of this paper is aimed at showing that the properties in (9) are mechanical entailments of the way that the syntactic structure of the *ktiir* and *'aliil* cases differs from the canonical structure in (10).

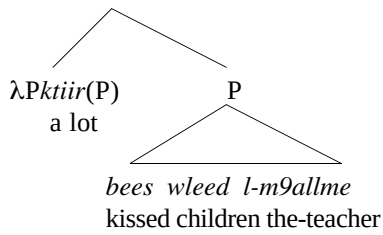
2.1 Two inferences about the structure of (1b)

The task of piecing apart the effect of *ktiir* on its syntactic environment begins with two inferences about the structure of (1b). The first inference concerns the position of *ktiir*, the second the position of the subject.

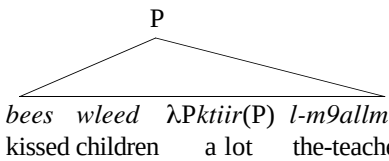
2.1.1 On the position of *ktiir*

The first inference is based on the observation that the predication *children kissed the teacher* is an argument of *ktiir* at some level. *Children kissing the teacher* is what *ktiir* says happens a lot. The relation between a predicate and its argument (predication) canonically holds in a local syntactic configuration (as per Williams (1980)). The S-structure word order of (1b) at face value does not represent a licit predication relation, since the predicate seems to be inside its own argument, as illustrated in (11b). The licit configuration in (11a) also cannot be derived from (11b) because scopal relations among adverbs are fixed (as per Cinque (1999)), meaning that adverbs don't move. So for the argument-predicate relation to hold between *ktiir* and the constituent P, P must either be base generated or move into roughly the relation with *ktiir* illustrated in (11a). In either case, *ktiir* must be outside the constituent P at D-structure, either because that is where (11a) obtains, or because (11a) is derived by movement of P to *ktiir*. Since *ktiir* is outside P at D-structure, it is outside P at every level, since *ktiir* can't move into P for at least the reason that adverbs don't move, as well as the fact that this would represent downward movement (to a non-c-commanding position).

(11) a.



b.



No!

2.1.2 On the position of the subject

The second inference concerns the position of the subject in (1b). Non-agreeing subjects display two properties that are typical of VP-internal subjects, from which I will conclude that non-agreeing subjects are *in situ* in VP at every level of representation. The two properties are existentiality and lack of quantification.

2.1.2.1 Existentiality

First, VP internal subjects are interpreted existentially, never presuppositionally. In particular, Heim's (1982) operation of existential closure applies over VP. This point was made by Diesing (1992) in connection with the data in (12) from German.

(12) a. weil Kinder ja doch [$_{VP}$ auf der Straße spielen]
since children indeed on the street play
'Since children are indeed typically such that
they play on the street.' -->presuppositional (generic)

b. weil ja doch [$_{VP}$ Kinder auf der Straße spielen]
since indeed children on the street play
'Since (some) children are indeed playing
on the street.' --> existential

Diesing claims that the modal particle *ja doch* demarcates the left edge of VP. (12b), in which the subject is VP internal (to the right of *ja doch*), asserts the existence of some children who play in the street. (12a), where the subject is VP-external (to the left of *ja doch*), presupposes the existence of children and makes a generic statement about the kind. Presuppositional bare plurals are interpreted generically.

No generic reading is available for non-agreeing subjects in Lebanese Arabic, as example (13) shows. Present tense in (13) should facilitate the possibility of the generic reading, but in spite of this effort, the generic reading of (13), analogous to (12a) is impossible, meaning non-agreeing subjects cannot be interpreted presuppositionally, but rather only existentially.

(13) 9am bi-buus wleed ktiir l-m9allme
PRT pres-kiss children a lot the-teacher
'Children kiss the teacher a lot.' -->existential
*'Children are typically such that
they kiss the teacher a lot.' -->presuppositional (generic)

Following Diesing's structural implementation of the existential/ presuppositional contrast, this means that non-agreeing subjects are VP internal when they are interpreted, i.e. at LF.

2.1.2.2 Lack of quantification

Another consideration indicates that non-agreeing subjects are VP-internal at S-structure, namely the fact that they cannot be quantified. Sportiche (1996;1997;1998;1999) claims that VP is the domain of bare predicational structure and quantifiers are never licensed in VP. The reasoning behind this claim is the following.

Some subjects of raising verbs fail to reconstruct, depending on what determiner they bear. This appears to undermine what would be an appealing generalization to the effect that reconstruction is a general property of movement chains, i.e. every case of movement allows reconstruction. The negatively quantified subject of the raising verb *be proven* in (14a) may not reconstruct, though the existentially quantified subject in (14b) can.

(14) a. No star was proven to be close to every planet.
no>proven>every / *proven>every>no

b. A star was proven to be close to every planet.
a>proven>every / proven>every>a

In light of the discrepancy between reconstruction as a property of movement and data such as (14), Sportiche reexamines the arguments for raising. Arguments for raising rest on the fact that selectional restrictions of a thematic verb apply to the subject of a raising verb. But these arguments actually do not bear on the determiner. The choice of NP, not D, influences the well formedness of (15).

(15) Every/no/some child/cat/*Buick/*proximity was proven to be sleeping.

No choice of determiner makes an ungrammatical choice of noun grammatical in (15), meaning that arguments for raising require the NP to

occupy a theta position at some level but do not say anything about the base position of the determiner.

This observation allows us to save the generalization that reconstruction is a property of movement chains. The exclusion of certain determiners means that these determiners are base generated outside of VP, so they can't reconstruct into VP. The NP, however, does move. In (16a), the NP *star* raises from a predicate-internal thematic position to the external determiner *no*. In (16b), the indefinite variable *a star* raises to subject position unquantified, and thus may reconstruct as an unquantified variable, falling into the domain of existential closure in VP at LF.

(16) a. No $[\text{star}]_i$ was proven to $[\ t_i$ be close to every planet$]_{VP}$.
b. $[\text{A star}]_i$ was proven to $[\ t_i$ be close to every planet$]_{VP}$.

Two crucial ingredients of this hypothesis are attested independently. First, independently of the hypothesis, there are clear cases where a determiner is introduced in a configuration external to the V-NP relation, as in (17).

(17) a. He made (*the) headway.
b. He made the headway that you said he made.

No determiner is licit in the VP *make headway*, so the determiner in (17b) must come from somewhere else. But that does not prevent the noun *headway* from associating with it as if it were *its* determiner. (17b) is therefore a *bona fide* case in which the determiner-noun relation is derived, not base generated. Second, independently of the hypothesis, there are contexts in which we observe that predicate saturation can be accomplished by a noun alone without the intervention of a determiner, namely in noun-verb compounds like *bear hunting* or *novel writing*.

Furthermore, the separability of Ds and NPs can be reduced to a general principle, namely locality of selection. Verbs impose s-selectional criteria on their arguments. For example, *sleep* imposes the restriction on its subject that it be animate, as exemplified in (15). Also exemplified in (15), the determiner does not play a role in the s-selectional relation between the verb and NP in any way. If s-selection is local, then the verb and NP must be in a local syntactic relation at some level of representation that excludes the determiner. Assuming that that level is D-structure, then the determiner must fail to intervene between V and NP at D-structure, i.e., it must be external to VP at D-structure, explaining the phenomenon in (14).

Based on these considerations, the fact that non-agreeing subjects in Lebanese Arabic cannot be quantified is explained by the proposal that they

are in VP at the level of representation that (1b) exemplifies, namely S-structure, since determiners are excluded from VP. Since the noun phrase must be in VP at D-structure for the purposes of predicate saturation and theta theory, this means that non agreeing subjects are in VP at D-structure also. It was already established that non-agreeing subjects are VP-internal at LF, meaning that they are VP internal at every level of representation.

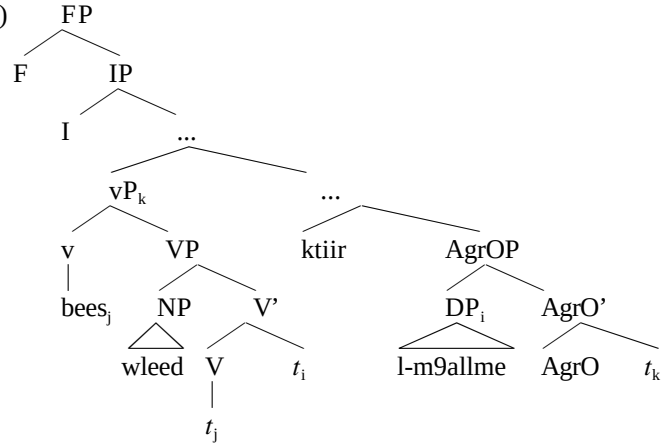
2.2 Summary

The preceding remarks clarify two properties of (1b). First, *ktiir* must be external to at least VP at every level. Second, the subject must be in VP at every level. These two conclusions seem to conflict with the attested word order in (1b), which has the subject to the left of *ktiir*. This would normally mean that the subject is hierarchically higher than *ktiir*, and therefore that *ktiir* is VP-internal also, which it cannot be. The following proposal reconciles these conclusions with the word order facts.

3. Proposal

The proposal that reconciles these two conflicting conclusions is that the VP as a whole has been displaced to a position preceding *ktiir*, and this displacement is preceded by object scrambling to AgrOP, which is under *ktiir*, as illustrated in (18). VS word order obtains in VP by virtue of verb movement to 'little-v'.

(18)



The interaction of the structure in (18) with well know principles of syntactic well formedness generates the entire phenomenology in (9).

The verb fails to agree with the subject because the subject doesn't move to the agreement licensing position [spec,IP]. In fact it can't, since movement to IP would result in illicit movement out of a specifier, a violation of the Left Branch Condition of Ross (1967), restated in X-bar theoretic terms in Koopman and Szabolsci (1998). So the left branch condition prohibits agreement in (1b).

Prepositional phrases that adjoin to IP and separate a verb from its subject in agreeing constructions do not split the verb and subject in non-agreeing constructions because these are not separated by the IP boundary. Verb and subject are inside a preposed VP that an IP adjunct will not intervene in. Since the adjunct-of-IP position precedes the vP-*ktiir* complex in (18), we predict the possibility of the PP sentence-initially in non-agreeing contexts, correctly:

(19) fi l-Saff bees wleed ktiir l-m9allme
in the-class kissed children a lot the-teacher
'Children kissed the teacher a lot in class.'

The subject is unquantified because it is in VP, and VP is the domain of bare predicational structure, not of quantification (Sportiche (1996;1997; 1998;1999)). Also, the subject is interpreted existentially by virtue of being in VP (Diesing (1992)).

The subject cannot bind an anaphor because the subject is buried in VP, and cannot c-command out. C-command is a requirement on binding (Langacker (1967), Reinhart (1976), Lasnik (1976)). So the c-command requirement on binding prohibits a non-agreeing subject from binding an anaphor outside VP.

The sentence is topicless because there is no syntactic topic formation. The topic-comment partition between subject and predicate is subverted because the subject is inside the predicate, and the sentence cannot say something about the subject (see Gundel (1988)).

The object, finally, is unrestricted because it occupies the same position in agreeing and non-agreeing contexts. *It* moves to a VP external case position in both cases, so it *can* be quantified, and may bind rightward material. Note that given that VP movement strands the object to the right of *ktiir*, the object *can't* be in VP, so the analysis itself requires the object to have the character of VP external material, and the fact that it can be quantified corroborates this.

Note that failure of quantification, failure of binding, and the impossibility of splitting the VS string in non-agreeing contexts could be taken to indicate subject incorporation into the verb, since incorporated heads cannot be quantified, usually do not bind a pronoun, and are

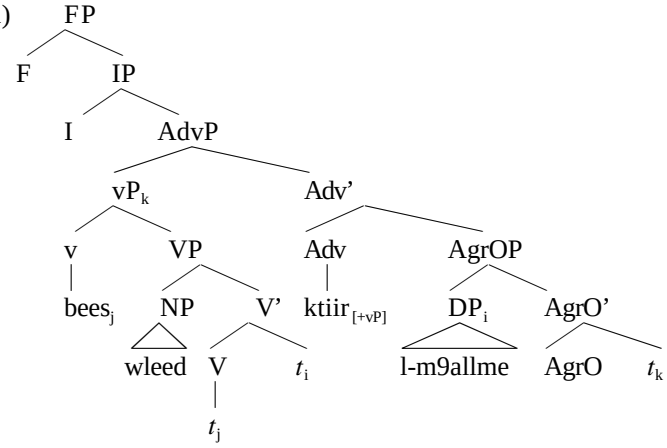
inseparable from the incorporating head. But the subject in (1b) can be modified by material that demonstrably doesn't form a word with it, as in (20), so (1b) does not seem to represent a case of head-to-head incorporation.

(20) bees [wleed Zghaar] ktiir l-m9allme
kissed children small a lot the-teacher
'Small children kissed the teacher a lot.'

4. The trigger

In the ways discussed above, the structure in (18) entails all the properties of the construction it underlies. But this structure does not by itself answer the question of what triggers the transformation that yields this phenomenon, i.e. what triggers VP raising. I pointed out that the predication *children kissed the teacher* is an argument of *ktiir*, but at D-structure, *ktiir* is separated from the VP by AgrOP. I propose that the predicate argument relation between *ktiir* and the VP obtains in the spec-head relation, and the relation is derived at S-structure by movement of VP into the specifier of *ktiir*. This situation is illustrated in (21), where the notation [+vP] on the head *ktiir* indicates that *ktiir* has the lexical property that it requires VP in its specifier, the standard configuration for a derived relation. Thus, *ktiir/'aliil* itself triggers vP raising, which in turn explains the connection between the constellation of properties in (9) and the presence of *ktiir/'aliil*.

(21)



5. Conclusion

In summary, the ways in which non-agreeing contexts differ from agreeing contexts arise out of a lexical requirement of the adverbs *ktiir* and *'aliil*. The presence of the adverb in the numeration is the basic difference which results in the structural difference which results in clustering of the properties in (9) in the presence of the adverb. The properties themselves fall out from the interaction of the particular syntactic structure of (1b) with independent principles of syntax. The principles involved are standard principles of syntactic well-formedness, namely: binding requires c-command, agreement requires the subject in [spec,IP], extraction from a left branch is illicit, material in VP is interpreted existentially, a syntactic topic is external to the comment, which normally includes the predicate, and predicate-internal material is unquantified.

References

Aoun, Joseph, Abbas Benmamoun, and Dominique Sportiche. 1994. Agreement, Word Order, and Conjunction in some Varieties of Arabic. *Linguistic Inquiry* 25:195-220.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. New York: Oxford University Press.

Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.

Gundel, Jeanette. 1988. Universals of Topic-Comment Structure. In *Studies in Syntactic Typology*, ed. Michael Hammond, Edith A. Moravcsik and Jessica R. Wirth, 209-239. Amsterdam: John Benjamins Publishing Company.

Heim, Irena. 1982. The Semantics of Definite and Indefinite Noun Phrases. Ph.D. Dissertation, University of Massachusetts, Amherst.

Koopman, Hilda, and Anna Szabolsci. 1998. The Hungarian Verbal Complex: Complex Verb Formation as XP Movement. Ms., UCLA, Los Angeles.

Langacker, Ronald. 1967. Pronominalization and the Chain of Command. Ms., MIT, Cambridge, Mass.

Lasnik, Howard. 1979. Remarks on Coreference. *Linguistic Analysis* 2:1-22.

Reinhart, Tanya. 1976. The Syntactic Domain of Anaphora. Ph.D. Dissertation, MIT, Cambridge.

Ross, John Robert. 1967. Constraints on Variables in Syntax. Ph.D. Dissertation, MIT, Cambridge, Mass.

Sportiche, Dominique. 1998. "Reconstruction and Constituent Structure." Paper presented at MIT, May, 1998.

Sportiche, Dominique. 1996. "A-Reconstruction and Constituent Structure." Paper presented at the University of California, Irvine, October 25th, 1996.

Sportiche, Dominique. 1997. "Reconstruction and Constituent Structure." Paper presented at MIT, October, 1997.

Sportiche, Dominique. 1999. "Reconstruction, Constituency and Morphology." Paper presented at GLOW, Berlin, Germany, April, 1999.
Williams, Edwin. 1980. Predication. *Linguistic Inquiry* 11:203-238.