

Expressing number agreement for pre- and postverbal subjects in Lebanese Arabic

Single Conjunct Agreement (SCA) has attracted a great deal of attention, as languages as typologically distinct as Lebanese Arabic, Czech, Dutch, Finnish, Icelandic, Modern Greek, Ndebele, Polish, Portuguese, Slovene, Swahili, and Welsh (among others) have demonstrated a wide range of conditions on SCA (see [2], [5], and [6] for a discussion of the literature). Some languages (e.g. the Modern Arabic dialects) only exhibit SCA with postverbal subjects and do not allow SCA with collective predicates or anaphor binding [1], [12]. Some languages, (e.g., Modern Greek) allow SCA for both preverbal and postverbal conjoined subjects, while other languages (e.g., Welsh) allow SCA with anaphor binding and collective interpretations.

This study investigates the patterns of agreement with conjoined subjects in Lebanese Arabic, manipulating the factors of noun number, word order, and noun type (animacy) to investigate the mechanisms underlying SCA. The first theoretical issue is whether the conjoined noun phrase itself is singular. Several analyses have suggested that SCA occurs when the conjoined noun phrase has a singular marking at the time agreement is computed, either through clausal coordination with gapping [1], late-adjunction of the second conjunct [13], or another asymmetrical ConjP structure in which number agreement is determined by the first conjunct alone [4], [9]. Another set of approaches has suggested that the conjoined noun phrase is plural, but that the verb has the ability to look inside the conjoined noun phrase and agree with the closest conjunct [12], [14], [2], rather than agreeing with the conjoined noun phrase as a whole. An orthogonal issue is whether agreement is affected by the semantics of the subject. For example, in Finnish, full agreement (with both conjuncts) is only available when the conjuncts are semantically related [6]. Another language that shows a similar sensitivity is Swahili, in which SCA with preverbal subjects is only possible with non-human conjoined nouns, although SCA is allowed for postverbal subjects regardless of animacy [10].


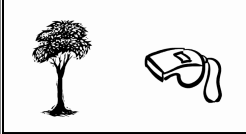


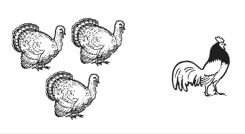
To address these questions, we conducted a sentence production experiment involving eight native speakers of Lebanese Arabic who each completed four experimental sessions, using a picture description task to manipulate the factors of animacy, noun number, and word order. Participants viewed objects on a screen, named the objects, produced verbs that were marked for number, and gave the color of the objects, using either declaratives (1) or interrogatives (2). Since adjectives are inflected in Lebanese Arabic, each sentence had two agreement targets: the adjective and the verb. In declaratives, the subject preceded both agreement targets, but in interrogatives, the verb preceded the subject, and the adjective was in the sentence-final position. Within the animacy manipulation, four types of conjoined nouns were used: humans, animals, count nouns, and mass nouns. Examples of the experimental conditions are listed in Table 1.

The results showed that the conjoined noun phrases that elicited singular verb agreement were not themselves marked as singular, as targets that followed the conjoined noun phrases were consistently plural. Participants were highly sensitive to the factor of word order, and conjoined singular postverbal subjects (e.g., “the turkey and the rooster”) elicited 64% singular verbs, compared to 1% singular verbs with conjoined singular preverbal subjects. The adjectives, which always occurred sentence-finally, showed 2% singular agreement in both declaratives and interrogatives. These patterns indicate that word order, and not the number valuation of the subject noun phrase, was causing the singular verb agreement with interrogatives. Animacy, however, did not significantly affect the patterns of SCA with the verb (all $F_s < 1$).

Evidence from gender agreement and from the noun number manipulation demonstrates that, while word order was a major determining factor, not all of the singular verbs produced could be attributed to SCA. Gender agreement patterns showed that SCA was accounting for many of the singular verbs produced: When the configuration was [Verb+NF.SG+NM.SG+Adj], 79 out of 94 (86%) singular verbs were feminine singular, while the remaining verbs showed default agreement. The noun number manipulation provided further evidence for default agreement: with plural nouns in the closest conjunct position, speakers produced 11% singular verbs in interrogatives (3) and 3% singular verbs in declaratives.

These results provide compelling evidence that all conjoined noun phrases in Lebanese Arabic are plural and that singular agreement arises because of two factors: single conjunct agreement and target-source word order. As suggested by van Koppen [14], SCA can occur when both the closest conjunct and the conjoined noun phrase are equally local to the verb, which is the case with postverbal subjects. Default agreement is also more likely with postverbal subjects, which we attribute, along with Franck et al., to the relative weakness of agreement under government alone, without the reinforcement of Spec-head “verification” [8]. Although there have been attempts within the minimalist program to simplify agreement to one mechanism [13], Franck et al. [8] make a case based on psycholinguistic evidence that Spec-head agreement is stronger than agreement under government/c-command/Agree alone. Our results support this claim, but since Arabic has a VP-internal subject [3], [7], [11], we also claim that Spec-head “verification” of agreement [6] operates at PF.

Table 1: Sample Materials

				
mass snow and lightning	count tree and whistle	animal bee and ant	human cook and maid	plural-singular turkeys and rooster

Examples:

- (1) elmalik wel malaki kanu zere2
the.king and.the queen were blue.pl
'The king and the queen were blue.'
- (2) kanu elmalik wel malaki zere2
were the.king and.the queen blue.pl
'Were the king and the queen blue?'
- (3) kan elshajar wel suffayra khuder
was the.trees and.the whistle green.pl
'Was the trees and the whistle green?'

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