

Word Order and Agreement Asymmetries in Lebanese Arabic and English

The modern Arabic dialects are well-known as having agreement asymmetries that are sensitive to word order effects (Aoun, Benmamoun, & Sportiche, 1994). Specifically, the crucial phenomena are the optionality of full agreement on the verb with postverbal subjects and the availability of first conjunct agreement. These asymmetries have been attributed to a variety of causes, including clausal agreement with gapping (Aoun et al., 1994), semantic agreement effects (Munn, 1999), and PF-merger phenomena (Benmamoun & Lorimor, 2006). However, Arabic is not alone in showing word-order asymmetries for agreement. Similar asymmetries that show sensitivity to word order have been documented in Russian (Corbett, 2006), Hindi (Bhatia, ms), Slovene (Harrison et al., 2005) and French and Italian (Franck, Lassi, Frauenfelder, & Rizzi, 2006), among others. However, previous work on agreement attraction in English has suggested that agreement is sensitive to structural relationships between lexical items (Vigliocco & Nicol, 1998), rather than to linear order, and that the agreement computation itself occurs in a highly local, hierarchical relationship (e.g., c-command).

The current work investigates patterns of agreement variability with conjoined subjects, using sentence production experiments in English and Lebanese Arabic. A picture description task manipulated the position of the subject relative to the verb. Participants viewed objects on a screen, named the objects, produced a verb that was marked for number, and gave the color of the objects, using either declaratives (e.g., “The king and queen were red”) or interrogatives (e.g., “Were the king and queen red?”). There was a significant effect of word order, with more plural verbs produced in declarative sentences than in interrogatives ($p < .05$) in both Lebanese Arabic and English. The declarative sentences were of the form “*The N and N AUX Adj*”, and the interrogative sentences were of the form “*AUX the N and N Adj*”. Since adjectives inflect for number agreement in Arabic, they functioned as additional agreement targets. Crucially, both the adjective and the verb were produced after the subject in declaratives, while in interrogatives, the verb was produced before the subject, and the adjective was produced postverbally. When both nouns were singular, both the Lebanese Arabic and the English speakers produced 1% singular agreement on verbs in declaratives. With interrogatives, Lebanese speakers produced 64% singular agreement on verbs, while the English speakers produced 19% singular agreement. The adjectives, however, showed very different agreement patterns. For declarative sentences, the Lebanese speakers produced almost no singular adjectives (one plural adjective produced experiment-wide), and for interrogatives, they produced 2% singular adjectives. The Lebanese speakers were therefore consistently producing sentences with two agreement targets that exhibited conflicting values for number. The verb, when occurring before the conjoined subject, often exhibited singular agreement, while the adjective, which followed the subject nouns, only rarely exhibited singular agreement. These effects are not due to participants resorting to Standard Arabic grammar, which requires singular agreement for postverbal subjects, as plural subjects occurring in interrogatives produced low rates of singular agreement (11% singular verbs when the closest conjunct was plural in interrogatives). Instead, the evidence points toward linear order as playing a crucial role in agreement production. Grammaticality judgment tasks with the Lebanese Arabic speakers confirmed these results: Agreement targets that occur after conjoined subjects are required to be plural, but verbs that occur before the subject nouns have more flexibility in agreement.

These results are incompatible with mainstream syntactic theories (e.g., P&P/Minimalism, HPSG, LFG) that only offer a single mechanism for agreement. A recent syntactic account by Franck et al. (2006) has argued that there are two mechanisms that are involved in the production of agreement, namely AGREE and Spec-head. While the above-mentioned data are not incompatible with their proposal, I offer an alternate, processing explanation: The act of producing an agreement controller causes the agreement features to become more active. Targets that occur after the subject are more tightly controlled by the phi-features of the subject head nouns, and this produces agreement asymmetries that are sensitive to word order effects. This analysis is preferred when considering additional data from agreement attraction phenomena, including differences between singular and plural attractors, as well as between lexical and conceptual number, in overall susceptibility to agreement attraction.

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