On the Anaphoric Status of *do so*

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1 Introduction

Do so anaphora (Lakoff and Ross, 1966; Anderson, 1968; Bouton, 1970; Halliday and Hasan, 1976; Hankamer and Sag, 1976; Miller, 1990; Ward, Sproat, and McKoon, 1991; Cornish, 1992; Fu and Roeper, 1993; Dechaine, 1994):

(1) Bill signed the legislation, and Al did so too.

2 Syntactic and semantic properties of *do so*

Main verb *do* + anaphoric adverbial *so*

- *So* not felicitous with other auxiliaries

(2) a. Bill signed the legislation, and Al did too. [auxiliary *do*]
b. Bill has signed the legislation, and Al has too.
c. Bill will sign the legislation, and Al will too.

(3) a. Bill signed the legislation, and Al did so too. [main verb *do*]
b. * Bill has signed the legislation, and Al has so (it / that) too.
c. * Bill will sign the legislation, and Al will so (it / that) too.

- Requires an activity

(4) a. Bill likes McDonald's, and Hillary does too.
b. ?? Bill likes McDonald's, and Hillary does so (it / that) too.
c. Al wants to be president, and Tipper does too.
d. ?? Al wants to be president, and Tipper does so (it / that) too.

- *So* doesn't passivize

(5) a. *...and so was done by Hillary.
b. ...and it (that) was done by Hillary.

- Nor does it cleft

(6) a. It is that that Hillary did.
b. * It's so that Hillary did.
c. What Hillary did was that.
d. * What Hillary did was so.

Less agreement on the transitivity of *do*

3 Deep and surface anaphora

- Surface anaphora:
  - antecedents are syntactic structures
  - may not be 'pragmatically-controlled'
- Deep Anaphora:
  - antecedents are semantic entities in the discourse model
  - may be 'pragmatically-controlled'

(7) A peace agreement in the former Yugoslav republic needs to be drawn up.

a. An agreement in North Korea does too. [VP-ellipsis (surface)]

b. * Jimmy Carter volunteered to. [VP-ellipsis (surface)]

c. Jimmy Carter volunteered to do it. [event anaphora (deep)]

(8) [Hankamer points gun offstage and fires, whereupon a blood-curdling scream is heard. Sag says:]

a. * Jorge, you shouldn't have! [surface]

b. Jorge, you shouldn't have done it! [deep]

c. * Jorge, you shouldn't have done so! [surface]

4 Evidence against the need for syntactic parallelism

- Non-parallel voice:

(9) Section 1 provides the examples to be derived by Gapping, and a formulation of Gapping capable of doing so. [= deriving the examples] (text of Neijt (1981))

(10) As an imperial statute the British North America Act could be amended only by the British Parliament, which did so on several occasions [= amended an imperial statute]. (Groliers Encyclopedia)

- Nominalized antecedents:

(11) The defection of the seven moderates, who knew they were incurring the wrath of many colleagues in doing so, signaled that it may be harder to sell the GOP message on the crime bill than it was on the stimulus package. [= defecting] (Washington Post)

(12) Even though an Israeli response is justified, I don't think it was in their best interests to do so right now. [= respond] (token provided by Dan Hardt)

- Binding conditions:

(13) Liszt was one of the great altruists in the history of music: he performed the large piano works of Robert Schumann and Frederic Chopin when they were physically unable to do so ... [= perform the large piano works of Robert Schumann and Frederic Chopin] (Groliers Encyclopedia)

- Split antecedents:

(14) The survey results, released by county officials this week, also showed that most of the teenagers who drank alcohol, smoked marijuana or had sex started doing so between the ages of 13 and 16. [= drinking alcohol / smoking marijuana / having sex] (Washington Post)

(15) Fortunately, the first person to die in 1990 and the first couple to file for divorce in 1990 were allowed to do so anonymously. [= die / file for divorce] (text of Roeper (1990), cited by James McCawley's "1990 Linguistic Flea Circus")

- Polarity alternation:

(16) Although this causes no problem in the first pregnancy, it can do so in the second pregnancy. [= cause a problem] (Groliers Encyclopedia)

(17) According to Docetism, the eternal Son of God did not really become human or suffer on the cross; he only appeared to do so. [= become human AND suffer on the cross] (Groliers Encyclopedia)

- Other form mismatches:

(18) There was a lot more negativity to dwell on, if anyone wished to do so. [= dwell on more negativity]

(19) With or without the celebration, Belcourt is well worth seeing, and you can do so year round. [= see Belcourt]

(20) ... He went on to claim that the allegedly high-spending Labour authorities had, by so doing, damaged industry and lost jobs. [= spent highly] (Cornish, 1992)

Conclusion: *Do so* does not require syntactic parallelism

5 *Do so* and pragmatic control

- Lack of pragmatically-controlled antecedents (Hankamer and Sag, 1976):

(21) [Hankamer points gun offstage and fires, whereupon a blood-curdling scream is heard. Sag says:]

a. * Jorge, you shouldn't have! [surface]

b. Jorge, you shouldn't have done it! [deep]

c. * Jorge, you shouldn't have done so! [surface]

(22) [John tries to kiss Mary. She says:]

a. John, you mustn't. (Schachter, 1977)

b. * John, you're the first man who ever has. (Hankamer, 1978)

c. * John, you mustn't do so.

- Not all referential uses of *so* are restricted in this way (cf. Williams (1977)):

(23) [Gregory holds a newborn baby with one hand behind her head, showing Andy. He says:]

It's important to hold her *so*, because the muscles in her neck aren't fully developed.

(24) [John pours another martini for Mary out of the wrong side of the decanter, creating a big spill. She says:]

You shouldn't do it so! [it = *pour the drinks*, so = *that way*]

- Two different meanings: unlike the manner-referring *so* in (23) and (24), *so* in *do so* indicates that the event specified by the verb it modifies is discourse-old (Prince, 1992). The verb being modified can denote the same type of event, or a generalization of it. (cf. Miller (1990))

(25) "...And with complete premeditation resolved that His Imperial Majesty Haile Selassie should be strangled because he was head of the feudal system." He was *so strangled* on Aug. 26, 1975, in his bed most cruelly. [Chicago Tribune 12/15/94]

(26) We dropped bombs on a few strategic targets one night, and in *so attacking* them, essentially started a war.

(27) Ethel offered to grade my papers for me and, by *so doing*, endeared herself to me for life. (Bouton, 1970)

- Higgins (1992): Old English *swa don* meaning "to act in such a manner"; *don* is an intransitive main verb.

Conclusions:

- *So* of *do so* marks that the *doing* event is discourse-old.
- Creation of discourse model referent from a non-linguistic source requires ACCOMMODATION (Lewis, 1979).
- Therefore, this meaning of *so* does not accommodate, and thus is infelicitous with pragmatically-controlled antecedents.

6 Similarities with verb phrase preposing

- VP Preposing (Ward, 1990)

(28) ...it was necessary to pass, if I was to stay at Oxford, <u>and pass I did</u>, after a week... (from Ward (1990))

- Requires an antecedent

(29) # Go to the movies I did today. [spoken discourse initially, with no prior mention]

- Does not allow pragmatically-controlled antecedents

(30) [Andy points to the C he got in Physics]

Gregory: # Pass you did.

- Antecedent must be local, but not necessarily immediate, as in (28).
- Does not require syntactic parallelism

(31) Bill said the project had to be finished by today, and finished it was!

(32) If Philadelphia is lucky, Egan's slipping up - if slip up he did - will stand as an early warning... (Ward, 1990)

(33) Inside the Coors truck was beer for the students' consumption. Consume they did - not only 15 kegs of beer, [...] (Philadelphia Inquirer)

Conclusion: VPP, like *do so*, requires a discourse-old (yet purely semantic) referent.

7 Conclusion

Summary

- Requirement for syntactic parallelism and ability to take pragmatically controlled antecedents need to be distinguished.
- *Do so*, like VPP, signals that the modified event is discourse-old. Therefore, they do not require syntactic parallelism, but cannot be used to refer to pragmatically-controlled referents.

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