

if-suspenders and the existential presupposition of questions*

Scott AnderBois - UC Santa Cruz
shanders@ucsc.edu

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1 Introduction

Central Question: Do wh-questions bear an existential presupposition?

- On the one hand, the questions in (1) seem to contribute the presuppositions in (2).

- (1)
- Who will you kill tomorrow?
 - Why did John throw away the sandwich?
 - When did you join the communist party?
- (2)
- $\exists x$: you will kill x tomorrow
 - $\exists x$: x is a reason why John threw away the sandwich?
 - $\exists x$: x is a time when you joined the communist party.

- On the other hand, NEGATIVE RESPONSES are often felicitous as in (3).

- (3)
- Who killed the prime minister?
 - No one. He is still alive.

Two paths in the literature:

- Negative responses are *semantic answers* (e.g. Groenendijk & Stokhof (1984))
 - Wh-questions do not contribute an existential presupposition.
 - The effect in (2) must be pragmatic in nature¹
- Negative responses are *presupposition denials* (e.g. Horn (1972), Comorovski (1996))
 - Wh-questions do bear existential presuppositions.
 - The effect in (2) is semantic, an ordinary instance of presupposition

Our answer: Yes, wh-questions bear an existential presupposition. Option (ii) is correct.

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¹The details of this have not been fully spelled out to my knowledge, though see Abusch (to appear).

- Our argument comes from Horn (1972)'s presupposition 'suspenders' as in (4)-(6) .

(4) Who, **if anyone**, left?

(5) When, **if ever**, is the iceman coming?

(6) The milk train doesn't stop here anymore, **if it ever did in the past**.

- A semantic/pragmatic account deriving the use of these *if*-suspenders from their form relies crucially on their having an existential presupposition.

Road map:

§2 examines the properties of *if*-suspenders, distinguishing two types;

§3 develops an analysis of *if*-suspenders which supplements a dynamic semantics view of conditionals with an additional pragmatic component;

§4 argues that, without an existential presupposition for questions, such an account makes fails;

§5 examines a potential counterargument from rhetorical questions;

§6 concludes.

2 Properties of *if*-suspenders

In this section, we establish the basic morphosyntactic form (§2.1) and the use (§2.2) of *if*-suspenders.

2.1 The form of *if*-suspenders

Horn characterizes *if*-suspenders by the following characteristics:

- Can exhibit a high degree of ellipsis/reduction (larger than VP-ellipsis)
- Presence of (weak) NPIs like *any* and *ever*
- Can occur clause-medially where ordinary *if*-clauses do not freely occur (i.e. appositively).

To this list, we can add the obvious property that these suspenders have a **suppositional** form either involving *if* or other elements such as *assuming*.

- For example, (6) can be paraphrased quite well by (7).

(7) The milk train doesn't stop here anymore, **assuming it ever did**.

- The same holds of the appositive *if*-suspenders in (4)-(5)

(8) Who left, **assuming anyone (even) did**?

(9) When is the iceman coming, **assuming he ever is**?

- These paraphrases suggest that the presence of *if* is not an accident.
- N.B. *if*-suspenders can occur appositively only if they have the reduced form [*if* + NPI].

2.2 The use of *if*-suspenders

Horn (1972) (and, more recently, Abbott (2005)) considers *if*-suspenders to instantiate ‘presupposition suspension’, distinct from ‘presupposition filtering’ in the sense of Karttunen (1973).

- This intuition, which we term the DOUBT IMPLICATION is expressed by Abbott (2005) as follows:

“Regular antecedent *if* clauses present hypothetical situations; ... they introduce presuppositions of the consequent clauses for temporary consideration. However the suspender *if* clauses suggest something about **what actually is the case – namely, that the presupposition in question may not hold.**”

We see the DOUBT IMPLICATION quite clearly by the fact that (10c) seems like a very good paraphrase of (10b) (example modified slightly from Horn (1972), p. 15).²

- (10) a. Does the Marquis smoke anymore?
b. No, he doesn’t smoke anymore, if he ever did.
c. No, he doesn’t smoke anymore, and I doubt he ever did.

The question, then, is how to derive the DOUBT IMPLICATION from the form of *if*-suspenders.

- It does not seem to be part of the literal meaning of *if*-suspenders for two reasons:
 - i. It is unclear how to compositionally relate the DOUBT IMPLICATION to the *suppositional* form of *if*-suspenders.
 - ii. Not all instances of *if*-suspenders are similarly paraphrasable as in (11)
Scenario: Professor to students
(11) a. You should write down which maxims, if any, are flouted in example 3.
b. #You should write down which maxims are flouted in example 3 and I doubt that any are.

The approach we take in §3 is to treat *if*-suspenders as a species of conditional antecedent with the DOUBT IMPLICATION arising as a conversational implicature.

3 *if*-suspenders as conditional antecedents

We propose an analysis of *if*-suspenders based on a dynamic semantics conception of conditionals following Stalnaker (1968) and many many subsequent works³.

3.1 Presupposition Suspension as Filtering

- In the Stalnakerian tradition, conditionals are evaluated in two steps.
- First, the *if*-clause’s information is added to the common ground hypothetically, creating a new temporary common ground.

²Indeed, the parallel is strong enough that Horn considers such paraphrases to instantiate the same phenomenon despite their difference in form.

³See especially Isaacs & Rawlins (2008) for a such an account of conditional questions. Their account, however cannot be extended straightforwardly to the present cases since they assume a question semantics without an existential presupposition.

- Second, the consequent is evaluated relative to this temporary common ground.

An *if*-suspender like (12) hypothetically updates the common ground with an existential claim.

(12) Who, **if anyone**, left?

- First, the *if*-suspender updates the c.g. with the hypothetical information that there is someone who left.
- Second, the question in the consequent (‘Who left?’) is evaluated relative to this temporary context

Any presuppositions of the consequent, then, must be satisfied (or accommodated) relative to this temporary common ground.

- The information the *if*-suspender adds to the common ground is exactly the existential information which the question presupposes.
- The *if*-suspender filters the presupposition in exactly the same way as an ordinary *if*-clause does.⁴

3.2 Deriving the Doubt Implication

Given the assumption that questions in fact have an existential presupposition, our semantics correctly captures its interaction with *if*-suspenders.

- Our semantics itself does not explain Horn and Abbott’s DOUBT IMPLICATION – the feeling that *if*-suspenders not only convey a *hypothetical* claim, but also the speaker’s doubt that the existential presupposition holds *actually*.
- For us, this implication arises via pragmatic competition with the unsuspended question.
- The speaker of the suspender question in (13) chose to add the existential claim in (14) to the c.g. *hypothetically*.

(13) What, if anything, does Alejandro want to eat?

(14) $\exists x$: Alejandro wants to eat x .

- The speaker could have instead uttered (15) which differs from (13) only in that it makes the addressee accommodate (14) *actually* rather than accept it *hypothetically*.

(15) What does Alejandro want to eat?

- (13) and (15) seem to be equally *informative* and *relevant*.
- By the maxim of manner, the speaker should have uttered (15) since it is briefer.

⁴The fact that the *if*-suspender occurs appositively need not concern us since appositives similarly serve as presupposition filters as seen in (i) (from Nouwen (2007)).

(i) John, a good tennis player, is a good golfer **too**.

- Since she didn't and is assumed to be cooperative, she must have had some other reason not to: (15) must be a more *truthful* reflection of her epistemic state.

Therefore, the addressee concludes that the speaker doubts the existential claim in (14).

- Since it is an implicature, we expect it to be cancellable as in (16), repeated from (11).

Scenario: Professor to students

(16) You should write down which maxims, if any, are flouted in example 3.

- Here, the doubt implicature does not arise because the professor's epistemic state is irrelevant to the discourse.
- The suspended question avoids committing to the existence of a positive answer, but does not implicate anything about the professor's epistemic state.

3.3 Temporary contexts in discourse

Having assimilated *if*-suspenders to ordinary *if*-clauses semantically, we expect they behave like them with respect to properties such as modal subordination (Roberts (1989), Stone (1999) a.o.).

- In modal subordination, a temporary context, such as that created by the *if*-clause in Roberts' (17a), remains available for anaphoric retrieval later in discourse, as in (17b).

- (17) a. If Edna forgets to fill the birdfeeder, she will feel very bad.
b. The birds will get hungry.

- With respect to modal subordination, *if*-suspenders exhibit a split.⁵
- The less-elliptical, non-appositive *if*-suspenders behave like ordinary *if*-clauses, allowing for modal subordination as in (18)-(19).

- (18) a. The milk train doesn't stop here anymore, if it ever did in the past.
b. It would have stopped at the train depot downtown.

- (19) a. I want to find who ate my cake, if anyone did.
b. A fork would be dirty, so we should check the dishwasher.

- In contrast, the more elliptical, appositive *if*-suspenders do not seem to license modal subordination very well as in (20).

- (20) a. I want to find out who, if anyone, ate my cake.
b. #?A fork would be dirty, so we should check the dishwasher.

- Why do appositive *if*-suspenders not allow modal subordination while non-appositive ones do allow it?

⁵In both cases, the pragmatics of suspension make such examples quite difficult to construct. If we look at an example like 'Who, if anyone, left?', we see that referring back to the individual who left will be pragmatically odd independent of modal subordination since we have called into question the very existence of such an individual.

The answer, we claim, is that ordinary *if*-clauses, unlike appositive ones, are **topics**.

- The connection between ordinary clausal adjunct *if*-clauses and topichood has been noted by typologists (e.g. Haiman (1978)) and formal semanticists (e.g. Bittner (2001)) alike.
- In modal subordination, an *if*-clause establishes a topical set of possible worlds which a subsequent modal retrieves anaphorically.
- Appositives do not seem to have a topic-comment structure (or if they do, the appositive is the comment).
- We expect, then, that *if*-clauses (and therefore *if*-suspenders) which occur appositively do not readily allow for modal subordination.

This prediction seems to be upheld not only by appositive *if*-suspenders, but also ordinary *if*-clauses⁶ which occur appositively as in (21)-(22).

- (21) a. The army, if our informant can be believed, is invading tomorrow.
b. #He would be granted asylum for his help.
- (22) a. If our informant can be believed, the army is invading tomorrow.
b. He would be granted asylum for his help.

3.4 Negative responses to questions with *if*-suspenders

Having developed an account which captures the core properties of *if*-suspenders, we turn now to examine the felicitous responses to questions with *if*-suspenders.

- A question with an *if*-suspender, (23), has the same range of possible answers as its unsuspended counterpart, (24).
- Crucially, a suspended question allows for the negative response at least as freely as its unsuspended counterpart.

- (23) a. Who, if anyone, left?
b. **No one** // Bill // Fred // Bill and Fred // ...
- (24) a. Who left?
b. **No one** // Bill // Fred // Bill and Fred // ...

The following example from the Corpus of Contemporary American English (Davies (2008-), available online at www.americancorpus.org) makes the point more clearly:

- (25) And if that challenge is not met, it really opens an entire Pandora's box of that question: Who, **if anyone**, is in charge in Iraq? And if the answer is nobody, then we're in big trouble...

- This is expected if negative responses are denials of the existential presupposition.
- Indeed, we might expect the negative response to be more likely than in suspenderless questions since the questioner implicated her doubt of the existence of a positive answer.

⁶It is not entirely clear how *ordinary* these appositive *if*-clauses are. There do seem to be restrictions on what kinds of conditionals can be expressed via an appositive *if*-clause. While we leave the investigation of such restrictions to future work, the key point for us is that occurring appositively seems to *correlate* with the infelicity of modal subordination.

4 The Existential Presupposition of Questions

In §3, we have seen that we can derive the properties of *if*-suspenders from a semantics based on their conditional-like form as follows:

- The semantic contribution of *if*-suspenders is the same as ordinary *if*-clauses (given the discussion of modal subordination and topic-comment structures)
- The DOUBT IMPLICATION is a conversational implicature, arising because the hypothetical information of the *if*-suspender could have instead been accommodated actually
- NEGATIVE RESPONSES are felicitous in questions with an *if*-suspender, as in questions with no *if*-suspender, because they involve a denial of the question's existential presupposition.

We can imagine combining this semantics with a question semantics that does not involve an existential presupposition. This, however, leads to two problems with no obvious solutions.

- i. We no longer expect negative responses to *if*-suspender questions to be felicitous.
 - Recall that if questions have no existential presupposition, we take NEGATIVE RESPONSES to be felicitous by virtue of being semantic answers.
 - The *if*-suspender adds to the c.g. the information that there is some individual satisfying the predication, thereby *eliminating* the negative answer.
- ii. Worse, we no longer predict the doubt implication to arise pragmatically at all.
 - We derived the DOUBT IMPLICATION as a manner implicature arising because the speaker could have had the addressee accommodate the existential information *actually* instead of adding it to the c.g. *hypothetically*.
 - If questions did not have an existential presupposition, this competition would not arise.

The only obvious way to maintain the position that questions do not contribute an existential presupposition and resolve these two issues is to alter our semantics itself.

- That is, to claim that the presence of *if* and other suppositional elements in suspenders does not reflect their semantics.
- This seems to us an unacceptable cost.
- Moreover, we would still have to explain why the examples in (1), repeated in (26), seem to presuppose a positive answer.

- (26) a. Who will you kill tomorrow?
b. Why did John throw away the sandwich?
c. When did you join the communist party?

- In the absence of such an account, the properties of *if*-suspenders, including the felicity of negative responses, support the position that questions do indeed bear an existential presupposition.

5 A note on rhetorical questions

Another potential argument against an existential presupposition for questions comes from rhetorical questions as in (27) which, given an appropriate context, seem to convey negative propositions as in (28).

- (27) a. Who wants to eat a rattlesnake?
b. Why would I want to do that?
c. What food does Fred even like?
- (28) a. $\neg\exists x : x$ wants to eat a rattlesnake.
b. $\neg\exists x : I$ want to do that because of x .
c. $\neg\exists x : Fred$ likes to eat x .

- If this effect is a semantic one (as argued by Sadock (1971), Han (2002) and others), this would conflict with the claim that questions bear an existential presupposition.
- How could these questions presuppose existence and assert non-existence?
- However, recent work by Rohde (2006) and Caponigro & Sprouse (2007) has shown that rhetorical questions as in (29) can readily convey non-negative responses as in (30).⁷

- (29) a. It's understandable that Luca adores Mina. After all, who helped him when he was in trouble?
b. They should stop complaining about the chair to us. After all, who voted for him?
- (30) a. Mina helped Luca.
b. All of them voted for the chair.

We conclude, following Rohde (2006) and Caponigro & Sprouse (2007), that rhetorical questions have the same *semantics* as ordinary questions.

- While they differ in the details, the key insight in both Rohde (2006) and Caponigro & Sprouse (2007) is that these rhetorical questions are questions whose resolution is already known to both the addressee and speaker, and probably obviously so.
- Since Caponigro & Sprouse (2007)'s question semantics does not involve a presupposition, they claim that rhetorical questions can be used to convey any semantic answer to the question.
- If negative responses are indeed not semantic answers, how can the range of meanings that can be conveyed by rhetorical questions?
- By many definitions of rhetorical questions, our answer would seem to be unsatisfyingly disjunctive: semantic answers or the negative response.

In (31) (Sperber & Wilson (1981), p. 300), however, a question can be used ironically to convey (32) which is neither a semantic answer nor a negative response⁸:

⁷As Caponigro & Sprouse (2007) note, rhetorical questions differ from ordinary questions in that (i) this response is not obligatory and (ii) it can be given by either the addressee or the speaker.

⁸Clearly such utterances convey something above and beyond the propositional content in (32) or else the speaker would simply utter the proposition itself. This equally holds of rhetorical questions as above and ironic questions like (31), see Sperber & Wilson (1981) for discussion of with respect to ironic utterances.

Scenario: Speaker and Addressee are caught in a downpour.

(31) Did you remember to water the flowers?

(32) It is raining really hard!

- Sperber & Wilson (1981) treat such questions as instances of verbal *irony* with no apparent connection to rhetorical questions.
- We claim, however, that such examples are very much parallel to the rhetorical questions in (27) and (29).

More concretely, all of these examples can be characterized as in (33):

(33) Speaker utters a question Q in order to highlight the fact that the common ground is such that asking Q would be *superfluous* (often so superfluous as to be *ridiculous*).

- In (31), the question is superfluous because the speaker and addressee are both aware that the answer to the question is irrelevant given the scenario.
- In (29a), the question is superfluous because the speaker and addressee are both aware that the answer to the question is ‘Mina’.
- In (27a), the question is superfluous because the speaker and addressee are both aware that there is no positive answer to the question.

6 Conclusion

- We have argued for a semantics of *if*-suspenders which assimilates them to ordinary *if*-clauses.
- The DOUBT IMPLICATION which they convey can be straightforwardly derived pragmatically,
- But only if we treat questions as bearing an existential presupposition which would otherwise force the content of the suspender to be accommodated actually.
- The account, therefore serves as an empirical argument for the existential presupposition, something which various theories of the semantics of questions either assume to exist or assume not to exist on the basis of (2) or (3) alone.

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