

## Abridged Karttunen 1973

Chris Potts, Ling 230a: Introduction to Semantics and Pragmatics, Winter 2010

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### 1 Holes, Plugs, and Filters

The three groups of predicates that we need to distinguish are characterized as follows:

*Plugs*: predicates which block off all the presuppositions of the complement sentence;

*Holes*: predicates which let all the presuppositions of the complement sentence become presuppositions of the matrix sentence;

*Filters*: predicates which, under certain conditions, cancel some of the presuppositions of the complement.

### 2 Plugs

3. The first group, plugs, contains verbs that are commonly called “verbs of saying” or “performatives”, such as *say*, *mention*, *tell*, *ask*, *promise*, *warn*, *request*, *order*, *accuse*, *criticize*, *blame*, etc. What is common to them is that they can be used to report on what has been said or what illocutionary act (in the sense of Austin 1962) has been performed. As I mentioned already in connection with (5), one can surely report that a certain illocutionary act has taken place without thereby committing oneself to the presuppositions of whatever was said on that occasion. More examples are given in (7).

- (7) a. Harry has promised Bill to introduce him to the present king of France.  
(Does not presuppose that the king exists.)
- b. Sheila accuses Harry of beating his wife. (Does not presuppose that Harry has a wife.)
- c. Cecilia asked Fred to kiss her again. (Does not presuppose that Fred had kissed Cecilia before.)

### 3 Holes

4. I will now move on to the second group of predicates I mentioned above. The class of holes contains all ordinary run-of-the-mill complementizable predicates, such as *know, regret, understand, surprise, be significant, begin, stop, continue, manage, avoid, be able, be possible, force, prevent, hesitate, seem, be probable*, etc. As far as I can see, the group includes all of Kiparsky's factives, Newmeyer's aspectual verbs, and my one- and two-way implicatives. I will suggest later on that the propositional attitude verbs and some of Morgan's world-creating predicates may also be in the class of holes. For all such verbs, the cumulative hypothesis works without a hitch. If the main verb of the

sentence is a hole, then the sentence has all the presuppositions of the complement sentences embedded in it. Consider the examples in (9).

- (9) a. Fred has a wife.
- b. Fred has been beating his wife.
- c. Fred stopped beating his wife.
- d. Fred hesitated to stop beating his wife.
- e. It surprised Mary that Fred hesitated to stop beating his wife.
- f. Cecilia knew that it surprised Mary that Fred hesitated to stop beating his wife.

## 4 Filters

5. The third group of complementizable predicates, filters, contains only logical connectives: *if . . . then*, *and*, and *either . . . or*. Of course, grammarians do not usually call such words predicates, but I find it convenient here to follow the logical rather than grammatical tradition, ignoring also the distinction that logicians usually make between connectives and ordinary predicates. For example, I will simply regard the discontinuous conditional morpheme *if . . . then* as a predicate that takes two sentential complements, the “antecedent” and the “consequent”.

### 4.1 Conditionals

The problem is to find some way of distinguishing cases like the examples in (10) and (11b), where the cumulative hypothesis works, from those like (11a), where it fails.

- (10) a. If baldness is hereditary, then all of Jack’s children are bald.
- b. If all of Jack’s children are bald, then baldness is hereditary.
- (11) a. If Jack has children, then all of Jack’s children are bald.
- b. If all of Jack’s children are bald, then Jack has children.

### 4.2 Coordinations

6. Let us now turn to conjunctions. It is easy to see that, whenever the two clauses involved are semantically unrelated, their conjunction has all the presuppositions of its constituents. The examples in (15) are analogous to those in (10).

- (15) a. Baldness is hereditary and all of Jack’s children are bald.
- b. All of Jack’s children are bald and baldness is hereditary.

What about conjunctions corresponding to the conditionals in (11)? Consider (16).

- (16) a. Jack has children and all of Jack’s children are bald.
- b. All of Jack’s children are bald and Jack has children.

### 4.3 Disjunctions

Again, no filtering is needed for simple cases where the two disjuncts are not semantically related. The examples in (21) have all the presuppositions of the individual components.

- (21) a. Either baldness is not hereditary or all of Jack's children are bald.
- b. Either all of Jack's children are bald or baldness is not hereditary.

Consider now cases where there is a presuppositional relation between the disjuncts.

- (22) a. Either Jack has no children or all of Jack's children are bald.
- b. Either all of Jack's children are bald or Jack has no children.

For reasons that I don't quite understand, I don't find (22b) any more acceptable than the corresponding examples with *if . . . then* and *and*, (11b) and (16b). Leaving out the negation from the second disjunct would make (22b) even worse. Since I am not able to fully decipher this example, I cannot tell what (22b) presupposes, if anything.<sup>11</sup>

On the other hand, (22a) is a clear case. It does not presuppose that Jack has any children. Note that the relation between the two clauses is different from what we had in the corresponding examples with *if . . . then* and *and*, (11a) and (16a). The first disjunct in (22a) negates the presupposition of the second. Consider also the more complicated examples in (23).

- (23) a. Either it is false that Jack has children or all of Jack's children are bald.
- b. Either Bill has always refrained from beating his wife or Bill has already stopped beating her.
- c. Either Harry is not married at all or his wife is no longer living with him.

What makes (11a) special is that there is a certain relation between the antecedent and the consequent. The antecedent consists of the presupposition of the consequent. In such cases, the presupposition seems to become void. However, when we look at some more complicated examples, we see that, for the filtering to take place, the antecedent does not have to be identical with the presupposition of the consequent. Consider the examples in (12).

- (12) a. If it is true that Jack has children, then all of Jack's children are bald.  
 b. If Fred has managed to kiss Cecilia, Fred will kiss Cecilia again.  
 c. If Harry is married, then his wife is no longer living with him.

In (12a), the antecedent is not identical with the presupposition of the consequent. However, in this case the antecedent *semantically entails* the presupposition. In general, we say that A semantically entails B ( $A \Vdash B$ ) if (and only if) B is true whenever A is true.<sup>8</sup> We find the same relation in (12b). In (12b) the consequent presupposes that Fred has kissed Cecilia. The truth of "Fred has kissed Cecilia" follows from the truth of the antecedent clause, "Fred has managed to kiss Cecilia."<sup>9</sup> Again, the presupposition is filtered out. Similarly in (12c), where the antecedent "Harry is married" entails "Harry has a wife", which in turn is just what the consequent presupposes. The original example in (11a) is simply a special case of this type. There the antecedent not only entails but is identical with the presupposition.

On the basis of these observations, we can tentatively postulate the following *filtering condition* for *if . . . then* sentences. (It will be revised slightly later on.)

- (13) Let S stand for any sentence of the form "If A then B".  
 (a) If A presupposes C ( $A \gg C$ ), then S presupposes C ( $S \gg C$ ).  
 (b) If B presupposes C ( $B \gg C$ ), then S presupposes C ( $S \gg C$ ) unless A semantically entails C ( $A \Vdash C$ ).<sup>10</sup>

As far as the filtering of presuppositions is concerned, these examples show that conjunctions behave just like conditionals. The filtering condition for *and*, given in (17), is the same as the rule for *if . . . then*.

- (17) Let S stand for any sentence of the form "A and B".  
 a. If  $A \gg C$ , then  $S \gg C$ .  
 b. If  $B \gg C$ , then  $S \gg C$  unless  $A \Vdash C$ .

These examples lead us to postulate the following filtering condition for disjunctions.

- (24) Let S stand for any sentence of the form "A or B".  
 a. If  $A \gg C$ , then  $S \gg C$ .  
 b. If  $B \gg C$ , then  $S \gg C$  unless  $\lceil \sim A \rceil \Vdash C$ .

Except for the negation sign in (24b), the condition is the same as for the other connectives.

## 4.4 Revisions

- (25) Either Geraldine is not a Mormon or she has given up wearing her holy underwear.

(BHP) Either this building has no bathroom, or it's in a funny place.

- (29) a. If Geraldine is a Mormon, she has given up wearing her holy underwear.  
b. Geraldine is a Mormon and she has given up wearing her holy underwear!

The revised form of (17b), which is identical with (13b), is given below.

- (17b') If  $B \gg C$ , then  $S \gg C$  unless there is some (possibly null) set  $X$  of assumed facts such that  $X \cup \{A\} \Vdash C$ .  
(Constraints on  $X$ :  $X \not\vdash \sim A$  and  $X \not\vdash C$ .)

As another piece of evidence in favor of our revised filtering conditions, consider the examples in (30), which were pointed out to me by George Lakoff.<sup>14</sup>

- (30) a. If Nixon appoints J. Edgar Hoover to the Cabinet, he will regret having appointed a homosexual.  
b. Nixon will appoint J. Edgar Hoover to the Cabinet and he will regret having appointed a homosexual.  
c. Either Nixon does not appoint J. Edgar Hoover to the Cabinet or he will regret having appointed a homosexual.