

Karttunen (1971)

10th Session

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June 17 2009

Goal: find out about another class of verbs besides factive predicates that trigger presuppositions.
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1 Paper

1.1 Reference

Karttunen, L. (1971) Implicative verbs. In *Language*, **47.2**: 340–358.

1.2 Guidelines

- In what ways are implicative verbs different from factive ones?
- What is the presupposition generated by an implicative verb?
- Why must the implied sentence share modality, tense or illocutionary force with the main sentence?
- In what way are *choose* or *be able* problematic?

1.3 Goals

- Propose a more fine grained classification of sentence-taking verbs, which include implicative predicates.
- Present an analysis of implicative verbs that draws on their implications and presuppositions.

1.4 Claims

- Implicative verbs such as *manage* involve presuppositions, but in a different way from factive verbs.
- They presuppose the existence of a sufficient and necessary condition which alone determines whether the event described in the complement took place.

2 Introduction

- Classification of verbs
 1. Verbs that take *that*-complements
 - Factive (involve the presupposition such that the sentence complement represents a true proposition): know, realize, regret.
 - Non-factive: believe, think, assume.
 - Non-inherently factive or non-factive (can be used with or without presupposition): report, announce, remember.
 2. Verbs that take infinitive complements
 - Factive: glad, proud, lucky.
 - (1) a. John was glad to see his parents.
 - b. John wasn't glad to see his parents.
 - c. Was John glad to see his parents?
 - d. \Rightarrow John saw his parents.
 - (2) a. John was eager to see his parents.
 - b. John wasn't eager to see his parents.
 - c. Was John eager to see his parents?
 - d. \nRightarrow John saw his parents.
 - Implicative: manage, remember, bother, get, dare, care, venture, condescend, happen, see fit, be careful, have the misfortune/sense, take the time/opportunity/trouble, take it upon oneself.
 - Non-implicative: agree, decide, want, hope, promise, plan, intend, try, be likely, be eager/ready, have in mind.

3 Properties of implicative verbs

3.1 Assertions

- Anyone who asserts (3-a) is also committed to the truth of (4-a), and hence implies belief in the truth of its complement.
 - (3) a. John managed to solve the problem.
 - b. John remembered to lock his door.
 - c. John saw fit to remain silent.
 - (4) a. John solved the problem.
 - b. John locked his door.
 - c. John remained silent.
- This holds for implicative, but not for non-implicative predicates. In asserting (5-a) one need not have any knowledge or belief concerning the truth of (4-a).
 - (5) a. John hoped to solve the problem.

- b. John had in mind to lock his door.
 - c. John decided to remain silent.
- To test the difference between implicative and non-implicative predicates, we can do as follows:
 - (6)
 - a. #John managed to solve the problem, but he didn't solve it.
 - b. John hoped to solve the problem, but he didn't solve it.
- However, this contrast might have to do with the complement of *hope* including a future tense or modal in its underlying representation. To avoid this, we should check whether asserting *a* commits us to belief in *b*:
 - (7)
 - a. John hoped to solve the problem.
 - b. John will solve the problem.
 - (8) John hoped to solve the problem, but he will not solve it.

<p>Summary: there is an implication between a main sentence that contains an implicative verb and the proposition embedded in it as a complement. “If the sentence as a whole is true, then the complement, taken by itself, must also be true.”</p>

3.2 Negation

- By looking at data that contain negation we can finally grasp the difference between factive and implicative verbs. Negation does not change the truth of the presupposed proposition in factive verbs.
 - (9)
 - a. John realized that he had no money.
 - b. John didn't realize that he had no money.
 - c. John had no money.
- When we negate an implicative verb, the proposition that we are committed to also contains negation. “[...] the negation of a sentence with an implicative predicate implies the negation of its complement.”
 - (10)
 - a. John didn't manage to solve the problem.
 - b. John didn't remember to lock his door.
 - c. John didn't see fit to remain silent.
 - (11)
 - a. John didn't solve the problem.
 - b. John didn't lock his door.
 - c. John didn't remain silent.
- Contrast with non-implicative predicates.
 - (12)
 - a. John didn't hope to solve the problem.

- b. John didn't have in mind to lock his door.
- c. John didn't decide to remain silent.

o Below is the test in (6) applied to negation:

- (13) a. #John didn't manage to solve the problem, but he solved it.
b. John didn't hope to solve the problem, but he solved it.

o The problem: (3-a) ends up being equivalent to (4-a), in spite of the difference in meaning between *managed to solve* and *solved*.

(α) (3-a) \rightarrow (4-a), and

(β) (10-a) \rightarrow (11-a).

(γ) \sim (3-a) \rightarrow \sim (4-a).

Modus Tollens

(δ) (4-a) \rightarrow (3-a).

(α) & (δ)

(ϵ) (3-a) \equiv (4-a).

:-O Unacceptable conclusion

The step from (γ) to (δ) seems plausible, because the assertion of (3-a) intuitively comes out true if John in fact solved the problem. However, note that while \sim (3-a) implies \sim (4-a), “[...] it also suggests that John at least tried to solve the problem.” If he didn't try, we would not know whether to judge (10-a) as true or false. “In other words, (10-a) presupposes that John made an attempt to solve the problem. The logical status of (11-a) clearly does not depend on any such assumption. For this reason, it is not in general true that (11-a) implies (10-a); the entailment holds only if the presupposition underlying (10-a) is fulfilled.”

The step (β) does not represent logical implication (i.e., entailment). “The argument depends on the unstated premise that the presupposition associated with *manage* is fulfilled even if John did not solve the problem.”

Following Austin (1962), Karttunen is using the term *imply* in a weak sense: ‘*p* implies that *q*’ means that asserting *p* commits the speaker to *q*. Asserting $\sim q$ need not commit the speaker to $\sim p$.

Negative assertions do not negate the presuppositions associated to the main verb:

- (14) a. John didn't manage to solve the problem.
b. John solved the problem without really trying.

o Cancellation of double negation: when there is negation in both the main and the embedded clause, then the implication is positive. There is no correspondence with non-implicative and factive verbs.

- (15) a. John didn't remember not to lock his door.
b. John locked his door.
c. John remembered to lock his door.

3.3 Questions and commands

- “Questioning a sentence with an implicative predicate amounts to questioning the complement of that sentence.” An affirmative answer to (16-a) commits the speaker to an affirmative answer to (16-b), and the same would hold for a negative answer. When one inquires (16-a), one wants to know the answer to (16-b).

- (16) a. Did John manage to solve the problem?
b. Did John solve the problem?

- Different behavior of non-implicative verbs. “One may know the answer to (17-a) without knowing the answer to (17-b).”

- (17) a. Did John hope to solve the problem?
b. Did John solve the problem?

3.4 Modality

- Implicative verbs: by uttering a sentence with an implicative, the speaker is committed to the modal sentence corresponding to its infinitive clause.

- (18) a. John ought to remember to lock his door.
b. John must take the time to study better.
c. John should get to be the chairman.

- (19) a. John ought to lock his door.
b. John must study better.
c. John should be the chairman.

- Non-implicative verbs: opposite behavior. And this is independent of whether we have an epistemic or a deontic reading of the modal.

- (20) a. John ought to be eager to lock his door.
b. John must promise to study better.
c. John should want to be the chairman.

3.5 Tense

- Implicative verbs: the main sentence and the complement sentence must agree in tense. This can only be shown by using adverbials in the complement sentence.

- (21) a. #John remembered to lock his door tomorrow.
b. #John managed to solve the problem next week.
c. #John saw fit to arrive day after tomorrow.

- (22) a. #John will remember to lock his door yesterday.
b. #John will manage to solve the problem last week.
c. #John will see fit to arrive day before yesterday.

- Non-implicative verbs: they do involve some restrictions, but they do not exclude the possibility of having a future time adverbial if they are in the past tense.

- (23)
- John agreed to lock his door tomorrow.
 - John hoped to solve the problem next week.
 - John wanted to arrive day after tomorrow.

3.6 Adverbials

- Implicative verbs: any time reference in the main clause modifies the infinitive clause. (24-a) does not imply (24-b) but rather (24-c).

- (24)
- Yesterday, John managed to solve the problem.
 - John solved the problem.
 - John solved the problem yesterday.

- It does not seem to be the case that the adverbial is part of the infinitive clause. (25-a) and (25-b) give different impressions on what John was supposed to remember, even though they all imply (25-c).

- (25)
- Before he left, John remembered to call Mary.
 - John remembered [to call Mary before he left].
 - John called Mary before he left.

- Parallel with locative expressions.

- (26)
- At the door, John saw fit to apologize.
 - John apologized at the door.

- Non-implicative verbs: there are no restrictions of the sort.

- (27)
- At the door, John had in mind to apologize.
 - John apologized at the door.

- (28)
- #On the sofa, John managed to sleep in the bed.
 - On the sofa, John decided to sleep in the bed.

3.7 *Because*-clauses

- Clauses introduced by *because*, *although*, *when* behave like non-sentential adverbs wrt implication.

- (29)
- Because he did well on the exam, John managed to win a scholarship for the summer.
 - John won a scholarship for the summer because he did well on the exam.

- However, *because*-clauses present some unexpected problems. (30-a) does not imply (30-b). In (30-b), the *because*-clause identifies a certain **motivation**, whereas in 30a it constitutes an **explanation** of what made the purchase possible.

- (30) a. Because the ring was cheap, John managed to purchase it.
b. John purchased the ring because it was cheap.

- Ambiguity of *because*-clauses: in (29-b) it suggests a causal explanation, as in (30-a), and (29-a) implies (29-b), contrary to the situation between (30-a) and (30-b).

- (31) The taxi driver was killed because he did not wear his safety belt.
a. That the driver got killed is explained by his failure to wear his safety belt.
b. The driver was killed for not wearing his safety belt.

- Implicative verbs: they only permit the explanatory sense of *because*. Since (30-b) has another and more salient reading, namely the motivation interpretation, then the implication does not follow.

4 Proposal

4.1 A first approach

- We assume that the structure in (32) is common to all the underlying representation of the sentences in (33).
 - It is their bare propositional core (i.e., it does not have any indication of illocutionary force or time/locative references).
 - S1 and S2 involve the same subject.

- (32) [_{S1} John manage [_{S2} John open the box]].

- (33) a. John managed to open the box.
b. John didn't manage to open the box.
c. Did John manage to open the box?
d. John should manage to open the box.
e. Yesterday, John managed to open the box.
f. In his office, John manages to open the box.

- We now assume there is an S3, which consists of S2 plus all the modifiers that in (32) are associated with S1 (e.g., negation, tense, time and locative references).

- (34) [_{S3} John opened the box in his office].

- Proposed rule: for S1 to be well formed, S3 will have to be well formed.

(35) The illocutionary force of S1 (i.e., assertion, command, question, etc.) is shared by S3.

- The rule in (35) describes why the following sentences are ill-formed:

(36) a. #John managed to open the box tomorrow. (# John opened the box tomorrow.)
b. #John took time to visit Mary, but he didn't visit her. (# John visited Mary, but he didn't visit her.)

4.2 Proposition and presupposition

- The sentences in (37) and (39) are related by implication (the former implies the latter, but not the other way around), but they are not synonymous. We need to understand in what way they differ.

(37) Yesterday, John didn't happen/manage/remember/get/bother to kiss Mary.

(38) Yesterday, John didn't kiss Mary.

- We need to distinguish between *proposition* (non-standard use in Searle 1969) and *presupposition*.

- “The propositional component carries the illocutionary force; only that part can be asserted or questioned.”
- “The presuppositional component expresses the unstated beliefs of the speaker that underlie the proposition.”

- Presuppositions of each implicative verb:

- *Manage*: ‘Yesterday, John attempted to kiss Mary, and his success depended only on his skill and ingenuity.’
- *Remember*: ‘Yesterday, John was obligated to kiss Mary, and intended to do so, and whether or not he did depended only on whether he remembered his commitment.’
- *Bother*: some conscious effort and willingness on the part of the subject is necessary in order to carry out the complement.
- *Get*: ‘Whether or not John kissed Mary depended only on whether he got a chance to do so.’
- *Happen*: ‘Whether or not John kissed Mary, it only depended on chance.’

- Core properties of the presuppositions in implicative verbs: “[...] there is some necessary and sufficient condition, expressed by the main verb, which alone determines whether the event described in the complement took place.”

(39) Let v stand for any implicative verb and S stand for the sentence that manifests itself as the infinitival complement of that verb in the surface structure. $v(S)$ constitutes the central part of the proposition to which negation, modals, and time and locative references are attached.

- a. Presupposition: $v(S)$ is a necessary and sufficient condition for S .
 - b. Proposition: $v(S)$.
- The proposal in (39) is a justification of (35): for an affirmative assertion, there is a presupposition according to which a sufficient condition is fulfilled, and hence, S is true; for a negative assertion, a necessary condition is not fulfilled, and hence, S is false, etc.

4.3 Verbs with negative implication

- Negative implicatives: forget, fail, neglect, decline, avoid, refrain.

- (40)
- a. John forgot to lock his door.
 - b. John didn't lock his door.
 - c. John didn't remember to lock his door.

- Analysis 1: *Forget* can be seen as *not remember*, and *fail* as *not do*, *not succeed*. Problem: some verbs do not have a positive counterpart (e.g., *neglect*, *avoid*).

- (41)
- a. John didn't forget to lock his door.
 - b. John forgot not to lock his door.
 - c. John didn't remember not to lock his door.
 - d. John locked his door.

- Analysis 2: instead of the rule in (39), we have the rule in (42).

- (42)
- a. Presupposition: $v(S)$ is a necessary and sufficient condition for $\sim S$.
 - b. Proposition: $v(S)$.

- Problems of both analyses. Grammar must incorporate more constraints in order to be able to explain the following situations:

- (43-a) and (43-b) are not necessarily synonymous, as would be expected. To fix this, negation in *not remember* must have the narrowest scope among the logical operators in the main clause.

- (43)
- a. All of the board members forgot to come to the meeting.
 - b. All of the board members did not remember to come to the meeting.
 - c. Not all the board members came to the meeting.
 - d. None of the members came to the meeting.

- The following examples are not all paraphrases of each other. Only (44-b) is equivalent to (44-c), and *yes* as an answer to (44-a) means that John didn't come, whereas in (44-b) and (44-c) means that John did come.

- (44)
- a. Did John forget to come?
 - b. Didn't John remember to come?
 - c. Didn't John come?

4.4 Residual problems

- Some verbs are interpreted as implicative or as non-implicative depending on the context.
 - (45) a. Positive: choose, be able, can, be in position, have the time / opportunity / chance / patience, be ... enough (to).
b. Negative: refuse, be too ... (to).
 - (46) a. Twice before, John has chosen to ignore my request.
b. John has chosen to become the best student next semester.
 - (47) a. In the last game, the quarterback was able to complete only two passes.
b. Ten years ago, John was able to seduce any woman in Torrance.
 - (48) a. John refused to believe that he was sick.
b. John refused to come to Mary's party tomorrow.
 - (49) a. John was clever enough to leave early.
b. John was clever enough to learn to read.
 - (50) a. John was too stupid to call the cops.
b. John was too stupid to be a regent.
- For some of these verbs, it does not make a difference whether they are in an affirmative or negative sentence; either way they do not have a definite implication (e.g., *choose*, *refuse*, *too/enough* constructions). For some others (e.g., *be able / possible*, *have the courage*), there is a difference: in negative sentences, they entail that the complement is false. They express a necessary condition for the truth of the sentence.
 - (51) a. John was able to come, but he didn't come.
b. #John wasn't able to come, but he came.
 - (52) a. Presupposition: $v(S)$ is a necessary condition for S .
b. Proposition: $v(S)$.
- Remaining problem: why examples like (47-a) seem to suggest that there is not only a necessary but also a sufficient condition for the truth of the embedded sentence.
- Another group of verbs that deserve attention. The expected implications hold in affirmative sentences but not in negative ones. They express a sufficient but not a necessary condition for the truth of the complement sentence.
 - (53) a. Positive: cause, make, have, force.
b. Negative: prevent, dissuade.
 - (54) a. John forced Mary to stay home.
b. Mary stayed at home.

- c. John asked Mary to stay at home.
- (55)
- a. John didn't force Mary to stay at home.
 - b. Mary didn't stay at home.
 - c. John didn't ask Mary to stay at home.

These verbs parallel *ask*, *order*, *advise*, *request* when they occur in negative sentences.

- (56)
- a. Presupposition: $v(S)$ is a sufficient condition for S .
 - b. Proposition: $v(S)$.

5 Summary

- Implicative verbs (e.g., *manage*) are an interesting class of verbs, which differ from factives, although they also involve presuppositions.
- They presuppose that there exists a sufficient and necessary condition for the truth of their complement sentence.
- Whether or not the speaker is committed to the truth of the complement depends on the presence of negation, modality, tense, illocutionary force, etc.
- The implied sentence must share all the properties wrt negation, modality, tense, illocutionary force, etc.
- There are other verbs which do not follow this pattern straightforwardly, even though they generate similar presuppositions in certain contexts (e.g., *choose*, *be able*, *force*).